

Saudi Arabia Rooftop Solar PV Installation Market Assessment, By Technology Type [Monocrystalline, Poly Crystalline, Thin film], By Grid Type [On Grid, Off Grid], By Deployment [Residential, Commercial, Industrial], By Region, Opportunities and Forecast, 2018-2032F

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Report description:

Saudi Arabia rooftop solar PV installation market is projected to witness a CAGR of 12.63% during the forecast period 2025-2032, growing from USD 1.33 billion in 2024 to USD 3.45 billion in 2032. The rooftop solar PV installations market shown a significantly rise in Saudi Arabia due to combination of various factors such as supportive government policies, renewable energy goals, advanced technology and industrial development. The country is looking to adopt decentralized and distributed solar installation systems which allow different sectors to generate onsite electricity directly from rooftops. Moreover, with the rise in focus towards enhanced energy security and reduced transmission losses in the industrial sector drive the demand for rooftop solar PV installations in the market.

The initiative plans and policies are crucial in encouraging both residential and commercial investments in rooftop solar PV installations. Furthermore, the higher authorities and government have established a supportive regulatory policy that streamlines processes for solar project implementation and boosts the demand for rooftop solar PV installation in the residential sector. The government financial support and renewable energy production targets act as catalysts for the adoption of rooftop solar systems. For instance, according to the International Energy Agency (IEA), Saudi Arabia aims to source 50% of its electricity from renewable energy by 2030 The goal is part of the National Renewable Energy Program (NREP), with plans to expand its solar capacity to between 100 GW and 130 GW. The increasing investment in renewable energy production technologies helps to drive the demand for rooftop solar PV installations in the market.

Growth in Commercial and Industrial Sectors Drive Market Growth

Saudia Arabia government is looking to invest heavily in the manufacturing sector which is going to boost the demand for renewable electricity in the country. Commercial and industrial sectors are exploring options for energy transition to reduce

energy expenses which makes sectors a prime customer for rooftop solar installations in coming years. Furthermore, production of renewable energy on site will reduce the reliance on the grid and mitigate rising energy prices for energy-intensive industries. Commercial sectors are developing energy management strategies that include investments in new technologies for on-site renewable energy production. These new strategies primarily focus on sustainability as a core component of corporate social responsibility (CSR). Installing rooftop solar panels, for example, aligns well with CSR goals by demonstrating a commitment to reducing carbon footprints and adopting clean energy practices.

Moreover, commercial and industrial facilities have large roof areas which could be effectively utilized for the installation of solar panels. With the installation of solar PV onsite allows businesses to harness significant amounts of solar energy, making rooftop systems a practical solution for meeting the energy needs. Rooftop solar PV installations provide an additional layer of energy security for businesses during the outage, which drives the technology demand in the market.

For instance, in May 2023, the Saudi Electricity and Water Regulatory Authority announced the list of 106 qualified companies to implement small photovoltaic solar energy systems projects in commercial and industrial facilities in Saudi Arabia. The adoption of new renewable production technologies enhances Saudi Arabia's quest to become a global center for solar energy. This development will drive the demand for rooftop solar PV installation in the market.

Rise in Demand for Cost-Effective and Durability Energy Technology

Saudi Arabia is transitioning from an oil-centric to an environmentally focused economy. The residential sector is taking initiatives in empowering houses to generate electricity through small-scale residential rooftop solar photovoltaic systems. The energy costs are on rise due to which residential sector is looking to produce electricity on-site to lower the overall energy expenses which drive the demand for rooftop solar PV installation. Rooftop solar PV systems provide substantial savings on electricity bills which drive the demand for the solar PV systems in the market.

In addition, the financial incentive provided by local government makes solar installations increasingly attractive as benefits could lead to significant long-term savings. With lowering of product cost and financial benefits initial lower the investment and makes rooftop solar PV systems more affordable for a broader range of households. Thus, the robust performance and low maintenance requirements of modern solar systems contribute to high demand for system in both residential and commercial sectors across the country.

For instance, in February 2024, according to National Renewable Energy Programme (NREP), there were four major projects announced by the government of Saudi Arabia which will help the country to achieve 50% of the country's electricity from renewable energy by 2030. Hence, the biggest one will be the 2-gigawatt (GW) Al Sadawi initiative in the Eastern Province, while a 1 GW Al Masa'a plant will be built within the Hail Province. The other two projects from this announcement are the Al Henakiyah II and Rabigh II projects, with capacities of 400 MW and 300 MW, respectively.

