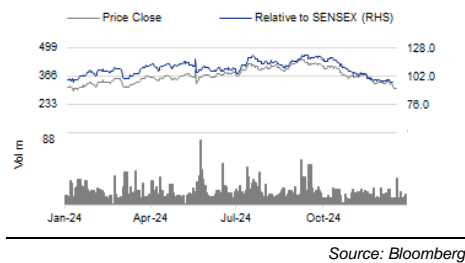


India
ADD (Initiating coverage)

Consensus ratings*:	Buy 20	Hold 2	Sell 3
Current price:	Rs308		
Target price:	Rs385		
Previous target:	NA		
Up/downside:	25.0%		
EIP Research / Consensus:	-13.5%		
Reuters:			
Bloomberg:	NTPC IN		
Market cap:	US\$41,162m		
	Rs2,988,997m		
Average daily turnover:	US\$92.4m		
	Rs6707.2m		
Current shares o/s:	12,580.1m		
Free float:	21.3%		

*Source: Bloomberg



Price performance	1M	3M	12M
Absolute (%)	(13.3)	(27.0)	(1.4)
Relative (%)	(8.0)	(23.3)	(7.5)

Major shareholders	% held
Government of India	51.1
ICICI Pru	4.0
LIC	4.0

Research Analyst(s)

Ishan VERMA
 T (91) 22 4161 1565
 E ishan.verma@incredresearch.com

NTPC Ltd

Powering India's energy future

- NTPC's 25GW brownfield thermal expansion ensures base-load stability with industry-leading PLF at 77.25%; 8.8 GW to be awarded in FY25F.
- NTPC, along with NGEL, aims to scale renewable capacity 20x to 60GW by FY32F from 3.3GW, with~ 89% EBITDA margin from long-term 25-year PPAs.
- We initiate coverage on NTPC with an ADD rating and a SOTP-based target price of Rs385 as a proxy play on India's 900GW energy transition.

Leader with a 24% market share; balances thermal & renewable

NTPC is India's largest power utility, with a 17% share in the country's installed power capacity having 76GW operational capacity and contributing 24% (422BU) to India's total electricity generation in FY24. NTPC's robust dual-energy strategy focuses on balancing base-load thermal stability with clean energy expansion. Thermal power capacity is set to grow by 25GW by FY32F, which includes 11GW of capacity under-construction and 8.8GW of thermal projects to be awarded in FY25F, supporting the Central Electricity Authority or CEA's forecast of 80GW additional thermal capacity by FY32F. Simultaneously, NTPC's listed subsidiary NGEL focuses on renewables, aiming at a capacity of 60GW by FY32F, with operational renewables to rise from 3.3GW in FY24 to 15GW by FY27F.

900GW market by FY32F; targets 130GW+ growth-ready portfolio

India's power sector is on a high-growth trajectory, with installed capacity expected to expand from 442GW in FY24 to 900GW by FY32F. NTPC's regulated business ensures stable earnings with a 15.5% RoE for thermal projects, achieving an impressive plant load factor (PLF) of 77.25% for coal plants in FY24 vs. the industry average of 69.5%. With captive coal production projected to reach 50mt by FY27F, NTPC is strengthening supply security and cost efficiency. Its brownfield expansion at Rs100m per MW is set to drive regulated equity CAGR of 9% to Rs1,345bn by FY27F. Renewable energy, spearheaded by NGEL, targets a scalable unregulated business model with long-term power purchase agreements or PPAs and the EBITDA margin of 89% ensuring cash flow. With renewables' share to reach 500GW by FY30F, NTPC is poised to lead India's energy transition while maintaining grid stability, with peak demand likely to post a 7% CAGR to 366GW by FY32F.

Large headroom to grow; initiate coverage with an ADD rating

NTPC's major capacity expansion and stable cash flow makes it a top investment in India's energy transition space. Our SOTP valuation highlights NTPC's leadership and growth potential. The regulated thermal power business is valued at 1.55x FY26F BV, while subsidiaries and JVs are pegged at 1.9x FY26F regulated equity per share with a 20% holding company discount. The renewables segment, led by NGEL's extensive pipeline, is valued at the CMP. This translates to a target price of Rs385 or ~25% upside from the CMP. We assign an ADD rating to NTPC. Ventures in green hydrogen (5GW), nuclear power (2.8GW), & PSP (8GW) provide further upside potential. Downside risks: Delay in plant commissioning, changes to CERC regulations and reduction in NGEL's valuation.

Financial Summary

	Mar-23A	Mar-24A	Mar-25F	Mar-26F	Mar-27F
Revenue (Rsm)	1,637,698	1,619,850	1,709,111	1,758,065	1,839,485
Operating EBITDA (Rsm)	426,373	443,166	475,738	483,588	506,560
Net Profit (Rsm)	163,140	155,705	191,566	201,600	215,425
Core EPS (Rs)	17.7	17.8	19.8	20.8	22.2
Core EPS Growth	5.6%	0.3%	11.1%	5.2%	6.9%
FD Core P/E (x)	18.32	19.20	15.60	14.83	13.87
DPS (Rs)	7.3	7.5	8.2	8.6	9.1
Dividend Yield	2.35%	2.43%	2.65%	2.77%	2.96%
EV/EBITDA (x)	11.26	10.82	10.15	10.14	9.84
P/FCFE (x)	(99.89)	43.94	15.19	15.10	14.75
Net Gearing	130.5%	120.5%	114.3%	110.6%	107.6%
P/BV (x)	2.15	1.99	1.86	1.73	1.61
ROE	12.9%	11.9%	12.3%	12.1%	12.0%

% Change In Core EPS Estimates
 InCred Research/Consensus EPS (x)

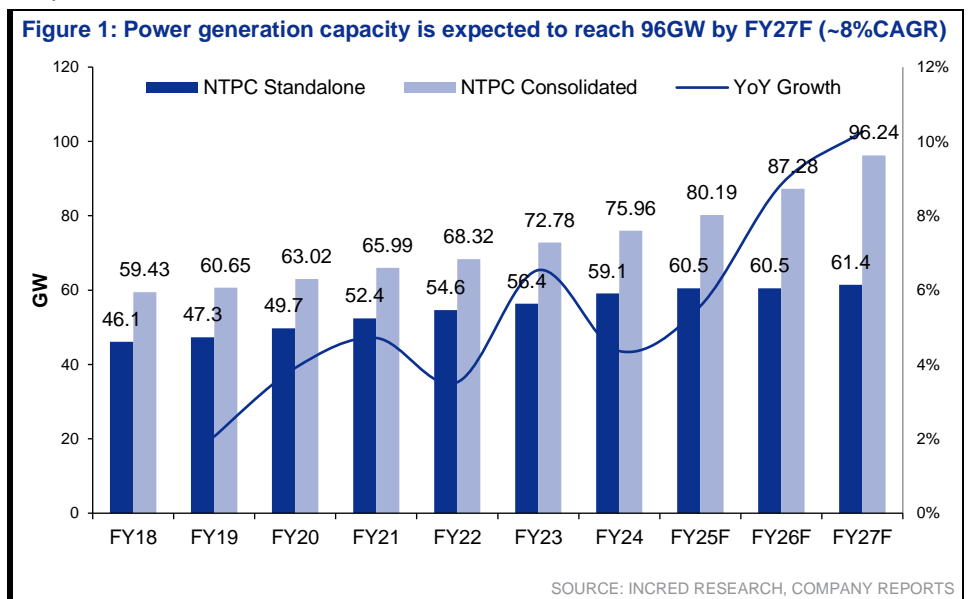
Powering India’s energy future

Investment rationale

85GW expansion balances conventional & renewable energy



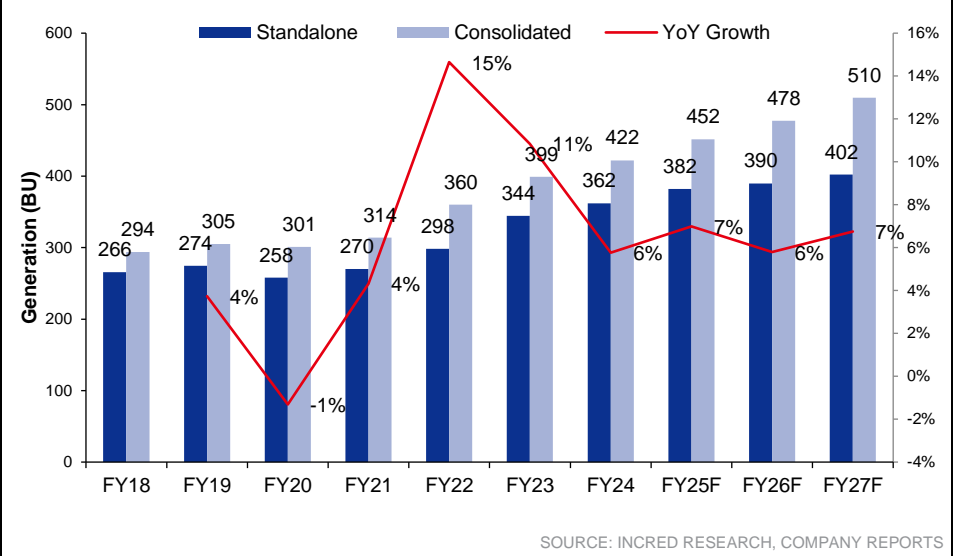
NTPC holds a 17% share in India’s total installed power capacity, with 76GW out of 442GW, making it the largest power utility in the country. Its power plants generated 422BU (bn units) of electricity in FY24, contributing 24% to India’s total electricity generation, reinforcing its indispensable role in the country’s energy sector. With plans to add 25GW of thermal power capacity by FY32F through brownfield expansion and 60GW of renewables by FY32F, it is driving balanced growth with reduced execution risks. As the country’s largest power generator, NTPC plays a pivotal role in ensuring energy security, even as renewable energy adoption accelerates.



