POWERup

Update on India's electricity capacity, generation and investment

Institute for Energy Economics and Financial Analysis

3Q 2026

1. Installed capacity

Third quarter (3Q) 2026 update:

Non-fossil sources accounted for 87.9% of new capacity additions in 3Q 2026. Gas and diesel capacity declined due to retirements.

India added power generation capacity of **12,128 megawatts**[1] (MW) in the third quarter (3Q) of 2026 (July–September), with non-fossil fuel-based power capacity accounting for **87.9%** of new capacity additions. Net capacity additions stood at 10,038MW after accounting for total retirements of approximately 2,089MW (Table 1).

Solar accounted for 73.4% of new capacity additions this quarter, followed by wind at 14.5%. Coal and lignite capacity also increased during the quarter. While 1,470MW of coal- and lignite-based capacity was added, 810MW was retired, resulting in net additions of 660MW. The coal capacity added this quarter came from:

- Tamil Nadu Power Generation Corporation Limited's Udangudi Thermal Power Station, Unit 1, added 660MW.
- Nagai Thermal Power Plant in Tamil Nadu, Unit 1, added 150MW.
- Satluj Jal Vidyut Nigam's (SJVN) Buxar Thermal Power Station in Bihar, Unit 2, added 660MW.

Meanwhile, 978MW of installed gas capacity and 301MW of diesel capacity were retired in 3Q 2026. India continues to wind down its gas-based power capacity because of high and volatile liquefied natural gas (LNG) prices, limited domestic gas allocation and competition from

[1] All figures, including totals and percentages, have been rounded up.

Table 1: Installed power generation capacity by source (MW), 3Q 2026

Energy source	As of 30 June 2026	As of 30 September 2026	New capacity addition in the quarter	Retirement in the quarter	Net capacity added#	% of new capacity added
Wind power	57,443	59,201	1,758	0	1,758	14.5
Solar power*	162,152	171,051	8,899	0	8,899	73.4
Small hydro	5,182	5,182	0	0	0	0
Biomass	10,869	10,869	0	0	0	0
Waste-to-energy*	878	878	0	0	0	0
Large hydro	52,065	52,065	0	0	0	0
Nuclear	8,780	8,780	0	0	0	0
Coal (+ lignite)	230,778	231,438	1,470	810	660	12.1
Gas	20,122	19,144	0	978	-978	0
Diesel	589	288	0	301	-301	0
Total	**548,858**	**558,896**	**12,128**	**2,089**	**10,038**	**100**

*Includes grid and off-grid capacities
#Net capacity is calculated after deducting retirements from new capacity additions

Source: Central Electricity Authority (CEA), IEEFA

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cheaper coal and renewables. The West Asia crisis further highlighted the risks of dependence on imported fossil fuels. As a result, many gas plants have become economically unviable, underutilised, or inoperable. These reductions accounted for approximately 61% of the total 2,089MW retired during the quarter.

As of 30 September 2026, non-fossil fuel-based power capacity accounted for 55.1% of India's installed power capacity, up from 54.2% at the end of June, while coal and lignite accounted for 41.4%. As renewable capacity expands, energy storage will be increasingly important to manage variability and maintain grid stability. The Central Electricity Authority (CEA) projects a requirement of 73.93 gigawatts (GW) of energy storage capacity by 2031-32, comprising 47.24GW from battery energy storage systems (BESS) and 26.69GW from pumped storage projects (PSPs).

Year-to-date (YTD) update: January to September 2026

Capacity additions increased by 16% in January–September of 2026, compared with the same period in 2025.

India added **45,167MW** of net power capacity in the first nine months of 2026 (January–September), a 16% increase from 38,887MW in the same period in 2025 (Table 2).

Renewables accounted for 91.3% of the net capacity additions, equivalent to 41,239MW. Solar contributed 35,242MW, accounting for 78% of the net capacity additions. Wind capacity additions declined slightly, from 4,961MW to 4,690MW, while coal and lignite additions increased from 5,108MW to 5,208MW. This points to continued growth in renewable capacity, led increasingly by solar, alongside ongoing additions to coal capacity.

