

India Wind Power Sector Digest: Trends, Insights & Pathways

Examining Wind Energy trends ,
investment opportunity & development track in India

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Key Highlights –Wind Energy in India

- Under the Budget of 2025-26, the budgetary allocation from 930 Crores to 500 crores and 31 crore in research & development under the institution of wind energy.
- On average, India's wind capacity expanded by roughly 759 MW per quarter, with an annual growth rate of around 4.96.
- From 2022-23 to 2023-24, FDI inflows increased significantly, rising from ₹4,695 crores (\$588 million) to ₹7,329 crores (\$885 million).
- Suzlon has announced its collaboration with the state government to develop a 3000 MW wind energy mill and establish a Wind Turbine Blade Manufacturing Facility in Vijayapura.
- Hero Future Energies, for instance, announced a \$20 billion investment plan over six years to escalate its capacity from 1.9 GW to 30 GW by 2030, focusing on wind, solar, and battery storage projects.

Research Base

India's Expected to reach 122GW wind capacity by FY32 to ensure energy security.

The report revealed that 21 Indian states has taken contract of more than 100GW of wind energy by 2030 to meet the renewable purchase obligation & diversify their clean energy portfolios. Even like the states with limited wind potential like Odisha, Jharkhand, Punjab, & Bihar importing surplus from the wind rich states.

The green energy accounts for the 19% of the demand wind energy which is generated during the night time & morning time becomes the strategic solution to reduce reliance on thermal power and ensures round the clock green energy supply.

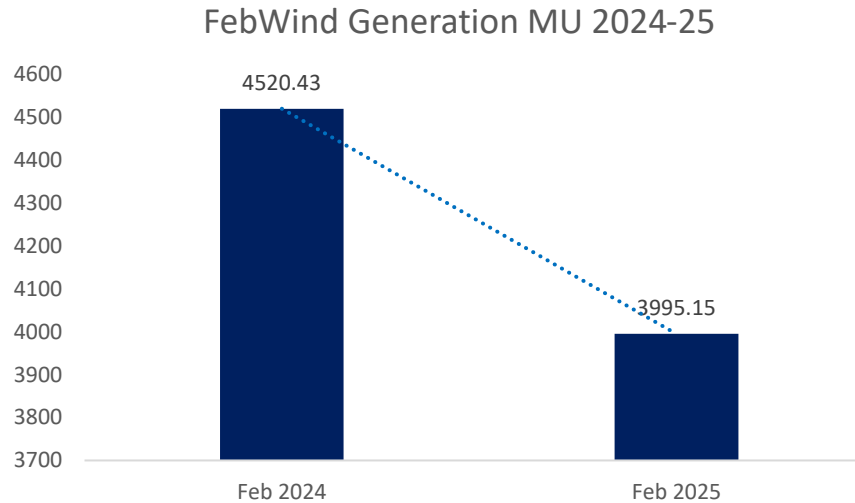
The report also states the economic benefits of wind energy including the job creation in manufacturing capacity to produce 17.5GW of wind turbines annually, positioning the country to export wind components to global markets such as Australia, Europe & USA.

Looking ahead, the National Electricity Plan projects that India's installed wind capacity will reach approximately 73 GW by 2026-2027 and 122 GW by 2031-2032. However, challenges such as state-level complications for right of way, sanctity of power purchase agreements, delayed payments, and difficulties in land allocation continue to impede progress.

Research Objectives

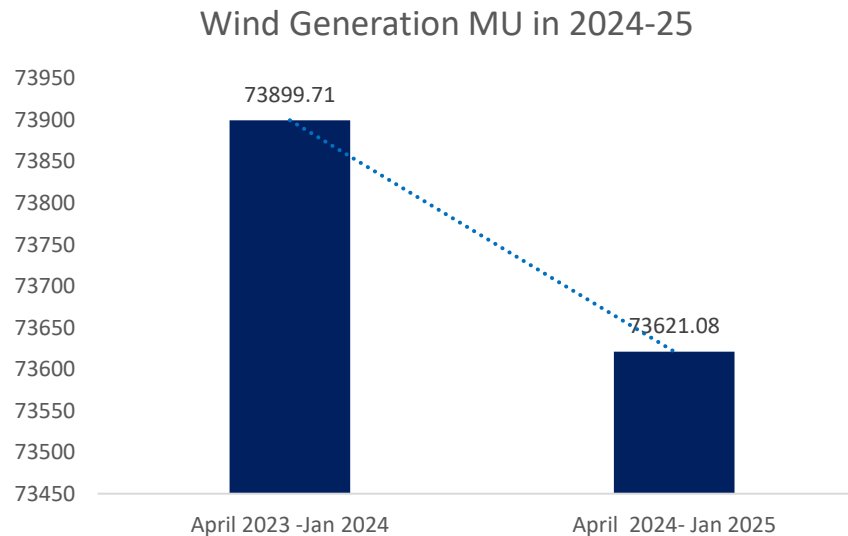
- Examine the trends of wind energy in India.
- Investment opportunity in different segments of the wind energy industry in India till 2030
- Analysis of wind energy market characteristics.
- Investment opportunity examination in wind energy
- Capturing of historic market trends , characteristics & outlook for wind energy.
- Investment opportunity assessment for plastic material & resin in India till 2030
- End consumer industry wise opportunity assessment for wind energy in India.