Thermal power for base-load stability

NTPC anchors its growth on a dual-energy strategy with a planned addition of 25 GW of thermal capacity by FY32F, contributing to the Central Electricity Authority or CEA’s projection that 80GW of additional thermal power will be required to meet India’s rising electricity demand. Of this, 11GW capacity is already under construction, representing 44% of NTPC’s expansion target and ensuring timely capacity enhancement. This expansion will help address India’s projected annual electricity demand CAGR of 6% through FY30F, which is expected to push peak power requirements beyond 335GW by the end of this period. Leveraging its 40-year experience in project execution, NTPC focuses on brownfield expansion that costs approximately Rs100m per MW, offering significant capital efficiency and faster operational readiness compared to greenfield projects.

Figure 2: Standalone power generation



Steady cash flow with a regulated tariff model

NTPC’s regulated business model, with cost-plus tariffs ensuring a guaranteed RoE of 15.5% for thermal projects, offers stability in earnings. The newly implemented FY25-29 regulatory framework provides greater transparency and enhances RoE visibility. Regulated equity is projected to post a 9% CAGR, rising from Rs1,043bn in FY24 to Rs1,345bn by FY27F, driven by steady capacity addition reinforcing NTPC’s position as a low-risk, high-return investment.

Figure 3: Standalone regulated equity trend

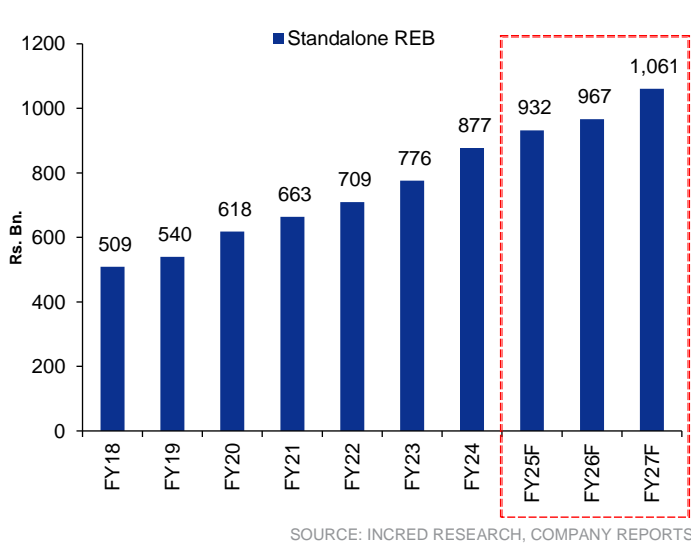
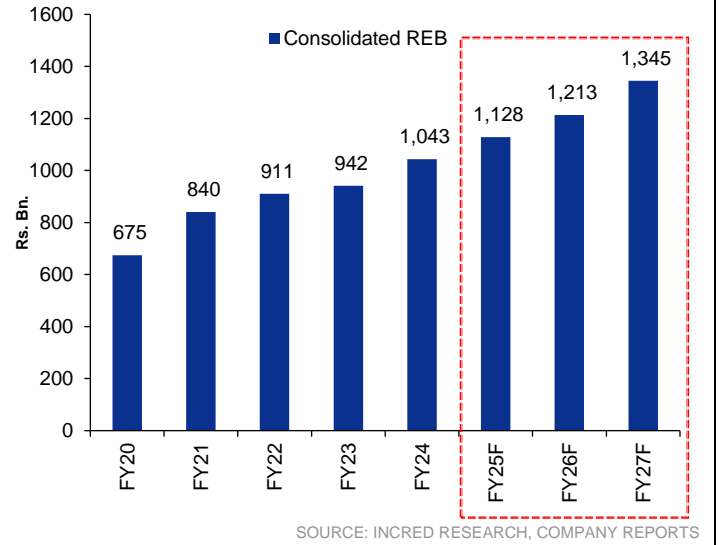


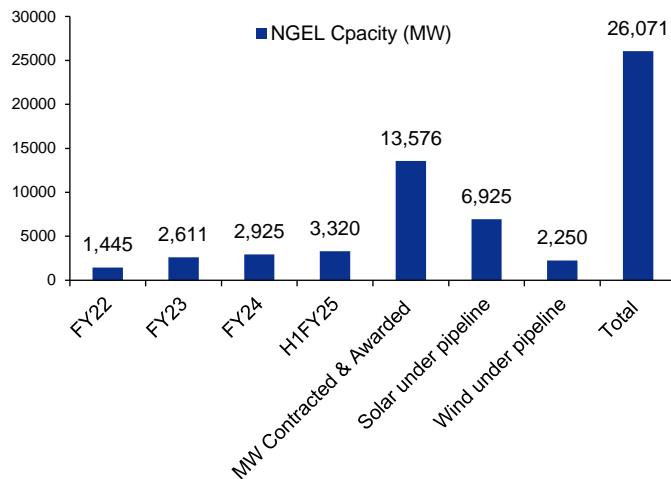
Figure 4: Consolidated regulated equity trend



Renewable energy expansion for future resilience

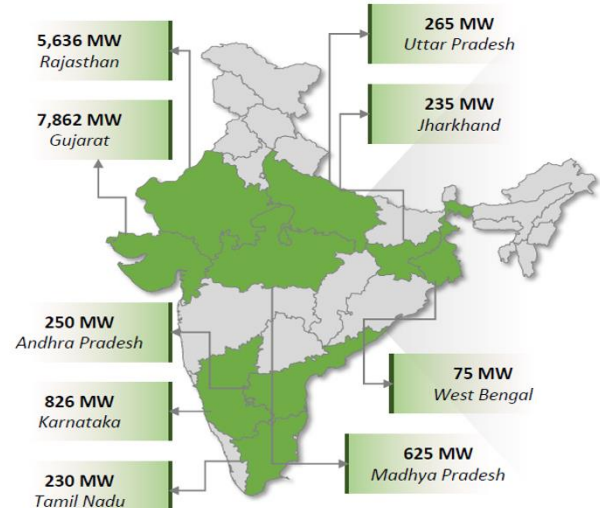
NTPC Green Energy (NGEL), NTPC’s renewable energy subsidiary, is spearheading the company’s clean energy transformation. India’s aim to expand its renewable energy (RE) capacity to 500GW by 2030F from 192GW in FY24 positions NGEL at the forefront of this transition. As a key beneficiary, NGEL contributes meaningfully to NTPC’s leadership in sustainable power generation. NGEL, which is among the top 10 renewable players in India, is targeting 60GW of renewable energy capacity by FY32F, accounting for 46% of NTPC’s projected total capacity. NGEL aims to scale operational renewable capacity from 3.3GW as of Sep 2024-end to 6GW by FY25F, 11GW by FY26F, and 19GW by FY27F, with plans to add 8GW annually between FY28F and FY32F. This positions NTPC to capture a significant share of India’s energy transition towards sustainable power generation.

Figure 5: NGEL's journey so far



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 6: Geographical presence of its portfolio



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Scaling renewable revenue streams with long-term PPAs ➤

NGEL's portfolio across six Indian states mitigates region-specific risks and optimizes solar and wind resources. Long-term power purchase agreements (PPAs), averaging 25 years, ensure steady revenue. FY24's weighted average tariff of Rs3.4/kWh exceeds the Rs3.1-3.3/kWh required for 10-13% equity internal rate of return or IRR. Hybrid tariffs range from Rs3.15-3.20/kWh, outperforming standalone solar energy (Rs2.55-2.56/kWh) and aligning with wind power tariff (Rs3.40-3.75/kWh). FY24 revenue touched Rs19.6bn, posting a 46.82% CAGR, supported by an EBITDA margin of over 85% (~Rs6.5m per MW).

Expansive project pipeline ➤

NTPC has built India's most extensive project pipeline, securing its leadership in the energy sector. The company has ~11GW of under-construction coal projects of which 1,600MW was awarded in 1HFY25, with an additional 13.6GW of thermal projects planned to be awarded in FY25F-27F. Key thermal power additions include 2,700MW in FY25F across Barh, North Karanpura, Patratu, and Meja, and 1,460MW in FY26F, driven by Patratu and Meja expansions.