Policy support and financing are also helping expand solar deployment across different segments. In July 2026, the Union Cabinet approved the Pradhan Mantri Surya Sarovar Yojana (PM-SSY), which envisages 5,000MW of floating solar photovoltaic projects integrated with energy storage systems. Additionally, the World Bank and Asian Development Bank approved financing to support the Pradhan Mantri Surya Ghar: Muft Bijli Yojana, India's primary programme driving residential rooftop installations, this quarter.

Together, these initiatives support solar deployment across utility-scale and residential rooftop segments, with storage integration also gaining attention. Further details on the financial commitments underpinning these initiatives are provided in the Investments section of this newsletter.

Table 2: Net power capacity additions by source (MW), 2025 versus 2026

Energy source	Net capacity addition, 9 months 2025 (MW)	% of net capacity added, 2025	Net capacity addition, 9 months 2026 (MW)	% of net capacity added, 2026
Wind power	4,961	12.8	4,690	10.4
Solar power*	29,467	75.8	35,242	78.0
Small hydro	34	0.1	23	0.1
Biomass	29	0.1	112	0.2
Waste-to-energy*	234	0.6	22	0.0
Large hydro	3,140	8.1	1,150	2.5
Nuclear	600	1.5	0	0.0
Coal (+ lignite)	5,108	13.1	5,208	11.5
Gas	-4,686	-12.0	-978	-2.2
Diesel	0	0.0	-301	-0.7
Total	**38,887**	**100%**	**45,167**	**100**

*Includes grid and off-grid capacities

Source: CEA, IEEFA

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Net capacity additions trend:

Net capacity additions fell 37.5% in 3Q 2026 year-on-year (YoY).

India added 10,038MW of net power generation capacity in 3Q 2026, a 37.5% decline YoY from 3Q 2025. Fossil fuel-based capacity additions also slowed, with coal additions falling while gas and diesel capacity declined due to retirements (Table 3).

Net capacity additions were at their lowest level in the past five quarters, falling 37.7% quarter-on-quarter (QoQ) from 16,119MW in 2Q 2026.

Solar remained the largest contributor, adding 8,899MW, although this was down 25.2% QoQ from 11,891MW in 2Q 2026. Wind additions increased 30.4% QoQ to 1,758MW, making it the only generation source to record a QoQ increase in net capacity additions. Overall, the quarter saw a slowdown in net capacity expansion, driven by lower solar and coal additions and reductions in gas and diesel capacity.

Table 3: Net power capacity additions (MW), last five quarters

Energy source	3Q 2025	4Q 2025	1Q 2026	2Q 2026	3Q 2026
Wind power	1,449	1,387	1,584	1,348	1,758
Solar power*	11,084	8,478	14,451	11,891	8,899
Small hydro	32	25	12	11	0
Biomass	14	0	112	0	0
Waste-to-energy*	1	2	20	1	0
Large hydro	730	807	500	650	0
Nuclear	0	0	0	0	0
Coal (+ lignite)	2,760	2,152	2,330	2,218	660
Gas	0	-10	0	0	-978
Diesel	0	0	0	0	-301
Total	**16,070**	**12,841**	**19,010**	**16,119**	**10,038**

*Includes grid and off-grid capacities

Source: CEA, IEEFA

Capacity additions among large states:

Gujarat recorded the highest capacity additions among large states, adding 3,972MW in 3Q 2026.

Among large states (with installed renewable energy capacity close to 10GW or more), Gujarat led renewable energy capacity additions in 3Q 2026 with 3,972MW, followed by Rajasthan (2,103MW) and Uttar Pradesh (912MW) (Table 4).

Capacity additions slowed across most large states, with seven of the eight states recording a QoQ decline. Maharashtra saw the steepest fall with additions declining by 77% from 2Q 2026. Tamil Nadu's additions also declined by 56% QoQ, with the slowdown coinciding with reports that the Tamil Nadu Green Energy Corporation Limited has not been inviting fresh applications for new solar and wind projects since March 2026, pending a policy for BESS. New renewable energy project applications will be invited once the policy is in place. Karnataka was the only state to mark an increase in capacity additions this quarter, rising 48% QoQ.

