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What are the key trends driving the growth of renewable energy in India?

India's renewable energy sector continues to witness remarkable growth and attract global attention, as reflected in the 45% year-on-year increase (as of August 2025) in investments in RE projects. The country's installed renewable capacity has crossed 230 GW as of August 2025, with nearly 50% of the clean energy target achieved in 2025 itself, five years ahead of the scheduled goal of 500 GW by 2030. India presently ranks fourth globally in renewable energy installed capacity.

This growth is supported by a rapidly expanding domestic manufacturing ecosystem, with solar module capacity reaching ~100 GW and with the introduction of ALMM-II for domestic solar PV cells, starting with ~13 GW capacity and expected to scale up to 50–60 GW by 2027. Additionally, the rise in Battery Energy Storage System (BESS) and green hydrogen tendering, with BESS capacity projected to touch 30 GW by 2027, will further enhance grid stability and accelerate India's clean energy transition.

These milestones, coupled with strong policy reforms, underscore the sector's robust fundamentals and reaffirm India's leadership in driving sustainable energy transformation on a global scale.

What are the critical challenges that must be addressed to accelerate the growth of the renewable energy sector?

Presently, around 40 GW of bid and allotted PPAs remain unsigned with REIAs, with delays stretching well beyond a year in many cases as per recent reports. Such long delays impact construction timelines as well as the procurement of equipment and materials, leading to fluctuations in project costs for

commodities, materials, and labor. These delays also influence other aspects such as interest rates and exchange rates. Together, these factors can have a substantially negative impact on project viability. Establishing an appropriate framework to minimize the time between bidding and PPA signing will help mitigate such risks.

Uncertainty around fresh grid connectivity allotments until 2030-31 has further complicated tariff discovery, given the long gestation periods of renewable projects. Additionally, issues such as land acquisition delays, evolving Right of Way (RoW) charges, and transmission infrastructure bottlenecks continue to pose implementation hurdles.

Transmission capacity must be expanded in sync with the growth in RE capacity. Currently, many RE projects are at risk of being stranded due to delays in establishing the transmission infrastructure needed to evacuate the power they will generate. Conversely, if transmission lines are completed too far ahead of RE projects, it can result in stranded infrastructure. It is therefore essential to have better planning and coordination between RE bidding agencies and transmission system planners.

Addressing these challenges through timely policy action, infrastructure strengthening, and streamlined regulatory mechanisms will be critical in sustaining India's renewable energy momentum and ensuring the sector's continued attractiveness to investors.

India's solar power generation capacity has touched 125 GW mark according to the latest reports. What is your take on this towards India's renewable energy goals?

India's remarkable progress in solar energy stands as a testament to its leadership and commitment toward a sustainable future. Crossing the 125 GW mark is a significant



milestone, establishing India as the world's third-largest solar power producer, after China and the U.S. Though countries like China have added 210 GW in the first six months of 2025. This progress underscores India's leadership in the International Solar Alliance and positions the country as a key player in the global renewable energy transition.

Solar energy has become the most affordable source of power in India, with costs now lower than coal-based generation due to technological advancements and manufacturing efficiencies. The government's policy reforms, such as Production Linked Incentive (PLI) schemes, the development of solar parks, and the reduction of GST from 12% to 5% on renewable equipment, have further boosted domestic manufacturing and improved project cost competitiveness. There has been a slowdown in rollout of solar generation projects and storage projects are urgently needed to work in unison with standalone solar.

What is trending in wind sector? How is the company playing a major role in India's wind power capacity?

India's wind energy sector is regaining momentum and remains a critical pillar of the country's clean energy transition. The sector is witnessing key trends such as the repowering of old wind sites, expansion of domestic wind turbine manufacturing, and the development of hybrid projects that combine wind and solar to enhance grid stability. India's onshore wind potential stands at about 695 GW, while its offshore potential is around 70 GW, primarily across Gujarat and Tamil Nadu. The government's National Repowering and Life Extension Policy, along with Viability Gap

Funding (VGF) support for 1 GW offshore projects, has further strengthened the sector's growth outlook.

Apraava was one of the first independent power producers (IPPs) in India to recognize the potential of renewable energy (RE) and capitalized on it by setting up wind capacity starting in 2007. Our current operational RE portfolio of over 1,450 MW comprises 1,200 MW of wind and 250 MW of solar capacity. We commissioned our largest wind project of 250 MW in Sidhpur, Gujarat, earlier this year. We also have 850 MW of RE projects (550 MW of solar and 300 MW of wind capacity) at various stages of construction. Apraava remains committed to supporting India's energy transition, helping the country achieve its net-zero targets by investing only in non- or low-carbon-emitting businesses and contributing to nation-building.

How are your innovative solutions supporting the growth of the RE sector?

We aim to invest an equivalent of ~1 GW per year in India's energy sector for the next few years. In addition to pure RE projects, we also intend to participate in standalone BESS projects as well as hybrid projects, comprising a mix of storage and solar and wind. At present, the limited capacity of evacuation systems and transmission lines is one of the biggest constraints in the growth of the RE sector. We will look at adding substations and transmission lines to our portfolio, which will further strengthen the RE ecosystem in India.

In the near to medium term, integrating large-scale renewables will require flexible transmission networks, advanced storage solutions, and digital technologies to ensure reliability. ■