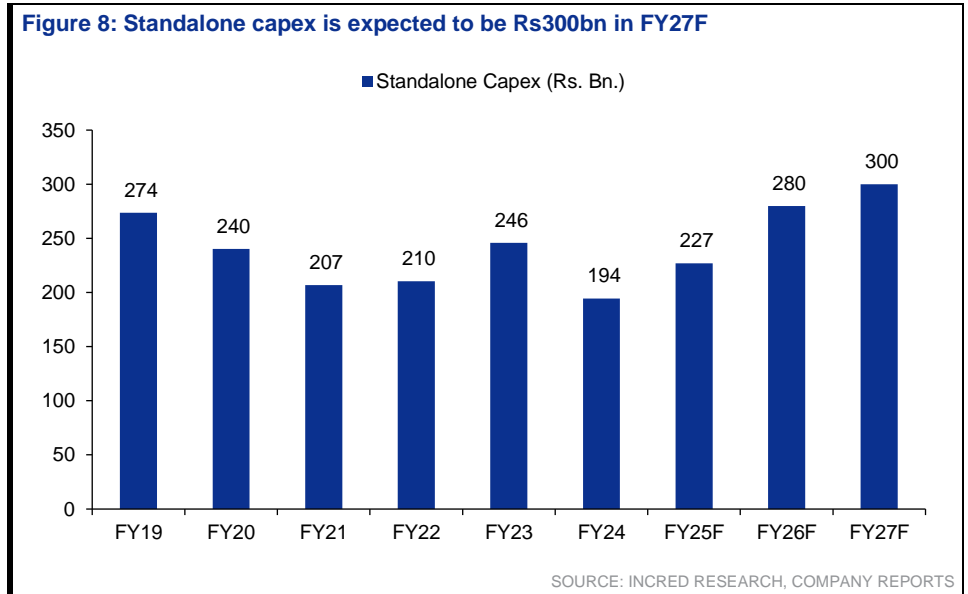
Figure 7: NTPC's thermal power project award pipeline (MW)

Plants	FY25F	FY26F	FY27F
Meja II	2,400		
Nabinagar II	2,400		
Telangana II	2,400		
Gadarwara II	1,600		
Anpara		1,600	
Obra		1,600	
Patratu II			1,600
Total	8,800	3,200	1,600
Mix			
NTPC	6,400	47.1%	
Subsidiaries & JVs	2,400	52.9%	
Total	13,600	100%	

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Currently, NGEL's total renewable pipeline of 26.1GW includes 13.6GW of contracted & awarded projects (with signed PPAs) and 9.2GW under various stages of development, representing a combined investment potential of Rs 1,300bn. This robust and diversified pipeline of 47.6GW positions NTPC to scale its generation capacity by 62%, driven by a blend of renewable and thermal power expansions, ensuring a balanced growth trajectory and reliable energy supply to meet India's rising demand.

Figure 8: Standalone capex is expected to be Rs300bn in FY27F



Industry leader with operational excellence ➤

NTPC has consistently outperformed industry benchmarks across key operational parameters, with its coal-based stations reporting 77.25% PLF in FY24 vs. industry average PLF of 69.5%, driven by effective fuel management and consistent plant availability. This efficiency underscores its strong operational management. In renewable energy, NTPC achieved a CUF of 24.61% for solar power and 28.27% for wind power during 1HFY25. NTPC's gas-based capacity operated at 15.2% PLF in 1HFY25 vs 9.7% in FY24, reflecting its strategic use of gas plants for peak demand management.

In terms of reliability, NTPC maintained a plant availability factor (PAF) of 90.5% across its coal-fired units, ensuring stable energy supply even during peak demand periods. NTPC's coal production of 34mt in FY24, representing a 48% YoY increase, underscores its backward integration strategy, reducing the dependence on external suppliers and enhancing fuel security.

Figure 9: NTPC's PLF has been consistently above that of the industry

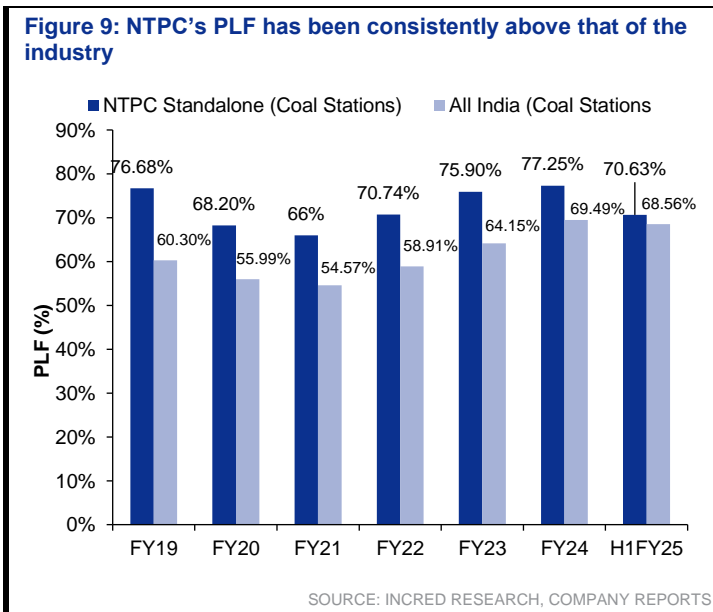


Figure 10: Plant availability factor (PAF) across modes

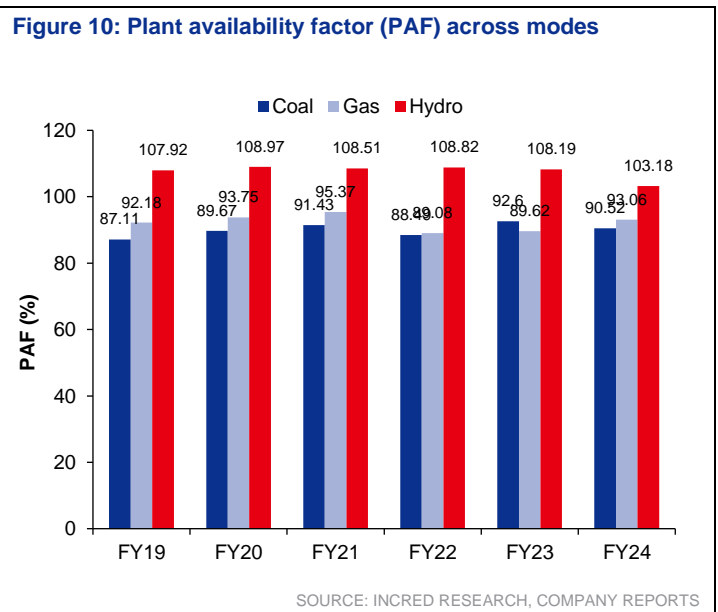
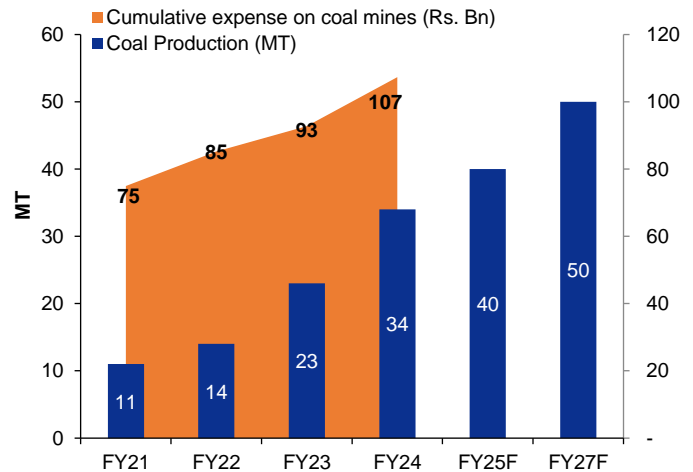


Figure 11: NTPC's focus on captive coal production targets 50mt captive production by FY27F

Coal Stations	Capacity (mtpa)	Production (in mt)	
		FY23	FY24
Pakri-Barwadih	22	13.22	16.31
Dulanga	7	7	7
Talaipalli	23	2.4	7.54
Chatti-Bariatu	7	0.58	3.3
Kerandari	6	0	0.24
Sub-Total	65	23.2	34.39
Badam	3	Under Development	
Banhardih (PVUNL)	12	Under Development	
North Dhadu (NML)	4	Under Development	
Total	84		

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 12: Plans to meet a minimum 25% of coal requirement through captive mines by FY30F for fuel security



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 13: Figure 3: NGEL's operational performance versus peers

Particulars	NTPC Green Energy				ReNew Energy Global PLC			Adani Green Energy			
	FY22	FY23	FY24	1HFY25	FY22	FY23	FY24	FY22	FY23	FY24	1HFY25
Capacity utilization factor (CUF):											
Solar	19.21%	22.74%	23.97%	24.61%	23.10%	24.80%	24.40%	23.80%	24.70%	24.50%	23.90%
Wind	23.66%	23.58%	19.78%	28.27%	25.40%	25.50%	26.40%	30.80%	25.20%	29.40%	35.70%
Financial											
Operating EBITDA margin (%)	87.31%	90.34%	88.99%	86.07%	58.17%	68.60%	71.57%	68.40%	64.17%	82.28%	83.65%
PAT margin (%)	10.41%	31.49%	17.56%	16.20%	-25.99%	-6.34%	5.06%	9.53%	11.29%	13.67%	19.43%
Net debt/equity (times)	4.41	1.09	1.98	1.91	3.07	4.08	5.19	19.36	6.96	5.52	5.65
Cash PAT margin (%)	41.46%	62.98%	50.31%	49.26%	-3.81%	13.71%	26.52%	26.07%	29.23%	34.31%	39.99%

SOURCE: COMPANY REPORTS, INCRED RESEARCH

Strategic diversification into new energy avenues➤

- NTPC is advancing into emerging energy sectors with strategic investments in nuclear power, green hydrogen, and energy storage. Its 2.8GW nuclear project at Mahi Banswara, Rajasthan, in partnership with Nuclear Power Corporation of India or NPCIL (49% NTPC ownership), marks a pivotal step in diversifying its clean energy portfolio, aligned with India's 22GW nuclear target by 2032F.
- In green hydrogen, NTPC targets 5GW of electrolyzer capacity by FY30F, driven by flagship projects like the Pudimadaka Hydrogen Hub in Andhra Pradesh, which is expected to produce 1,200mt of green hydrogen per day. Early investments position NTPC for leadership in the evolving hydrogen economy as technology and policy frameworks mature.
- As regards energy storage, NTPC has planned 10GW of pumped storage capacity by FY32F, with projects like Upper Bhavani (1GW) and Maharashtra (2.8GW) in advanced stages. The anticipated decline in battery storage costs in two-to-three years is expected to boost NTPC's competitiveness in hybrid renewable projects, strengthening its role in India's energy transition.
- NTPC's expansion into nuclear energy, green hydrogen, and energy storage offers transformative growth potential. Successful execution of the 2.8GW Mahi Banswara nuclear project could redefine its clean energy portfolio, while achieving its 5GW electrolyzer capacity by FY30F will position it as a frontrunner in India's green hydrogen market. The expected battery storage cost reduction over the next two-to-three years will enable competitive hybrid renewable projects, accelerating NTPC's clean energy transition and strengthening its leadership in India's evolving energy landscape.

