



Solar EPC prioritise energy storage and efficiency for advancement

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The solar EPC industry is experiencing rapid advancements focusing on energy storage, high-efficiency technologies, automation, and sustainability. Government initiatives further promote solar power generation and integration. Gagan Chanana speaks with EPR Magazine to share his thoughts on the industry.

Can you elaborate on the emerging trends in the solar EPC industry?

Emerging trends in the solar EPC industry focus on advanced energy storage, enhanced grid stability, high-efficiency technologies, increased automation, and sustainability. Advanced energy storage innovations such as efficient lithium-ion batteries, rapid charging capabilities, and smart energy management systems are essential for improving the usability and integration of solar power. Enhanced grid stability, supported by advanced storage technologies, maintains grid reliability and smooths power supply fluctuations.

The industry is shifting towards high-efficiency technologies, transitioning from polycrystalline to monocrystalline and N-type technologies like TOPCon and HJT, which promise efficiencies above 26%. This trend improves solar panel performance and energy output. Increased automation, including automatic production lines, reduces manual labour and enhances production efficiency. Lastly, the emphasis on sustainability drives the adoption of cleaner energy sources and sustainable

practices to minimise the environmental impact of solar energy projects. These trends collectively contribute to the continued evolution and growth of the solar EPC industry.

How have government schemes like the National Solar Mission (NSM) encouraged solar power generation in the country?

Government schemes like the National Solar Mission (NSM) focus on expanding solar power capacity in India. Incentives for energy storage, such as tax credits, grants, and production-linked incentive (PLI) schemes, enhance solar energy's reliability and efficiency. Additionally, the Pradhan Mantri Suryodaya Yojna (PMSY) provides increased subsidies and support for solar installations, fostering the growth of local manufacturing for solar PV cells and modules. These initiatives play a vital role in promoting renewable energy and achieving India's clean energy targets while encouraging the development of a sustainable and self-reliant solar industry.

How can companies increase efficiency and reduce costs?

Companies can adopt several strategies to increase efficiency and reduce costs. Smart energy management solutions optimise the use of stored energy, enhancing overall efficiency and reducing operational costs. Technological upgrades, such as shifting from MonoPerc to Topcon and planning for HJT advancements, can significantly improve performance. Additionally, sustainable manufacturing practices involve designing products and processes that minimise waste and optimise resource usage. By implementing these approaches, businesses can enhance sustainability

and competitiveness while reducing their environmental impact.

How does battery storage integration stabilise energy supply, and what are its benefits?

Battery storage integration in solar projects stabilises energy supply by managing intermittency issues and storing excess energy during low production periods. This enhances the reliability and availability of solar power, even during non-sunny hours, thereby supporting grid stability. Battery storage reduces reliance on conventional power sources, lowering energy costs and promoting cost-efficiency. Moreover, integrating storage with solar projects contributes to significant reductions in carbon emissions, supporting sustainability goals and advancing cleaner, more sustainable energy systems.

How can one tap the Solar EPC market in India?

Leveraging lower storage costs in the solar EPC market in India can be a powerful strategy to drive wider adoption of solar systems. The decreasing costs of energy storage technologies make solar systems more economically competitive and attractive. Investments in energy storage, supported by government initiatives, show strong market potential for integrated solar and storage solutions. Customisation for local markets is key, allowing solutions to meet regional needs and comply with regulatory environments. Building strategic partnerships with government and local stakeholders can help navigate the regulatory landscape and capitalise on available incentives, further enhancing the adoption of solar power.



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