Another constraint on states' renewable energy increase is renewable energy curtailment. In September 2026, a total of approximately 378 million units (MUs)

Table 4: Renewable energy capacity installations (MW), large states*

	3Q 2025	4Q 2025	1Q 2026	2Q 2026	3Q 2026
Rajasthan	2,613	2,161	4,512	2,509	2,103
Uttar Pradesh	340	79	365	1,688	912
Gujarat	2,571	2,630	4,635	4,428	3,972
Madhya Pradesh	365	249	329	368	340
Maharashtra	3,362	2,661	1,714	1,105	254
Andhra Pradesh	504	859	1,145	621	479
Karnataka	970	484	739	600	890
Tamil Nadu	840	524	1,995	668	294

*States with an installed renewables capacity of close to 10GW or more.

Source: CEA, Ministry of New and Renewable Energy (MNRE), IEEFA

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of renewable energy was curtailed (314MUs of solar and 64MUs of wind). Of this, Gujarat recorded the highest renewable energy curtailment at 187.76MUs, followed by Rajasthan at 110MUs. Solar accounted for most curtailment in both states, and in Karnataka (21.07MUs). Tamil Nadu (12.93MUs), meanwhile, recorded more wind curtailment. These have been attributed to transmission constraints, limited BESS capacity, and insufficient grid flexibility.

However, the quarterly slowdown does not necessarily indicate a loss of momentum in states' overall renewable energy deployment. Uttar Pradesh, for example, crossed 10GW of installed renewables capacity in 2026, and its quarterly additions rose 168% YoY, from 340MW in 3Q 2025 to 912MW in 3Q 2026. Andhra Pradesh also recorded a nearly four-fold increase in annual renewable energy capacity additions, from 1,085MW in financial year (FY) 2024-2025 to 3,866MW in FY2025-2026. This growth was attributed to the state's Integrated Clean Energy Policy, improved transmission connectivity, faster approvals, and sustained investor interest.

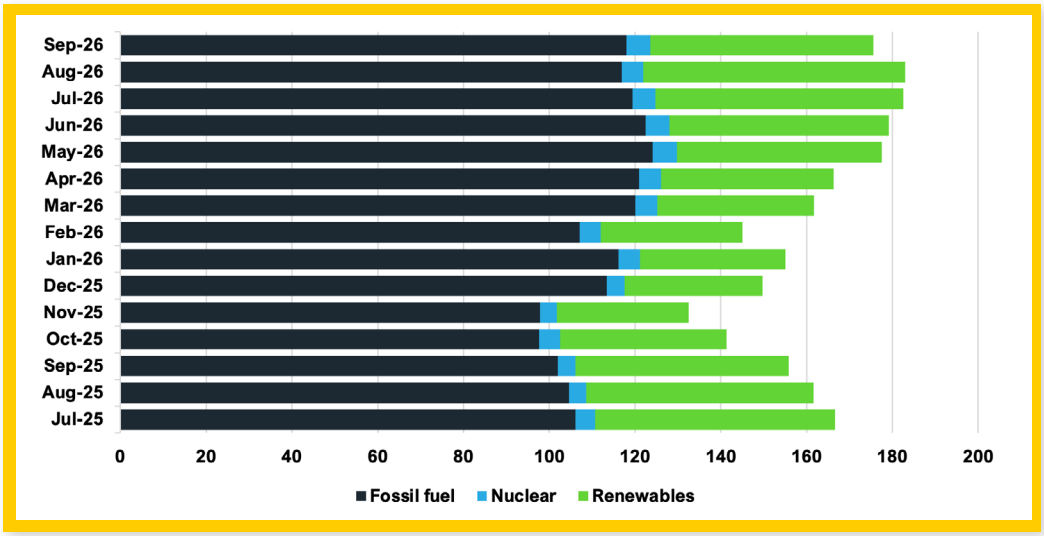
2. Generation

Power generation grew 11.8% YoY in 3Q 2026, with fossil fuel-based generation outpacing renewables.

Power generation increased 11.8% from 484 billion units (BUs) in 3Q 2025 to 541BUs in 3Q 2026. Fossil fuel generation rose by 13.3%, from 312.68BUs in 3Q 2025 to 354.2BUs in 3Q 2026. Renewables also increased YoY, from 158.7BUs in 3Q 2025 to 170.8BUs in 3Q 2026, a 7.7% increase. Nuclear generation also increased 25.7% in the same time period.