Figure 14: Significant Memorandums of Understanding or MoUs

MoUs

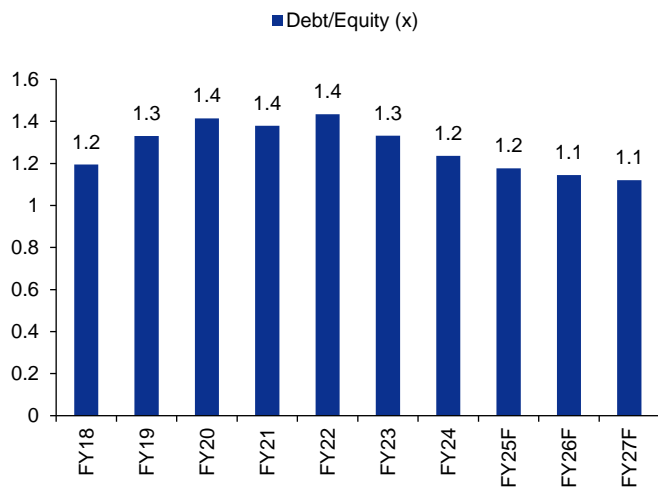
- NGEL and GPPL (Gujarat Pipavav Port Limited) for land in Pipavav Port for green ammonia project.
- NGEL and SCI (Shipping Corporation of India), for supply of green methanol.
- NGEL and GSPC (Gujarat State Petroleum Corporation) for H2 blending in NG network and green mobility.
- NGEL and Nayara Energy for production of green hydrogen.
- NGEL and HMEI (HPCL Mittal Energy) for development of green hydrogen derivatives.
- NGEL and Government of Maharashtra for green hydrogen.
- NREL and Government of Gujarat for development of 5GW GH2 technologies.
- NGEL and RVUNL (Rajasthan Rajiya Vidyut Utpadan Nigam) for development of green hydrogen and its derivatives.

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Strong asset base and government-backed trust ➤

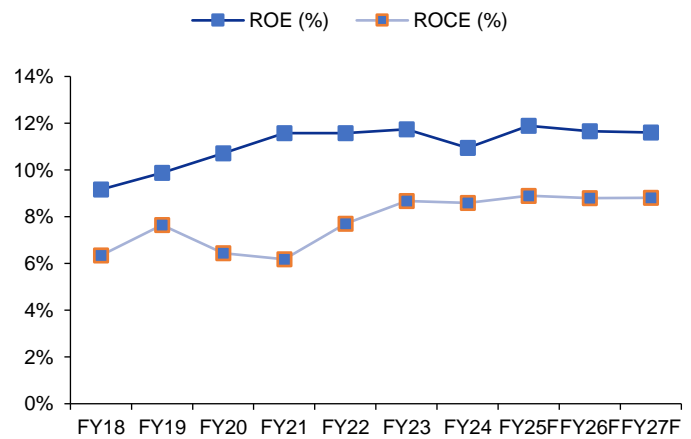
NTPC, with over four decades of legacy, is a trusted power generation partner with a diversified asset base across thermal, hydro, and renewables, ensuring reliable generation. Its alignment with India’s power ministry drives policy-supported growth and preferential project allocations. Backed by a AAA credit rating and a debt-to-equity ratio of 1.2x, NTPC secures low-cost financing for efficient project execution. Its in-house expertise ensures faster time-to-market and enhanced returns on investment.

Figure 15: Standalone debt/equity ratio



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 16: Standalone ROE vs. ROCE



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Valuation and our view ➤

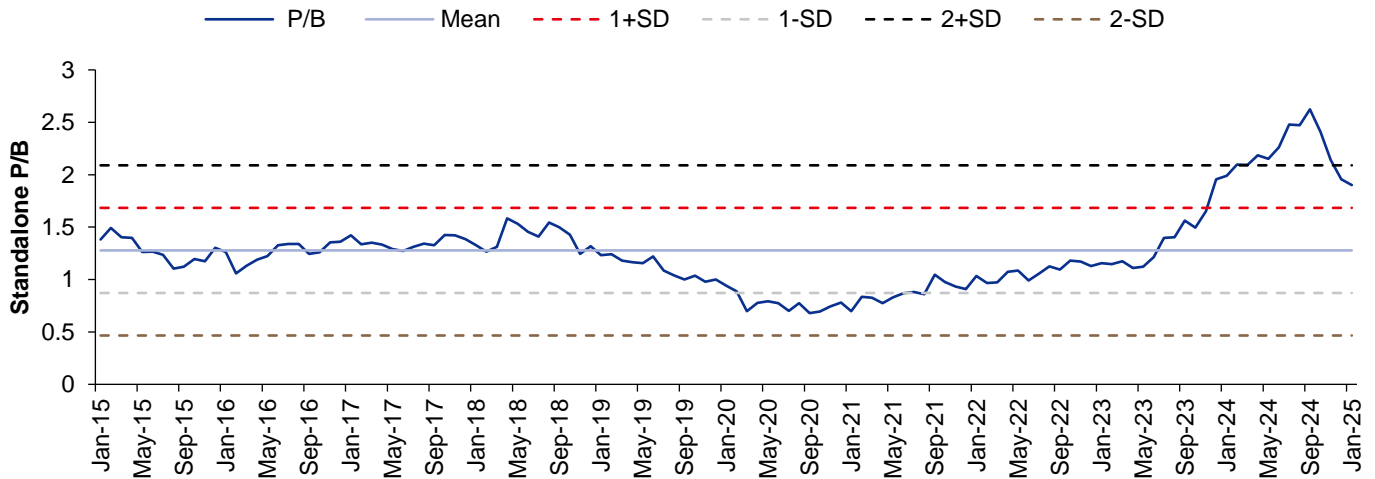
- Our valuation highlights NTPC’s leadership in thermal and renewable power generation, using the sum-of-the-parts (SOTP) methodology. We value its core regulated business at 1.55x FY26F BV at a 20% premium to the 10-year mean P/BV, resulting in a 1% terminal growth rate on a discounted cash flow or DCF-based approach. We have valued subsidiaries/JVs/associate companies at 1.9x FY26F (at mean) regulated equity per share using a 20% holding company discount. The renewables segment, supported by its large project pipeline, is taken at the current market price or CMP, resulting in a target price of Rs385, implying a 25% upside from the CMP.
- Our investment thesis is anchored in NTPC’s market leadership, with 76GW installed capacity (62GW thermal, 3.6GW renewables) and a 24% market share, is underpinned by regulated equity projected to post a 9% CAGR to Rs. 1.34tr by FY27F, ensuring stable cash flow. NTPC’s ambitious target of 60GW renewable capacity by FY32F, coupled with strategic investments in green hydrogen, pumped storage (PSP), and nuclear power, positions it for long-term growth, with a potential valuation upside from faster progress in these areas.

Figure 17: SOTP-based valuation

Entity	Method	Base value	Multiple	Discount	Value per share (Rs)
Standalone	FY26F Book value / Share	178	1.55		277
Subs/JVs/Assoc. cos.	FY26F Regulated Equity/ Share	25	1.9	20%	39
Green	Equity value/share	87		20%	70
Total					385
CMP					308
Upside					25.0%

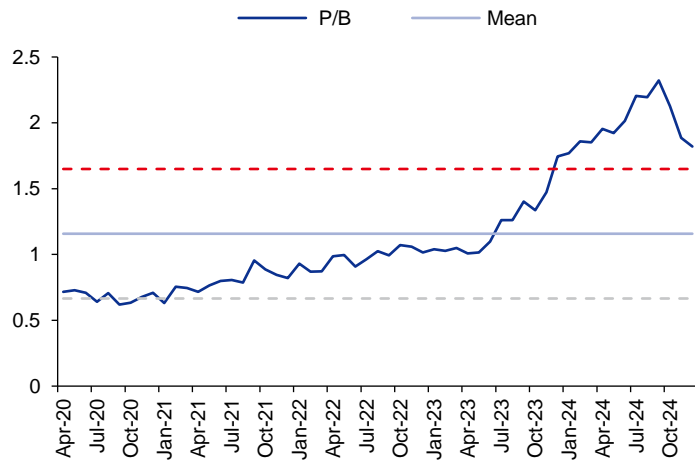
SOURCE: INCRED RESEARCH

Figure 18: 10-year standalone one-year forward P/BV



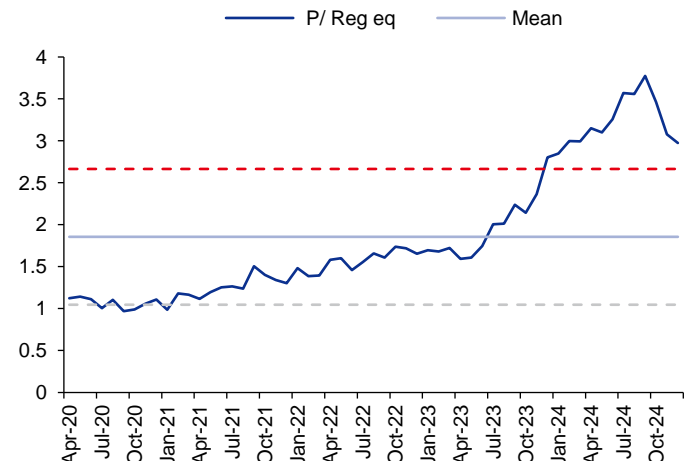
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 19: Consolidated one-year forward P/BV



