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POWER GREEN BHARAT

India is rapidly advancing toward becoming a global leader in renewable energy, driven by collective efforts from government agencies, private sectors, and institutions. However, challenges in grid stability and capital investment remain critical.



GROWING RE FUELS UPS BUSINESS

The UPS sector's commitment to advancing renewable energy aligns with the Viksit Bharat vision. The expansion of the solar product range and improvement in inverter and battery efficiency contribute to a sustainable energy future for India.

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The renewable energy sector in India has rapidly grown, ranking fourth globally in installed capacity, with non-fossil fuel capacity reaching 203.19 GW by June 2024. Industry leaders in power solutions are driving energy security through innovative technologies. Integrating IoT and AI enhances real-time monitoring, predictive maintenance, and optimised energy use, ensuring efficient operations. The commitment by the UPS sector to the advancement of renewable energy aligns with the 'Viksit Bharat' vision. Expanding the solar product range and improving inverter and battery efficiency contribute to a sustainable energy future for India. Industry experts analyse the prospects of the UPS solutions sector.

Evolving renewable energy capacity

India has made significant strides in renewable energy, now ranking fourth globally. By June 2024, non-fossil fuel capacity of the country surpassed 203.19 GW, accounting for 45.5 percent of its total energy capacity. Solar power, driven by initiatives like the National Solar Mission, grew 31 times since 2014 to 85.47 GW. Wind power doubled to 46.65 GW in the same period. Raman Bhatia, Founder & MD- Servotech Power Systems, comments, "UPS solutions play a critical role in this growth by ensuring grid stability, integrating energy storage, and supporting infrastructure, especially in remote areas. These systems help manage renewable energy fluctuations and enhance grid reliability and efficiency."

TPEML and TPREL collaborate to drive zero-emissions mobility in India

By pairing EVs with Solar Rooftop Systems, customers can reduce the total cost of ownership for their EVs, lower their electricity bills, and accelerate the payback period for their solar investment.



Tata Passenger Electric Mobility Ltd. (TPEML) and Tata Power Renewable Energy Ltd. (TPREL) have joined hands to drive zero-emissions mobility in India through a combined solution of Electric Vehicles and Solar Rooftop Systems. Through this collaboration, TPEML will enable customers to install a solar rooftop system through TPREL. In addition, both companies will promote EVs / EV Charging and Solar Rooftop Systems to their customers to drive awareness of the benefits of solutions.

Electric Vehicles (EVs) have zero tailpipe emissions, and solar power systems, which generate emissions-free electricity, are key enablers in India's journey towards Net Zero emissions. The union government has supported EVs through multiple initiatives over the last several years, and the recently launched 'PM Surya Ghar Muft Bijli Yojana' aims to provide subsidised solar rooftop installations to 1 crore households.

While Electric Vehicles (EVs) and Solar Rooftop Systems offer customers a compelling business case, combining these two solutions unlocks even more benefits. By pairing EVs with Solar Rooftop Systems, customers can reduce the total cost of ownership for their EVs, lower their electricity bills, and accelerate the payback period for their solar investment. Additionally, this combination enables 100 percent emissions-free power for EVs. Moreover, integrating Solar Rooftop Systems with EVs decouples the well-to-wheel emissions from the grid mix, providing a faster path towards net-zero emissions for the transportation sector. This synergy between EVs and Solar Rooftop Systems offers a powerful solution for customers seeking to minimise their environmental footprint while maximising economic benefits.

Shailesh Chandra, Managing Director of Tata Passenger Electric Mobility Ltd. and Tata Motors Passenger Vehicles

Ltd., commented on the collaboration, said, "India's net zero journey can only be achieved by switching to EVs and renewable power. We see significant synergies between the customers of EVs and solar rooftop systems. Over 90 per cent of EV customers use home charging, and nearly 30 percent of our EV owners are already using Solar Rooftop Systems. Combining forces with Tata Power Renewable Energy Ltd., we intend to democratise zero-emissions mobility and decouple EVs from the grid while reducing running costs for customers."

Praveer Sinha, CEO & MD of Tata Power, said, "Combining solar rooftops and EVs is a promising, cost-effective, sustainable solution for India, and hence, it is naturally complementary. Both solutions appeal to the same set of eco-friendly and value-conscious customers. We are excited to collaborate with Tata Passenger Electric Mobility Ltd. to drive greater adoption of Rooftop Systems and EVs and provide discerning customers with an opportunity to contribute to reducing emissions while saving money."



