

# Power Giants Hot Up Thermal Plans with Over ₹5.5 L cr Spends

Soaring electricity demand from industrial, commercial, residential segments fuel 50 GW capacity expansion

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**Mumbai:** India's leading power producers Adani Power, Torrent Power, JSW Energy, and state-owned NTPC have lined up investments exceeding ₹5.5 lakh crore to expand their thermal capacity by more than 50 GW by 2032, even as they continue to invest on renewables. Adani Power is targeting to expand its coal-based power capacity to 41.87 GW by FY32 from 18.15 GW at present, with a planned investment of ₹2 lakh crore.

NTPC in August said it is adding 27 GW of thermal capacity by 2031-32 on top of 62.8 GW capacity now. While it did not share its investment target, NTPC may have to invest over ₹2.25 lakh crore to achieve it. The estimated capital cost for setting up new coal-based thermal capacity, as considered in the National Electricity Plan, is ₹8.34 crore per MW (at 2021-22 price level).

Torrent Power is evaluating plans for 5-7 GW of new coal-based plants by 2032, which could entail an outlay of ₹60,000-90,000 crore. Currently, it has 2.7 GW of gas-based power capacity.

JSW Energy, while maintaining its primary focus on green growth, has signalled selective additions to its 5.7 GW thermal fleet within a broader portfolio of 30.5 GW by 2030. However, it has not specified a thermal investment figure.

Tata Power, one of the oldest thermal power players in the country, is yet to firm up its thermal power addition plans. Currently, it has a thermal power capacity of 8.8 GW.

## Growth On the Boil

Company-Wise Thermal Capacity Breakdown

Company	Plan	Capacity	Projected Investment
Adani Power	Installed	18,150 MW	
	Upcoming	23,720 MW	₹2 lakh crore
NTPC	Installed	64,174 MW	
	Upcoming	15,580 MW	₹2.25 lakh crore**
Torrent	Installed	3,092 MW	
	Planned	5,000-7,000 MW	₹60k-90k crore
JSW Power	Installed	5,658 MW	
	Upcoming	3,400 MW*	NA

\*1600 MW at its Salboni plant & 1800 MW optionality at its KSK Mahanadi plant; \*\*estimated value; Source: Respective cos' analyst presentations



The fresh investments come amid soaring electricity demand from industrial, commercial, and residential segments as well as increased urbanisation.

**As of June 2025, India's total installed power capacity reached 476 GW, of which thermal power accounts for 50.5%**

"India's power demand is expected to grow rapidly, with peak demand rising to 400 GW by 2031-32 and 700+ GW by 2047," an Adani Power spokesperson said. "Thermal power, with its inherent ability to provide large-scale, reliable, and round-the-clock power, will continue to remain the backbone of our energy security."

Adani Power has already emerged as India's largest private thermal generator.

Sharad Mahendra, joint managing director and CEO of JSW Energy, said the company's strategy balances sustainability and reliability.

"In our total portfolio of 30.5 GW by 2030, our growth engine remains renewables, but we are evaluating selective thermal additions to meet peak demand and ensure grid stability," Mahendra told ET. "This does not dilute our green push. Any thermal capacity is only to support the reliability of the grid."

Torrent Power, which is considering one of the biggest private-sector greenfield coal investments in a decade, also stressed that its move is about balancing demand and green energy. "The coal-based power capacity addition being envisaged is to meet the growing power demand and avoid future deficits, particularly in peak hours. In pa-

rallel, our push towards renewables has not and will not slow down," a Torrent spokesperson said.

NTPC and Tata Power did not reply to ET's emailed queries as of press time Wednesday.

The peak load in the country is around 250 GW at present.

As of June 2025, India's total installed power capacity reached 476 GW. Thermal power remains dominant, accounting for 240 GW, or 50.52% of the total.

The Central Electricity Authority (CEA) has targeted a total thermal capacity addition of 80-90 GW by FY32, encompassing both committed and planned projects.

India's per capita power consumption was approximately 1,538 kWh (kilowatt-hour) in 2024-25 (as of June 2025), a significant increase from 1,395 kWh in the previous fiscal year. Bihar has the lowest per capita power consumption at 317 kWh, while Gujarat has the highest at 1,983 kWh.

While renewables continue to attract the bulk of fresh energy investments — with \$300 billion expected till FY32 — the thermal sector's share of over \$90 billion highlights its continued relevance.

"Sustainability through renewable energy and reliability through thermal energy is the key, and we are going to play a key role in this India growth story," Mahendra of JSW said.

Vikram V, vice president and sector head, corporate ratings, at Icra, said India currently has about 43 GW of thermal power capacity under construction, driven by public sector utilities.