SOURCE: INCRED RESEARCH

Figure 20: Consolidated one-year forward P/Regulated Equity



SOURCE: INCRED RESEARCH

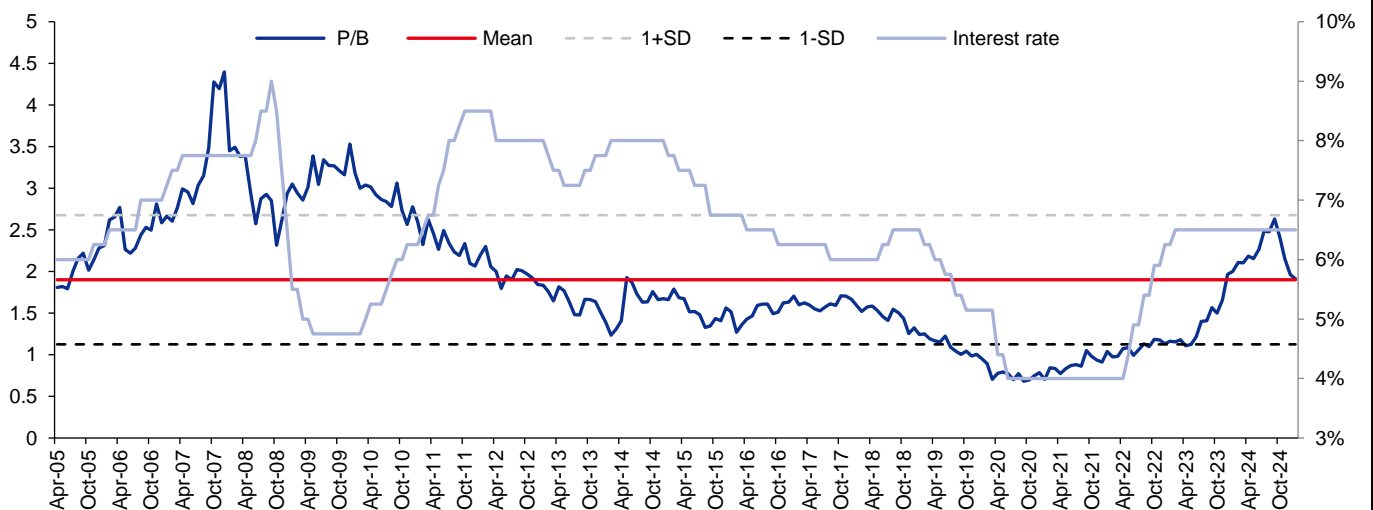
Interest rate dynamics and NTPC's valuation ►

NTPC's thermal power business operates on a fixed return on equity (ROE) model, offering stable earnings under the regulated framework. The valuation of such fixed-ROE businesses is highly sensitive to interest rate changes. The price-to-book value (P/BV) ratio, derived from the formula $(ROE - g) / (COE - g)$, illustrates this sensitivity. When interest rates rise, the cost of equity (COE) increases, narrowing the spread between ROE and COE, compressing NTPC's P/BV and potentially making the stock less attractive. Conversely, declining interest rates reduce COE, widening the spread, enhancing NTPC's valuation and making it a compelling investment opportunity.

Evolving correlation post-Covid ►

An analysis of NTPC's standalone P/BV versus the repo rate from FY05 to the present reveals a strong correlation during 2007–13, where declining rates boosted P/BV, and rising rates compressed it. However, this correlation weakened post-Covid, driven by sudden post-lockdown demand surges and NTPC's strategic pivot toward renewables. Unlike the fixed-ROE thermal business, NTPC's renewables operate under an unregulated model, introducing growth potential that offsets traditional valuation sensitivities. This shift highlights NTPC's evolving business dynamics and the rising importance of its renewable portfolio in shaping its valuation.

Figure 21: A long-term view on standalone P/BV versus repo rate



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Key risks ►

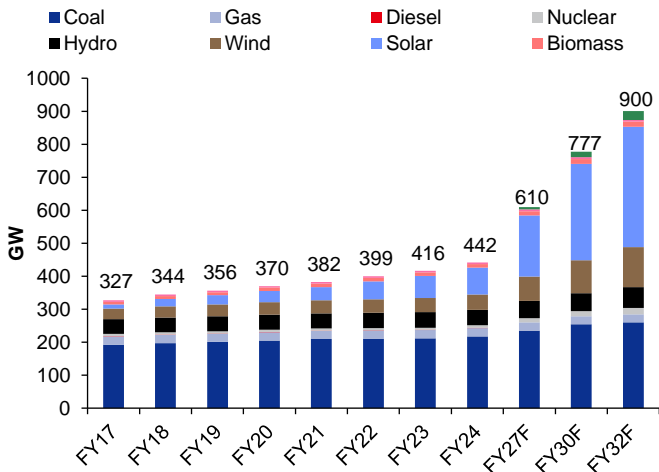
- Regulatory risks: Changes in ROE by the Central Electricity Regulatory Commission (CERC) or a delay in policy implementation could impact profitability.
- Execution risks: Delay in renewable project commissioning and thermal plant expansion may affect growth targets.
- Fuel supply volatility: Fluctuations in coal availability could disrupt operations.
- Renewable tariff pressure: Competitive bidding in renewable energy auctions could push tariffs below Rs2.5/kWh, exerting pressure on NTPC Green Energy's expected returns, particularly in solar and wind power projects.

Industry Overview

Powering India's growth >

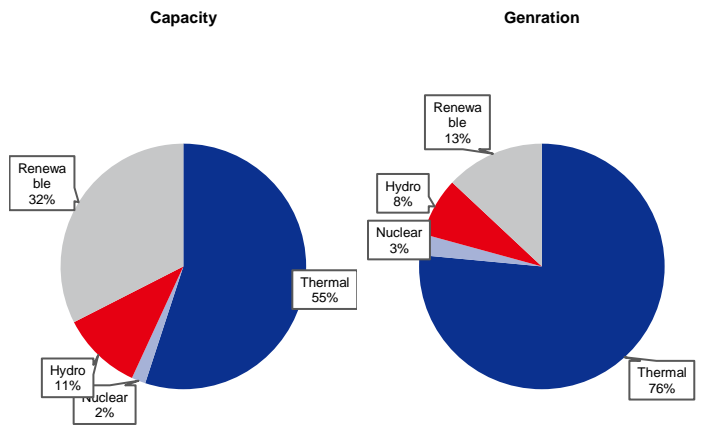
India is on an ambitious trajectory to expand its installed power capacity from 442GW in FY24 to 900GW by FY32F, reflecting a 9% CAGR. Peak power demand is projected to rise from 243GW in FY24 to 366GW by FY32F, reflecting the rapid urbanization and industrial expansion that continue to drive growth in one of the world's largest energy markets. The sector is poised to attract investments primarily targeting renewable energy, transmission infrastructure, and advanced grid systems.