INDUSTRIAL GRADE INSTRUMENTS
WITH TRACEABLE CALIBRATION



VIBRATION DATA LOGGER



VIBRATION METER



GEAR BOX LOW OIL SWITCH



VIBRATION SWITCH



AIR VELOCITY METER



WIND DATA LOGGER & MONITOR/SWITCH



FIELD FAILURE RELAY



PORTABLE DYNAMIC BALANCING EQUIPMENT
(SPECIALISTS FOR PRECISION COMPONENTS)

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As of July 2024, India has witnessed remarkable growth in its installed renewable energy capacity of 197+ GW. It has an ambitious target of 500 GW of renewable energy installed capacity by 2030. Meenu Singhal, Regional Managing Director, Socomec Greater India, views that the power management solutions industry plays a crucial role in this growth by ensuring that renewable energy systems operate efficiently and reliably. Effective power management is essential for integrating renewable energy into the grid, balancing supply and demand, and maximising the use of clean energy sources.

Meenu Singhal says, "At Socomec, our advanced power conversion, switching, and monitoring solutions are designed to support the seamless integration of renewable energy, enhance energy efficiency, and reduce losses. These solutions help optimise the performance of renewable energy installations, ensuring that they deliver consistent and stable power. They enable real-time monitoring and control, allowing operators to make informed decisions and respond quickly to fluctuations or challenges." He further states that as India continues to scale up its renewable energy capacity, the power management solutions industry will remain a key enabler of this transition, contributing to the country's journey toward a more sustainable energy future.

Strategies for 'Viksit Bharat' goals

Speaking on Viksit Bharat, the industrialists are very optimistic about achieving the desired goals necessary for economic and infrastructure development. Raman Bhatia shares, "Our strategies to achieve the 'Viksit Bharat' goals are centred on advancing sustainable energy solutions and driving innovation. We are committed to expanding the adoption of renewable energy by investing in solar, wind, and smart grid technologies, integrating IoT and AI for improved efficiency."

Sanchit Goyal opines that Su-Kam Power Systems is dedicated to advancing renewable energy solutions that align with the Viksit Bharat goals. He says, "We have already expanded our range of solar products and, by leveraging cutting-edge technology, have improved the efficiency of our inverters and batteries. Our commitment lies in contributing to developing clean energy infrastructure by offering smart and sustainable solutions."

Meenu Singhal has to say that to support the 'Viksit Bharat' goals, Socomec is committed to leveraging advanced technologies such as IoT and AI to enhance the reliability and efficiency across six primary market segments - data centre, healthcare, industry,

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UPS solutions play a critical role in this growth by ensuring grid stability, integrating energy storage, and supporting infrastructure, especially in remote areas. These systems help manage renewable energy fluctuations and enhance grid reliability and efficiency.

*Raman Bhatia,
Founder & MD,
Servotech Power Systems*



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We have already expanded our range of solar products and, by leveraging cutting-edge technology, have improved the efficiency of our inverters and batteries. Our commitment lies in contributing to developing clean energy infrastructure by offering smart and sustainable solutions."

*Sanchit Sekhwal Goyal,
Director,
Su-Kam Power System*



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One of our latest advancements is the development of the Diris Digiware system, a modular and scalable solution designed to optimise energy performance and monitoring within data centres, healthcare facilities, and industrial environments.

*Meenu Singhal,
Regional Managing Director,
Socomec Greater India*



infrastructure, commercial buildings, and renewable energy that we serve in India. This approach reduces downtime and supports the development of smart grids and smart cities. "Our ongoing investments in the Indian market aim to expand our manufacturing capacity to meet the increasing demands of India and emerging markets. As sustainability remains the core priority for Socomec, we are dedicated to strengthening our "Make in India" product portfolio by adhering to green and sustainable practices in our Indian manufacturing units," he adds.

Tackling challenges with resilience

As the power sector continues to evolve, industry leaders are embracing the challenges they face as opportunities for growth and innovation. Raman Bhatia emphasises a mindset of resilience and optimism. "Challenges are an inevitable part of any journey, including in the power sector. While I prefer not to dwell on the difficulties, I have learned to see them as opportunities for growth," Bhatia says. He further elaborates that Servotech has consistently used these challenges as stepping stones, fuelling their progress and shaping a stronger future.