Exhibit 01: MoM Trends of the Feb 2024-25 Capacity.



Source: Department of Chemicals and Petrochemicals, MoC&F

Exhibit 02: YoY Trends in the Wind Generation 2024-25



Source: CEA



Research Results

- Installed capacity of 48.37 GW in 2025
- Detailed research on market characteristics, key trends and outlook of each segment of wind energy.
- Analysis on the shift to solar alternatives such as wind.
- Region wise outlook for different segments for wind energy industry in India.
- Detailed analysis of different segments of wind energy its trends and outlook.
- Private and government investments in the wind energy industry.
- Detailed analysis of rapid green technology adoption in production market of the wind energy industry.

Research Case

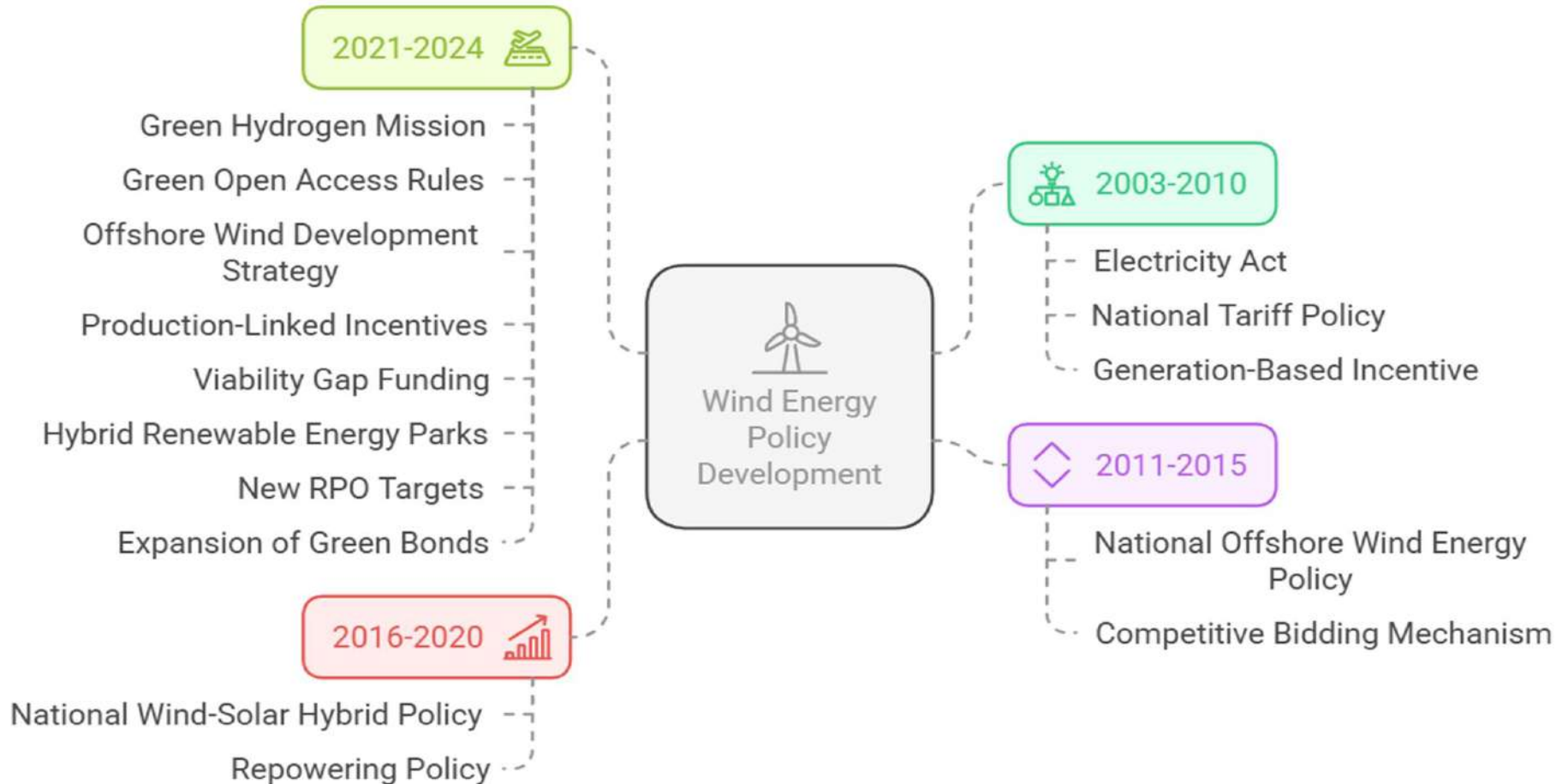
Why India's wind energy generation is dropping day by day despite the addition of the capacities ?