Figure 22: Rapid capacity addition



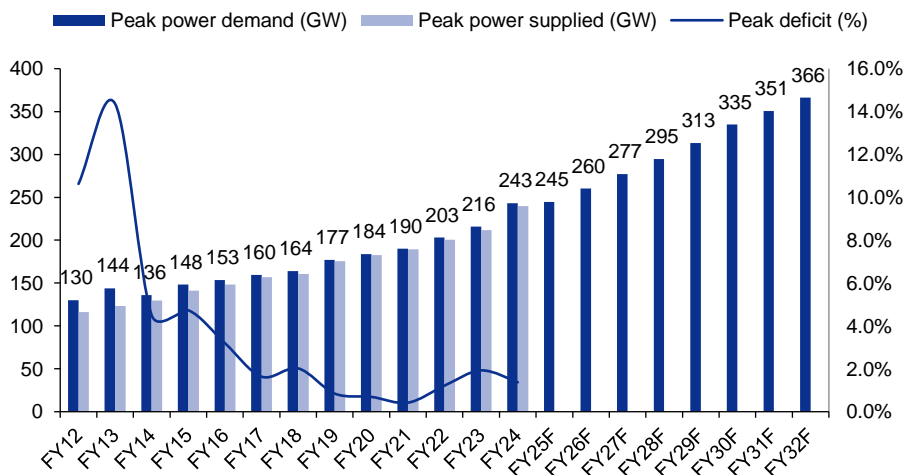
SOURCE: INCRED RESEARCH, CEA

Figure 23: Share of renewable in capacity vs. generation



SOURCE: INCRED RESEARCH, CEA

Figure 24: Peak power trend

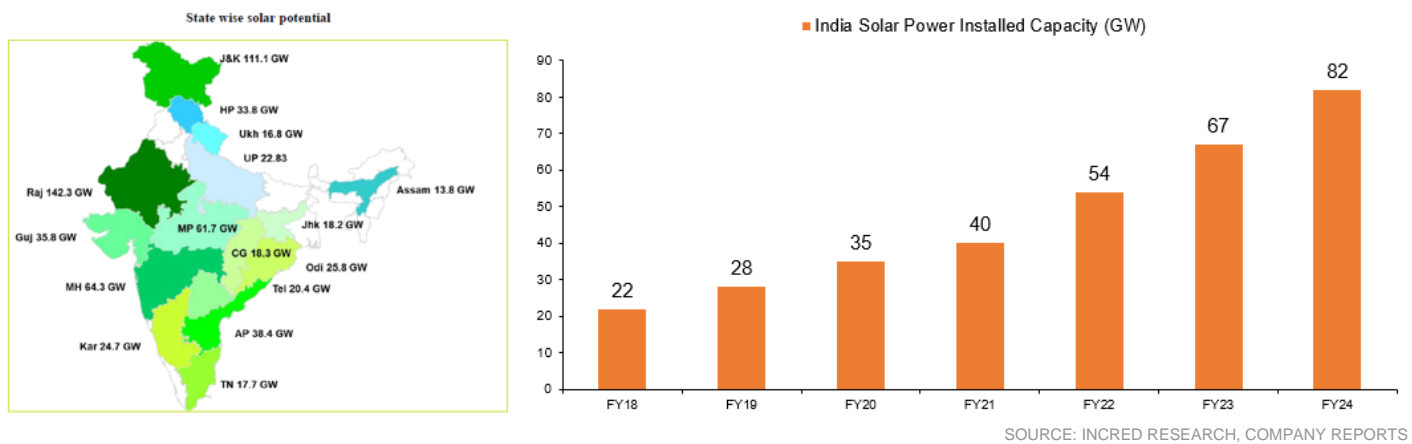


SOURCE: INCRED RESEARCH, CEA

Renewable energy is the new growth driver ➤

India's renewable energy ambitions are unmatched. The government targets achieving 500GW of non-fossil fuel capacity by FY30F, which will raise renewables' share in the energy mix to 66% by FY32F. Solar power capacity is set to grow at a staggering 20% CAGR, reaching 364GW by FY32F, while wind energy capacity is expected to expand to 121GW, posting a CAGR of 13%. These capacity additions are expected to be supported by incentives like the Production-Linked Incentive (PLI) scheme, enhanced rooftop solar adoption and concessional financing, making India a global hub for green energy innovation. In FY24, renewables generated 360TWh, meeting 20.7% of the country's electricity needs. By FY30F, this is expected to exceed 983TWh, driven by the rising affordability of solar and wind energy. However, seasonal and evening demand patterns create stress on supply, with peak energy shortage projected to persist at 0.5-1.5% annually. Battery storage is emerging as a key enabler, with a planned addition of 47GW/236GWh storage capacity by FY32F, helping mitigate supply variability.

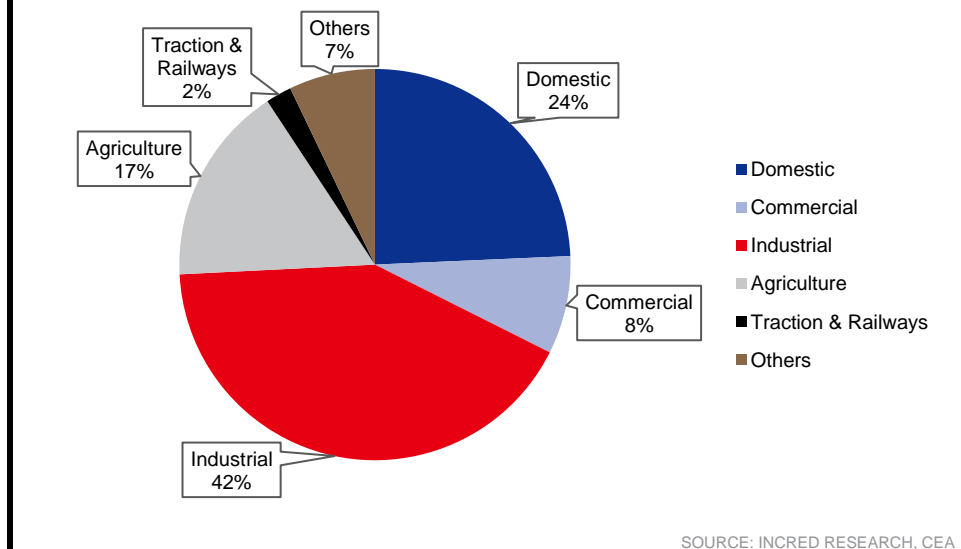
Figure 25: India has 666GW of solar energy potential of which only 12% (82GW) is the installed capacity



Thermal energy capacity remains critical ➤

Thermal energy's share will decline to 29% by FY32F, as coal and lignite plants focus on higher efficiency and load factors to meet peak demand during seasonal shortage. Despite the renewable energy push, coal will continue to play a vital role as the backbone of India's energy security. At least 80GW of coal-fired capacity is anticipated to remain operational by FY32F, addressing base-load requirements and grid stability during peak hours.

Figure 26: Sector-wise annual energy consumed (BU)



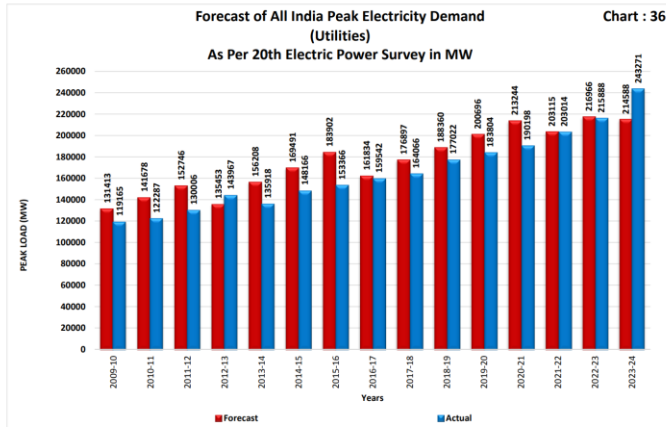
Demand growth necessitates high PLF ➤

India's power sector is witnessing a structural shift, with actual energy demand and peak demand consistently outpacing forecasts. In FY24, peak demand reached 243GW, surpassing projections of 215GW by 13%, while energy requirements totalled 1,626TWh, exceeding forecasts. This growing demand, driven by rapid electrification and industrial activity, underscores the critical role of maintaining high plant load factor (PLF) across energy portfolios.

Coal remains the backbone of India's power generation, with NTPC's coal plants achieving a leading PLF of 77.25%, well above the all-India average of 69.09%. Hydro assets, operating at a PLF of 42.01%, ensure grid stability and complement renewable energy. NTPC's gas-based plants, with a modest PLF of 9.7%, act as a buffer during peak shortage, despite higher costs. NTPC's position as a low-cost producer ensures priority scheduling under the Merit Order Dispatch (MOD) system, further driving its high PLF and operational efficiency.

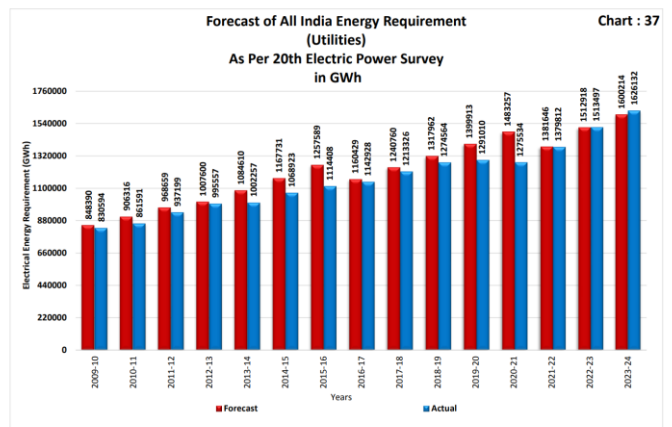
With a reduced energy deficit of 0.3% in FY24, the demand-supply gap is narrowing. However, peak shortage persists, requiring efficient utilization of thermal, hydro, and gas capacities to meet rising needs. This highlights the importance of reliable generation to support India's growing energy demand, making high PLF a necessity for energy security and stability.

Figure 27: Peak demand forecast vs. actual



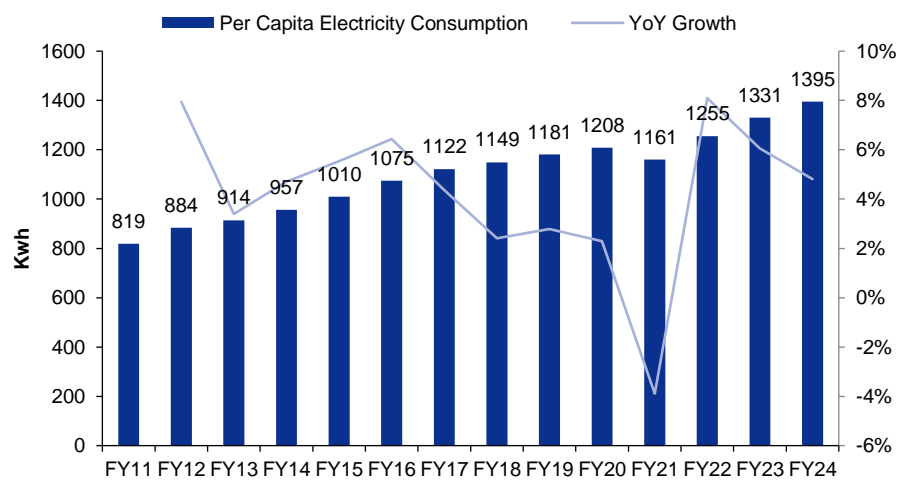
SOURCE: INCRED RESEARCH, CEA

Figure 28: Energy requirement forecast vs. actual



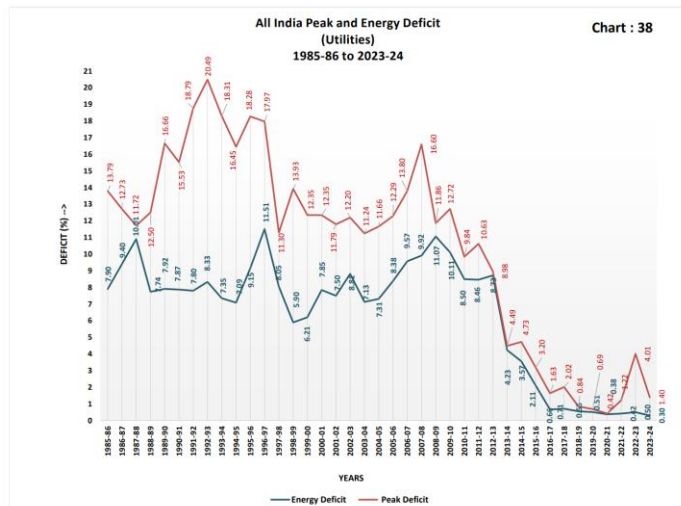
SOURCE: INCRED RESEARCH, CEA

Figure 29: Per capita electricity consumption is expected to touch 3,000kWh by FY40F