Government Subsidies and Financial Support Creates Opportunity

Rooftop solar photovoltaic (PV) systems are playing a vital role in building future sustainable countries. The government of Saudi Arabia is commencing supportive regulatory policy to enhances the attractiveness of rooftop solar installations in the country. Also, the government has simplified the permitting process and established clear guidelines for the installation of solar PV onsite. The Saudi government and higher authorities have implemented various financial incentives, including subsidies, tax benefits, and favorable financing options, which create the opportunity for market growth. The benefits offered by the government significantly lower the initial investment costs associated with installing rooftop solar systems, which drives the demand for rooftop solar PV installation in the market. The Saudi Arabia government has a supportive policy such as "Vision 2030" which aimed at promoting the adoption of renewable energy technologies across all sectors, including rooftop solar PV systems.

For instance, in August 2024, the Saudi Arabia government announced to invest around USD 1000 billion in sustainability plans out of which approximately USD 235 billion specifically allocated to clean energy initiatives. The funding will support the development of solar infrastructure and technologies in the country, making rooftop solar systems more accessible and financially viable for consumers. The government revised its target for solar energy 2030 vision from 58.7 GW to around 100-130 GW. Monocrystalline to Dominate the Saudi Arabia Market Share

Monocrystalline panels will be experiencing high adoption rate in the forecast period which make the segment to dominate the market. The advanced design of monocrystalline panels allows for greater renewable energy production in a smaller footprint. The panels are compact in size which convert a larger portion of sunlight into electricity compared to other panel types. Panels are

able to produce more power per square meter, which makes panels ideal for installations with limited space, such as rooftops. Monocrystalline solar cells are highly efficient as panels are able to absorb low-wavelength sunlight during cloudy weather and generate power. The high capability enables panels to produce electricity effectively even at sunlight due to which demand for monocrystalline panels is high in the rooftop solar PV installation systems. Thus, the combination of high efficiency, strong electron mobility, effective performance in low-wavelength light with aesthetic appeal makes monocrystalline solar panels the preferred choice for rooftop solar PV installation market.

Riyadh Region Leads the Rooftop Solar Photovoltaic (PV) Installation Market Share in Saudi Arabia

Riyadh regions dominate the rooftop solar PV installation market and is expected to continue its dominance during the forecast period. With rapid urbanization and population growth in Riyadh, electricity demand is expected to increase significantly. The region is looking for advanced technology in the manufacturing sector, which further drives the demand for renewable energy. The region has high levels of solar irradiation, which makes the region one of the countries' most suitable locations for solar energy generation. The region's geography has enabled maximum solar energy production, which further makes rooftop solar systems a strong source of energy. With the growth of different sectors within Riyadh are particularly motivated to invest in rooftop solar solutions to reduce operational costs and enhance sustainability. Rooftop solar installations provide a cost-effective solution that enables end-users to generate onsite electricity, which drives the systems demand in the market.

For instance, in July 2023, Sun Capture (Aljoaib Holdings) and Mohammed Bin Salman Nonprofit City signed an agreement to power [The City Hub' building through solar energy. "The City Hub" is the first building located at western side of Riyadh powered through solar power which will support the sustainability and growth in Riyadh. The solar PV plant has a capacity of 397 kW, estimated to offset carbon emissions by 12,285 tons. This development will increase the demand for rooftop solar PV installations in Riyadh.

Future Market Scenario (2025 [] 2032F)

The adoption of rooftop solar installations is expected to improve significantly in the residential sector which will help to shape the future of rooftop solar PV installation market.

As environmental concerns push for decentralized and distributed solar installations systems in industrial sector which drive the demand for rooftop solar PV installation in near future.

Continuous advancements in solar technology will enhance the efficiency and affordability of rooftop solar systems in residential applications.

Continued government support through subsidies, tax incentives, and favourable financing options will create more opportunities for the market.

Key Players Landscape and Outlook

In Saudi Arabia rooftop solar PV installation market, companies compete to outperform one another in terms of production and distribution of rooftop solar PV installation products. Rooftop solar PV installation manufacturers are concerned with supply chain resilience, energy efficiency, and environmental practices, which will define the industry's future. Production expansion, collaborations, agreements, and developing technologies are projected to increase competition in this fast-paced market. In July 2024, JinkoSolar Holding Co., Ltd. announced a joint venture with Renewable Energy Localization Company ("RELC") and Vision Industries Company ("VI") to operate a high-efficiency solar cell and solar module manufacturing facility in Saudi Arabia. The manufacturing facility is expected to have a total investment amount of approximately USD 1 billion and will be funded through a combination of its internal funds and external financing. The manufacturing facility is expected to achieve an annual production capacity of 10 GW for each of high-efficiency solar cells and solar modules. The agreement includes the information related to the equity interest of each company, such as Jinko Middle East, RELC, and VI agree to form a joint venture with 40%, 40%, and 20% equity interest, respectively. This development helps the company to increase its revenue and production capacity in the coming years.

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*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work.

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