Big drop in the Union Budget 2025 in investments of wind energy

Even though the installed capacity reached by 48 GW yet we see sharp decline in the wind generation because of the poor financial health of the Discoms, inadequate tariff, land acquisition issues lead the reduction of PPA commissioned as they are bearing losses all the time.

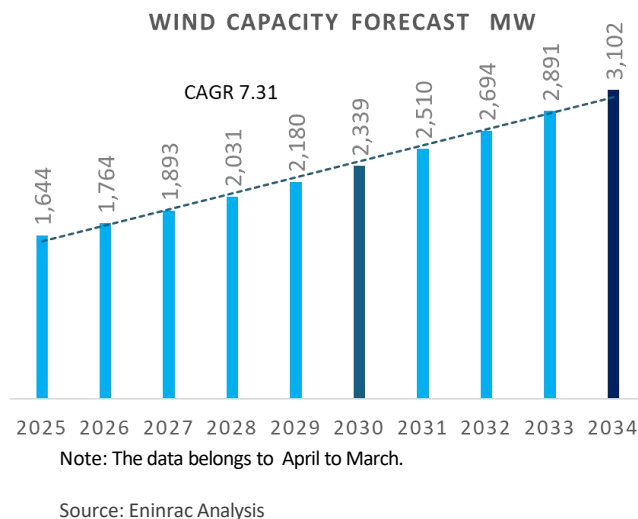
One of the major dropping investments in the Union Budget 2025 as it is quite uncertain to invest as we see a drop of 37.5 % drop from 930 crores in 2024. In the first quarter of 2024, India added about 1.2 GW of new wind capacity, reflecting a 56% increase compared to Q1 2023. By March 2024, the country's total installed wind capacity had reached 45.9 GW. However, Q2 2024 saw a slowdown, with only 770 MW installed—marking a 32% decline from the same period in 2024. This drop was attributed to grid connection delays, land acquisition challenges, right-of-way disputes, and the early arrival of monsoon rains in certain states. According to the global wind tracker data after 2023, the wind energy dropped from 2,614 MW to 1,532 MW in 2024. Rest in the two months of 2025 only 29 MW was added to the capacity. Currently, wind energy sector is increasing at a declining rate.

Evolution of India's Wind Energy Policies



- **REC Limited's Agreements:** In September 2024, REC Limited, an Indian public sector lender, signed agreements worth approximately ₹1.12 trillion (\$13.37 billion) with renewable energy developers.
- **KP Energy's Collaborations:** KP Energy Limited, a Gujarat-based wind energy company, has engaged in multiple PPPs to bolster wind energy infrastructure. Notably, in 2019, KP Energy partnered with CLP India to develop a 250.8 MW wind project in Dwarka, Gujarat
- In September 2024, TotalEnergies entered into a \$444 million joint venture with India's Adani Green Energy. This partnership involves a 1.15 GW portfolio of solar electricity installations, with both companies holding equal stakes

Exhibit 03: Anticipated Market Size of Wind energy according to historical trend in India till 2030.



Key Observatory:

This growth in the specialty Wind energy would be largely attributed to-

- The bullish wind power capacity forecast assumes a **7.31% CAGR**, leading to a significant increase from **1,644 MW in 2025 to 3,102 MW in 2034**. This represents an **88.7% total growth** over the period, almost doubling capacity compared to the base case. The higher growth rate suggests more aggressive investment, technological advancements, and strong policy support for renewable energy expansion.

Looking ahead, the National Electricity Plan projects that India's installed wind capacity will reach approximately 73 GW by 2026-2027 and 122 GW by 2031-2032. However, challenges such as state-level complications for right of way, sanctity of power purchase agreements, delayed payments, and difficulties in land allocation continue to impede progress.



Must Buy For

- Onshore Wind Developments
- Technological advancement in Wind energy
- Policy Heatmaps of Wind from 2024 to Jan 2025.
- Success Stories of Wind energy
- Future Outlook with CAGR calculation in case Bear, Bullish & BAU.

Key Queries Resolved

- What are the current market trends & growth projection for India's wind power sector.
- How are government policies & incentives shaping the development of wind energy in India?
- What are the key challenges in scaling up wind power capacity & how can they be addressed ?
- Which emerging technologies & innovation are driving efficiency & cost reduction in the wind energy?
- What are the future development of wind energy in the decade?
- How wind can help in diversifying the renewable portfolio?
- How wind can become the alternative to non-solar hours peak demand?

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