Renewable energy generation typically rises during the monsoon season, supported by stronger wind speeds and seasonal hydropower availability. However, generation trends in 3Q 2026 were affected by El Niño-related weather conditions. Hydropower (small and large, including imports from Bhutan) decreased 14.4% YoY.

Figure 1: Power generation by source in billion units (BUs), 2025–26



Source: CEA, MNRE, IEEFA

Looking ahead, weaker wind and hydropower output, combined with rising demand for air conditioning, could widen the gap between electricity demand and available supply by nearly 18 terawatt-hours (TWh) over a period of one year to June 2027. This potential shortfall could increase reliance on thermal power generation to meet demand.

These risks highlight the importance of maintaining adequate and reliable electricity supply as demand grows. With fossil fuel-based generation increasing faster than renewable generation in 3Q 2026, the availability of flexible resources, including energy storage and responsive power generation, will be important for managing weather-related variability and maintaining system reliability.

3. Investments

Investments reached USD5,284 million (~INR50,241 crore), up 21% QoQ from USD4,349 million (INR41,351 crore) in 2Q 2026.

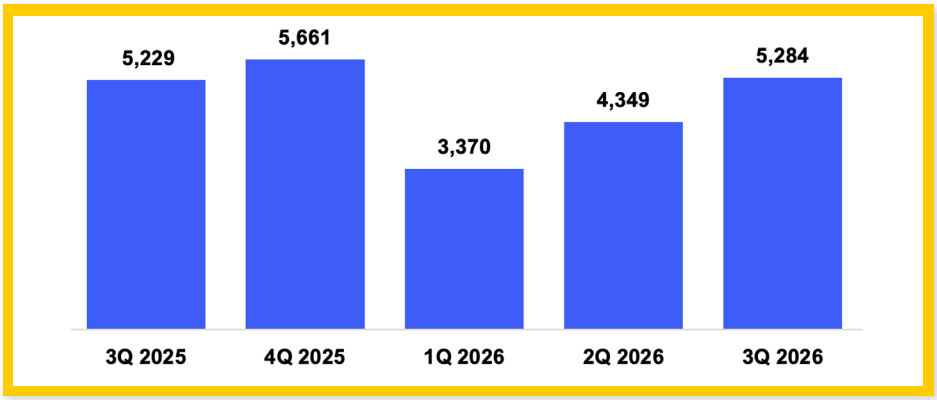
Investments in India's renewable energy sector reached USD5,284 million (INR50,241 crore)[2] in 3Q 2026, up 21% QoQ from USD4,349 million (INR41,351 crore) in 2Q 2026. YoY, investment remained broadly stable, increasing by 1% from USD5,229 million (INR49,718 crore) in 3Q 2025. The quarterly rebound brought investment close to the peak of USD5,661 million (INR53,826 crore) recorded in 4Q 2025, followed by a dip to USD3,370 million (INR32,042 crore) in 1Q 2026.

The scale of financing required remains substantial. According to the Ministry of New and Renewable Energy (MNRE), India's clean energy transition will require INR47.5 lakh crore (USD500 billion) by 2030. The modest YoY growth will have to increase significantly to match the scale of India's demand.

[2]All currency conversions in this newsletter were undertaken using OANDA on 28 October 2026.

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Figure 2: Investments in India's renewable energy sector (USD million)



Source: JMK Research and Analytics, news reports

Some significant investments and deals announced during the quarter are listed below. These do not directly reflect the quarterly investment total reported above:

Aditya Birla Renewables	**Aditya Birla Renewables** secured an INR15,213 crore (USD1.6 billion) term loan from Mitsubishi UFJ Financial Group (MUFG) to finance its proposed acquisition of 100% of Solenergi Power, including the Sprng Energy group, from Shell. The acquisition, valued at approximately INR17,322 crore (USD1.8 billion), covers a 5 gigawatt-peak (GWp) solar and wind portfolio in India, including 3.3GWp of operational assets, and 1.7GWp of contracted capacity.
Avaada Group	**Avaada Group** achieved financial closure for approximately INR12,360 crore (USD1.3 billion) to develop a 2.15GW renewable energy portfolio across Gujarat and Maharashtra, comprising 1.35GW of hybrid projects and 800MW of utility-scale solar. Financing was sanctioned by the State Bank of India, REC Limited, and Canara Bank, with projects supplying electricity to state distribution companies Maharashtra State Electricity Distribution Company Limited and Gujarat Urja Vikas Nigam Limited.
The World Bank	**The World Bank** approved a financing package of approximately INR8,462 crore (USD890 million) for India's Pradhan Mantri Surya Ghar: Muft Bijli Yojana, comprising a INR7,795 crore (USD820 million) loan from the International Bank for Reconstruction and Development (IBRD), a USD60 million (INR570 crore) concessional loan from the Clean Technology Fund and a USD10 million (INR95 crore) grant from the Livable Planet Fund. The programme is also expected to mobilise INR39,934 crore (USD4.2 billion) in private commercial lending to support rooftop solar installations for Indian households.
The Asian Development Bank	**The Asian Development Bank** (ADB) approved an INR8,082 crore (USD850 million) loan to support India's Pradhan Mantri Surya Ghar: Muft Bijli Yojana, accelerating rooftop solar deployment for low- and middle-income households. The financing will support reforms, private sector investment, grid personnel training, and rural entrepreneurship, contributing towards a target of installing 30GW of residential solar capacity across 10 million households by FY2026-2027.
Agastya Green Energy Ltd	**Agastya Green Energy Ltd** announced an INR7,800 crore (USD820 million) investment to establish 12GW each of solar ingot and wafer manufacturing capacity in Andhra Pradesh.
ReNew and Mitsui	**ReNew and Mitsui's** 320MW round-the-clock (RTC) hybrid renewable energy project across Rajasthan, Maharashtra and Karnataka secured an INR6,941 crore (USD730 million) green loan from a consortium of 12 banks, led by Standard Chartered Bank, Société Générale, Sumitomo Mitsui Banking Corporation, and Bank of America. The loan will refinance existing senior debt and cover project-related costs and capital expenditure for the wind, solar, and battery storage project.
Brookfield	**Brookfield** launched Lumara, a renewable energy platform in India, with plans to deploy approximately INR5,704 crore (USD600 million) to develop solar, wind and battery storage projects. The platform will start with a portfolio exceeding 6GW of capacity and focus on addressing project development bottlenecks, including delays in power purchase agreements, grid connections, and land acquisition.

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The Japan Bank for International Cooperation	**The Japan Bank for International Cooperation** (JBIC) signed a loan agreement of up to JPY80 billion or INR4,820 crore (USD506 million), with Power Grid Corporation of India to finance a high-voltage direct current (HVDC) transmission project linking Gujarat's Khavda Renewable Energy Park to Nagpur, Maharashtra. The loan is co-financed by Japanese banks, with JBIC providing a guarantee for the private lenders' portions, supporting transmission infrastructure needed to evacuate renewable power.
Indian Railway Finance Corporation Ltd	**The Indian Railway Finance Corporation Ltd** signed an INR4,200 crore (~USD442 million) term loan agreement with Damodar Valley Corporation to finance floating, ground-mounted and rooftop solar projects, as well as BESS in Jharkhand and West Bengal.
ACME Solar Holdings Limited	**ACME Solar** secured approximately INR3,404 crore (~USD358 million) in a long-term project financing loan from Power Finance Corporation to develop and construct a 250MW firm and dispatchable renewable energy (FDRE) project in Rajasthan and Gujarat. The project combines solar, wind, and battery energy storage, and has a 25-year power purchase agreement with NHPC.
Serentica Renewables	**Serentica Renewables** secured a loan agreement from a consortium of lenders led by ADB for INR3,280 crore (USD345 million). The loan will fund the development and refinancing of a 395.4MW solar and wind hybrid power project in Koppal, Karnataka.
ACME Solar	**ACME Solar** secured INR2,647 crore (~USD278 million) in long-term project financing from REC Limited for its 450MW/1,800 megawatt-hours (MWh) FDRE project. The project combines renewable power generation with battery storage and is backed by a 25-year power purchase agreement with SJVN Limited.
CleanMax	**CleanMax** raised INR2,500 crore (~USD263 million) through green non-convertible debentures (NCDs) from domestic and international institutional investors, including the International Finance Corporation (IFC), National Bank for Financing Infrastructure and Development (NaBFID), and India Infrastructure Finance Company Limited (IIFCL). The bonds are allocated to finance large-scale renewable energy projects in India's commercial and industrial sector.

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The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy.
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