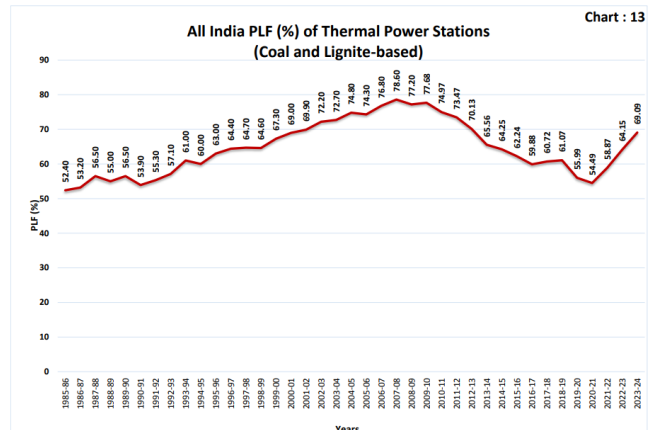
SOURCE: INCRED RESEARCH, MOP

Figure 30: Peak and energy deficit trend



SOURCE: INCRED RESEARCH, CEA

Figure 31: All India thermal station PLF



SOURCE: INCRED RESEARCH, CEA

Transmission capex bridging the gap ➤

India's power transmission infrastructure is undergoing a significant upgrade to handle rising power capacity and integrate renewable sources efficiently. The government plans to invest Rs9.16tr in transmission infrastructure between FY22-32F, focusing on expanding the network from 485,544 circuit kilometer (ckm) in FY24 to 648,190ckm by FY32F. The inter-regional transfer capacity will rise from 119GW to 168GW, supporting the integration of large-scale renewable projects. High Voltage Direct Current (HVDC) lines, with a planned addition of 33.25GW capacity, will ensure smooth power transfer across regions, minimizing bottlenecks. Despite these advancements, India still faces an energy deficit, recorded at 0.3% in FY24, lower than 0.6% in FY23, with peak energy shortage expected during high-demand months unless robust transmission and storage systems are in place.

Figure 32: Power transmission capacity

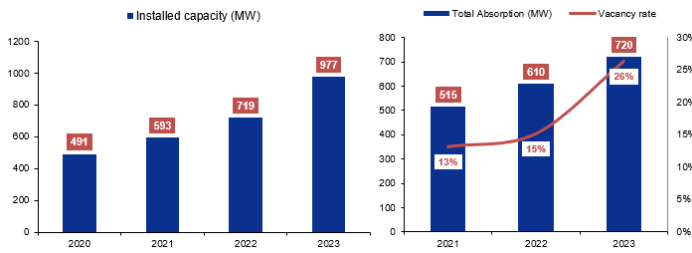
Type / Voltage Class		FY20	FY21	FY22	FY23	FY24	FY27F	FY32F
Transmission Lines								
(a) HVDC ± 320 kV/500kV/800kV Bipole	ckm	15,556	19,375	19,375	19,375	19,375	19,455	34,887
(b) 765kV	ckm	44,906	46,143	51,076	52,731	54,850	87,581	1,14,719
(c) 400kV	ckm	1,84,238	1,89,627	1,93,695	1,97,467	2,03,555	2,28,596	2,49,585
(d) 230/220kV	ckm	1,80,371	1,86,676	1,92,570	2,01,768	2,07,764	2,35,771	2,48,999
Total: Transmission Lines	ckm	4,25,071	4,41,821	4,56,716	4,71,341	4,85,544	5,71,403	6,48,190
Sub-stations								
(a) 765kV	MVA	2,32,500	2,40,200	2,58,700	2,78,200	2,96,200	6,00,700	9,20,200
(b) 400kV	MVA	3,35,697	3,60,252	3,91,638	4,24,273	4,56,458	6,78,083	8,13,828
(c) 230/220kV	MVA	3,74,196	3,95,516	4,20,612	4,44,379	4,64,922	5,68,497	6,11,107
Total: Sub-stations	MVA	9,42,393	9,95,968	10,70,950	11,46,852	12,17,580	18,47,280	23,45,135
HVDC								
(a) Bi-pole link capacity	MW	24,500	28,500	30,500	30,500	30,500	31,500	63,750
(b) Back-to back capacity	MW	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Total- HVDC	MW	27,500	31,500	33,500	33,500	33,500	34,500	66,750
Total: Transformation capacity	MW	9,69,893	10,27,468	11,04,450	11,80,352	12,51,080	18,81,780	24,11,885

SOURCE: CEA, INCRED RESEARCH

Electric vehicles & data centres driving demand ➤

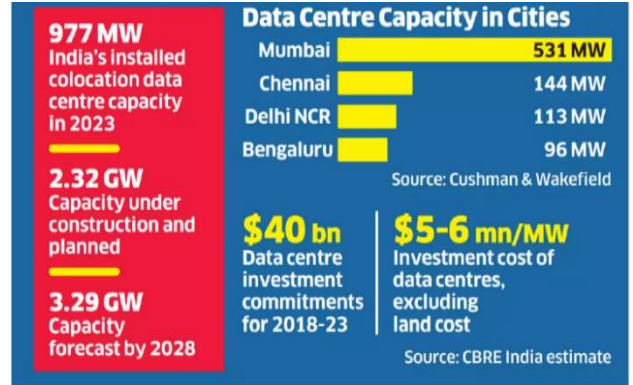
India's power demand CAGR at 6% is fueled by emerging sectors like electric vehicles (EVs), data centres, and broader electrification. By 2035F, EVs and data centres are projected to account for one-third of incremental power demand. EV adoption, especially in two-wheelers, will account for 17% of demand growth, while data centres, leveraging artificial intelligence or AI and 5G technologies, will expand capacity at a 30% CAGR, consuming 66TWh by FY30F. These sectors will drive India's transition to a digital and electrified economy, necessitating advanced grid systems to support the rising load.

Figure 33: India's data centre capacity & vacancy rate



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 34: Data on data centres



SOURCE: INCRED RESEARCH, ET

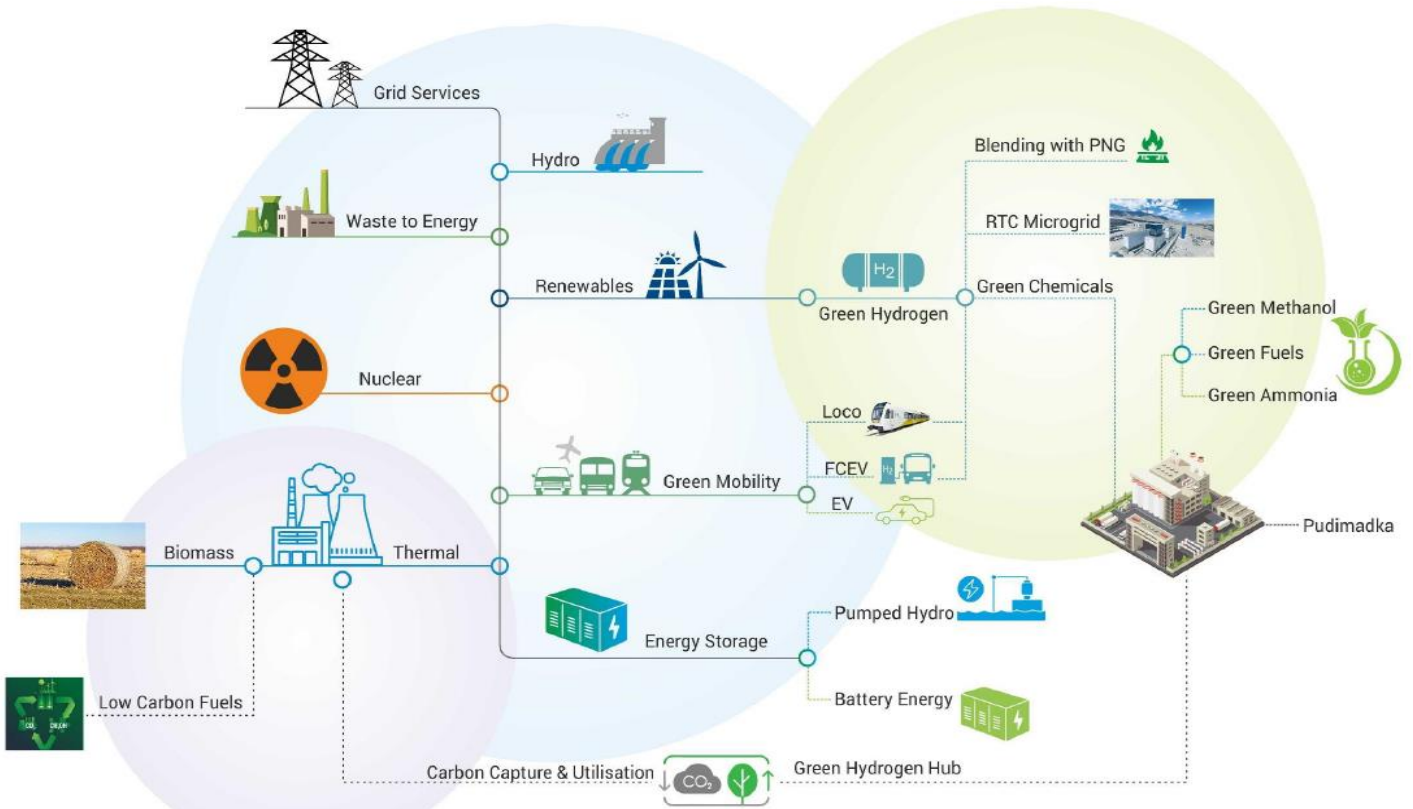
Company Overview

Historical legacy of India's largest power utility ➤

Founded in 1975, NTPC began as a thermal power company and has grown into India's largest integrated power producer. Over nearly five decades, it has set industry benchmarks in power generation, operational efficiency, and asset development. The government holds a majority 51.1% stake in the company. As of FY24-end, NTPC operates 76GW of installed capacity, accounting for 17% of India's total power capacity and producing 422BU annually, or 24% of India's total electricity generation.

