

Building Integrated Photovoltaic (BIPV) - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2020 - 2029

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Report description:

The Building Integrated Photovoltaic Market size is estimated at USD 6.31 billion in 2024, and is expected to reach USD 12.59 billion by 2029, growing at a CAGR of 14.79% during the forecast period (2024-2029).

Key Highlights

- Over the medium term, factors such as the reduction in energy bills due to self-power consumption and the reduction in the building's carbon footprint are expected to drive the market during the forecast period.
- On the other hand, the high installation cost compared to rooftop PV systems is likely to negatively impact the market growth.
- Nevertheless, the inclination towards renewables-based power generation worldwide is an enormous opportunity for BIPV systems. The governments of almost all countries are moving towards renewables-oriented energy policies to reach their carbon neutrality goals. The industrial and commercial sectors are even incentivized to adopt cleaner energy generation methods.
- Due to declining solar technology costs, Asia-Pacific is expected to grow faster during the forecast period.

Building Integrated Photovoltaics Market Trends

Crystalline PV Expected to Dominate the Market

- Most solar panels for roof and facade applications are made up of crystalline silicon. They are thick glasses that produce more power (10-12 watts per ft² of PV array under the full sun) than other technologies.
- The increasing installation of solar PV modules across the globe is further increasing the installation of BIPV systems. In 2022,

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the total solar PV installed capacity was around 1046.6 GW, which increased from 855.2 GW in 2021.

- In September 2022, Grenzebach Group, a glass and building materials producer in Germany, announced the inauguration of a building-integrated PV (BIPV) module production plant by the company's subsidiary Envelon in Bavaria region in Germany with a capacity of up to 300,000 sq. meter annual capacity.
- In December 2021, Italian solar panel manufacturer Solarday launched a glass-glass monocrystalline PERC BIPV panel in red, green, gold, and grey. The power conversion efficiency of the product is 17.98%, and its temperature coefficient is -0.39% per degree Celsius. Along with higher power conversion capability, it also adds aesthetic value to buildings by varying colors.
- Such developments are expected to have an overwhelming effect on the market development.

Asia-Pacific Expected to Witness Significant Growth

- The Asia-Pacific region has successfully implemented solar PV technologies in many industries in the most cost-effective way. The technology in the region has reached the maturity stage and has witnessed continuously plummeting prices.
- Countries like China, India, Japan, and ASEAN have proved themselves in solar power generation with new innovative technologies for BIPV, rooftops, and many other applications. China's production scale for each technology in the PV industry accounts for more than 50% of the world and is expected to remain at the top in the near future.
- The developments happened in other parts of the region too. In September 2021, AGC Inc., the Japanese manufacturer of glass, chemicals, and high-tech materials, announced that its BIPV glass had been selected to be installed at the Singapore Institute of Technology's new Punggol campus, which is scheduled to be open by 2024.
- In May 2023, a smart building materials Australian company, ClearVue Technologies Limited, announced the official release of its improved product design for integrating solar vision glass into glazing units or IGUs. At the same time, the Company releases its new integrated solar facade solutions.
- Owing to such developments, Asia-Pacific is expected to have the highest growth rate in the coming years.

Building Integrated Photovoltaics Industry Overview

The global building integrated photovoltaic (BIPV) market is moderately consolidated. The key players in this market (not in particular order) include ONYX Solar Group LLC, Merck KGaA, AGC Inc., Solarday, and Changzhou Almaden Co. Ltd., among others.

Additional Benefits:

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

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