

Solar Backsheet Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 125 pages | Mordor Intelligence

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Report description:

The solar backsheet market is expected to register a CAGR of more than 15.5% during the forecast period (2022-2027). Despite the COVID-19 pandemic, the solar backsheet market grew in 2020 due to the increased installation of solar energy projects. However, the market was negatively impacted due to the temporary shutdown of manufacturing units in H1 2020. The market is expected to grow during the forecast period due to the restrictions on conventional fossil fuel energy sources and global efforts to reduce carbon emissions. In addition, the reduction in solar panel costs and associate components for a solar project has made it one of the fastest-growing renewable energy sources. However, one of the major restraints to the market is the availability of pure silicon to make solar PV cells. Although silicon dioxide is available abundantly, it requires high energy to remove oxygen from the compound to create pure silicone, thus raising the cost.

Key Highlights

The fluoropolymer backsheet is one of the prominent segments with the highest market share and is costlier than non-fluoropolymer. It gives better resistance to environmental damage, such as ultra-violet radiation, humidity, and vapor penetration.

Furthermore, solar projects, especially off-grid projects, are expected to provide a significant opportunity to the market, as consumers in the developing and underdeveloped countries are likely to provide off-grid facilities to power remote places and islands with solar power.

Asia-Pacific is expected to dominate the market with various upcoming solar panel installation projects.

Solar Backsheet Market Trends

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Fluoropolymer is Expected to Become a Significant Segment

Fluoropolymer solar backsheets consist of three layers: inner, middle, and outer layer, which is attached to the outermost layer of a solar panel. The inner and outer layer of the solar backsheet is primarily made of polyvinyl fluoride (PVF) or polyvinylidene fluoride (PVDF). In contrast, the middle layer consists of polyethylene terephthalate (PET or polyester).

In 2020, fluoropolymer backsheets had a majority of the market share. The fluoropolymer backsheet is costlier than non-fluoropolymer due to its additional safety features like proven hydrolytic stability and excellent resistance to weathering effects in various conditions with PVF or PVDF layer.

According to SolarPower Europe, over the past decade, between 2011 and 2020, solar power increased rapidly from 30.13 GW in 2011 to 138.2 GW in 2020, primarily aided by utility-scale projects and the fluoropolymer solar backsheet market.

In 2021, Bharat Electricronics Limited, an Indian state-owned company, invited companies for a 2.86 MW of grid-connected solar power projects in Amravati and Akola in Maharashtra. In addition, as per the tender document, the solar backsheet should have three-layered structures. The inner layer of fluoropolymer should be a UV-resistant polymer, the middle layer should be polyester-based, and the outer layer should be fluoropolymer.

Hence, with additional benefits than non-fluoropolymer, the segment is likely to have high adoption in solar energy projects. Further, mass production is expected to reduce the price and boost the segment during the forecast period.

Asia-Pacific to Dominate the Market

Asia-Pacific is expected to dominate the market. According to the British Petroleum Statistical Review of World Energy 2021, Asia-Pacific generated the majority of solar power compared to all regions.

China is estimated to be the major country in the region, with approximately 175 GW of solar PV installations. It is expected to double its installation capacity by 2025, which is expected to boost the backsheet market during the forecast period.

Tengger Desert Solar Park, China (1,547MW), Yanchi Ningxia Solar Park, China (1,000MW), Datong Solar Power Top Runner Base, China (1,070MW), Kurnool Ultra Mega Solar Park, India (1,000MW), Longyangxia Dam Solar Park, China (850MW), and Kamuthi Solar Power Station, India (648MW) are the major existing key projects in the region with high uses of backsheets.

Further, the region has several upcoming projects like the Xiangyang Solar PV Power Plant. The power plant is 100 MW, started construction in Q3 2021, and is expected to be completed by the fourth quarter of 2022. Similarly, many utility-scale solar projects are under construction, driving the solar backsheet market in the region.

China will remain a renewable energy leader in 2022 due to the phasing out of coal energy plants and ambitious climate targets. In addition, according to IEA, solar photovoltaic energy is expected to break targets in 2022, with an annual addition of 162 gigawatts. Thus, Asia-Pacific will dominate the market.

Solar Backsheet Market Competitor Analysis

The solar backsheet market is fragmented. The key players in the market include DuPont de Nemours Inc., Isovoltaic AG, Coveme SpA, Arkema SA, 3M Co., Toyo Aluminium KK, Madico Inc., Taiflex Scientific Co. Ltd, Krempel GmbH, and Targray Technology International Inc.

Additional Benefits:

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

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