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India's transition snapshot

Key facts

India's rapidly growing power demand is driven by sustained economic growth, urbanisation and increased cooling needs. Rising temperatures and more frequent extreme heat are increasing peak electricity demand, particularly for cooling, thus reinforcing concerns around security of supply and creating pressure for additional generation. Maintaining reliability as demand grows is the central challenge of India's power transition – particularly as both renewable and fossil fuel capacity continues to expand.

At present, electricity generation remains dominated by coal, which accounted for 69.7% of generation in FY 2025–2026, while oil and gas accounted for 1.44%.[1] India has the world's second-largest operating coal fleet after China, with around 250.7 GW in operation in 2025.[2] The fleet continues to expand: a further 10 GW was commissioned in 2025 – just over 10% of the new coal capacity added globally that year.[3] A significant pipeline of proposed capacity remains under development, in line with the government's plan to add around 97 GW of new coal capacity by 2034–2035.[4] Yet even as capacity grows, the amount of electricity generated from coal declined in 2025.[5]

Wind and solar are playing a growing role in meeting India's electricity demand, accounting for 9.5% and 5.8% of electricity generation in in FY 2025–2026, respectively. [6] Together, their share of electricity generation increased from approximately 12.4% in FY 2024–2025 to 15.1% in FY 2025–2026, reflecting year-on-year growth.[7]

[1] NITI Aayog, August 2026, **India Climate and Energy Dashboard**
[2] Global Energy Monitor, 2026, **Boom and Bust Coal Report**, p.25.
[3] Ibid, p.11.
[4] Press Information Bureau (PIB), Government of India, December 2025, **Government of India Strategizes Power Capacity Expansion to Meet Growing Peak Demand**
[5] Ember, 2026, **Global Electricity Review 2026 – India**. Details that India's absolute coal-fired electricity generation declined by 44 TWh (2.9%) in calendar year 2025, while coal's share of generation fell from 75% in 2024 to 71% in 2025.
[6] NITI Aayog, August 2026, **India Climate and Energy Dashboard**
[7] Ibid.

India's rapidly accelerating renewable deployment is supported by long-term policy frameworks. India added a record 55.29 GW of non-fossil fuel capacity in FY 2025–2026, nearly double the previous record of 29.5 GW in the preceding year; this included 44.61 GW of solar and 6.05 GW of wind capacity.[8] This expansion is supported by policies aimed at improving energy access, accelerating electrification and attracting investment, alongside efforts to strengthen integration across the national power system, from generation to transmission and distribution. The National Generation Adequacy Plan for 2026–2036 provides a longer-term framework for meeting rising demand while expanding renewables, storage and transmission.[9] Achieving capacity targets envisaged in the plan could lead to non-fossil power capacity reaching nearly 70% by 2036.

The key constraint is whether India's power system can absorb renewable growth quickly enough to limit further coal lock-in and ensure that renewables can increasingly displace – rather than simply complement – fossil fuel generation. Integrating much larger volumes of variable renewables – and meeting the energy needs of underserved communities across the country – will require substantial grid expansion, modernisation and storage. The Central Electricity Authority estimates that India could require around 174 GW of storage power capacity (equivalent to 888 GWh of stored energy) by FY 2035–2036, alongside major transmission investment, to maintain system adequacy as renewable penetration rises.[10] This creates significant opportunities for international cooperation on transmission, storage, digitalisation and power-market reform while supporting India's wider energy security objectives. It also makes investment in transmission, storage, flexibility and market reforms critical to accelerating the transition and reducing the need for additional fossil fuel capacity.

Opportunities for international collaboration

Cooperation with the EU and other international partners on clean energy and electric vehicle manufacturing. India's ambition to become a global manufacturing hub for clean technologies and electric mobility manufacturing creates opportunities to link the energy transition to jobs, energy security and industrial development.[11]

Strengthening clean technology supply chains and mobilising investment. Building on India's growing capabilities in battery storage, green hydrogen, advanced grid technologies, solar, electric vehicles and onshore wind manufacturing. Opportunities for cooperation include clean technology trade, supply chain diversification, industrial decarbonisation, grid modernisation and investment in clean energy infrastructure.[12]

[8] Press Information Bureau (PIB), Government of India, April 2026, **India Ranks third globally in Renewable Energy Installed Capacity**

[9] Indian Central Electricity Authority, March 2026, **National Generation Adequacy Plan (2026-27 to 2035-36)**

[10] Ibid. p.i

[11] News On Air, 16 September 2025, **PM Modi: Clean Mobility & Energy to Make India a Global Hub**

[12] E3G, January 2026, **Why clean manufacturing should define the future of EU-India strategic partnership**

Deepening cooperation through the EU–India strategic partnership. The 2026 Joint Comprehensive Strategic Agenda identifies clean technology transfer, investment and strategic value chains as priorities for closer cooperation.[13]

[13] EU Commission, 27 January 2026, **Towards 2030: A Joint European Union-India Comprehensive Strategic Agenda**

ABOUT E3G

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We drive systemic action on climate by identifying barriers and constructing coalitions to advance the solutions needed. We create spaces for honest dialogue, and help guide governments, businesses and the public on how to deliver change at the pace the planet demands.

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