With current pipeline projects NTPC targets a significant capacity expansion to more than 130GW by FY32F, driven by 60GW of planned renewable energy capacity. This growth underscores NTPC's central role in ensuring India's energy security while accelerating its clean energy transition.

Figure 35: NTPC's integrated energy spectrum - moving towards net zero



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Diversified asset portfolio

NTPC’s power generation assets include 62GW of coal-based power plants, accounting for 81% of its current generation capacity, 3.6GW of renewable energy (RE), accounting for 5%, and 10GW of hydro and gas-based projects, making up the remaining 14%. The company has outlined an aggressive expansion plan, targeting 60GW of renewable energy capacity by FY32F, which includes 45GW of solar, 10GW of wind, and 5GW of hybrid projects. Its 2.8GW nuclear capacity, planned in partnership with NPCIL, aims to generate approximately 20BU or bn units of electricity annually, reinforcing its strategic pivot toward low-emission energy sources. With a combined renewable and nuclear development pipeline of over 70GW, NTPC is on track to drive India’s energy transition toward sustainability.

Figure 36: NTPC’s current asset portfolio

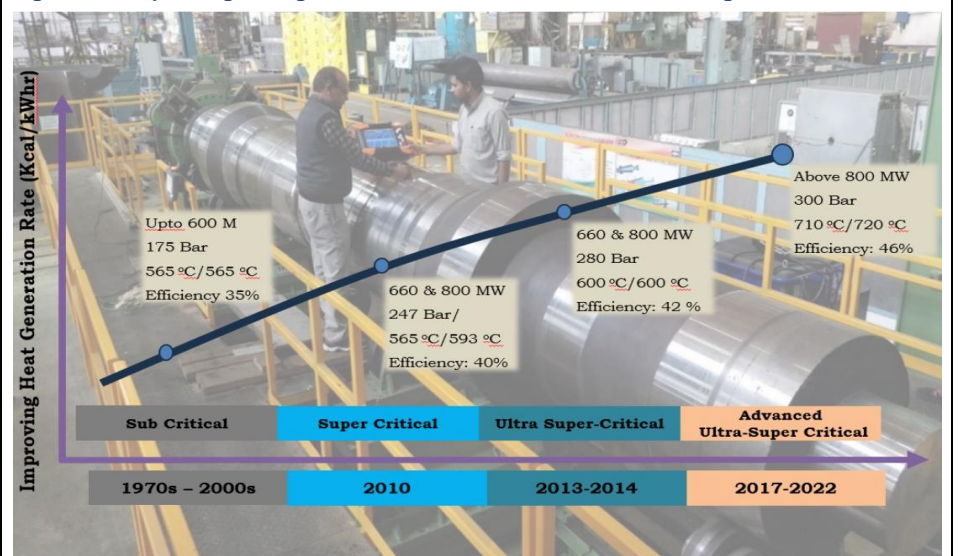
NTPC	Stations	FY24 Capacity (MW)	FY24 Generation (MU)
Coal	28	53,850	3,54,532
Gas	7	4,017	3,423
Hydro	2	808	2,990
Solar	15	403	755
Total NTPC Standalone		59,078	3,61,701
Subs & JVs			
Coal	9	8,344	40,710
Gas	4	2,494	4,226
Hydro	11	2,949	9,515
Solar	15	2,880	5,725
Wind	4	213	338
Total Subs & JVs		16,880	60,514
Total NTPC Group		75,958	4,22,214

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Driving efficiency with advanced coal technologies

NTPC’s 9,560MW pipeline of advanced coal units, including 8,240MW of ultra-supercritical and 1,320MW of supercritical capacity, is set to enhance efficiency and reduce emissions. Ultra-supercritical units operate with steam parameters of 280kg/cm² at 600/600°C, achieving efficiency improvement of 9% over typical subcritical units, while supercritical units, operating at 247kg/cm² at 565/593°C, deliver a 5% efficiency gain, cutting coal consumption and greenhouse gases. With these technologies, NTPC aligns with India’s National Electricity Plan, which prioritizes higher-capacity units (660–800MW) for faster capacity addition and lower environmental impact. These initiatives position NTPC to lead India’s thermal energy efficiency push, building on the national average improvement from 34.94% in FY16 to 35.69% in FY20.

Figure 37: Improving heat generation rate with advanced technologies



SOURCE: INCRED RESEARCH, [HTTPS://HEAVYINDUSTRIES.GOV.IN](https://heavyindustries.gov.in)

Integrated operations for energy security >

NTPC’s vertically integrated business model ensures fuel supply reliability and operational efficiency. Its 34mt of coal production in FY24, representing 14% of its total coal consumption, is projected to rise to 50mt by FY27F, significantly reducing external dependency. Additionally, NTPC’s coal block reserves provide long-term fuel security. The company’s trading arm, NTPC Vidyut Vyapar Nigam (NVVN), engages in power trading and renewable energy certificate transactions, ensuring optimal capacity utilization and revenue generation. NTPC is also expanding into green hydrogen, energy storage, and carbon trading, strengthening its future-ready energy ecosystem

Subsidiaries, joint ventures, and associate companies >

NTPC has built a strong ecosystem through its subsidiaries, joint ventures (JVs), and associate companies, enabling diversification and operational scale. These entities enhance NTPC’s capacity expansion, fuel security, and cross-border energy trade, driving sustainable growth and market leadership. Given below is a summary of key entities:

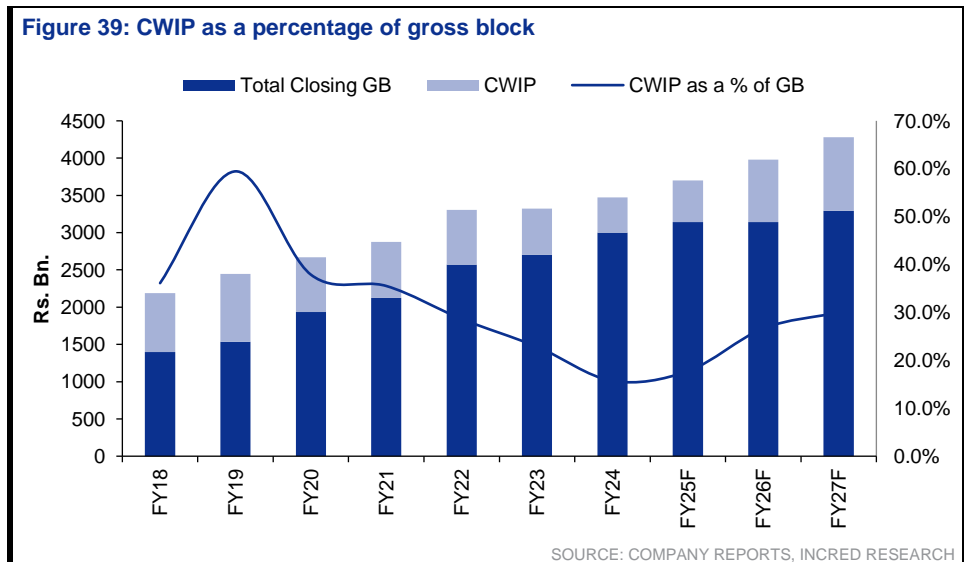
Figure 38: Summary of key generating entities

Entity	Ownership	FY24-end Capacity (MW)	FY24 Gross Generation (MU)
Subsidiaries			
THDC India	74.5%	1,487	4,656.9
Bhartiya Rail Bijlee Company (BRBC)	74.0%	1,000	6,944
North Eastern Electric Power Corporation (NEEPCO)	100.0%	2,057	8,002
Ratnagiri Gas and Power Private Ltd. (RGPP)	86.5%	1,967	1,228
NTPC Green Energy (NGEL)	89.0%	2,925	5,742
Ppratu Vidyut Utpadan Nigam (PVUL)	74.0%	Under construction	
Total		9,436	26,573
Joint Ventures			
Aravali Power Company Pvt. Ltd.	50.0%	1,500	1,501
Meja Urja Nigam Pvt. Ltd.	50.0%	1,320	8,276
NTPC Tamil Nadu Energy Company	50.0%	1,500	6,623
Trincomalee Power Company	50.0%	160	942
NTPC SAIL Power Company (NSPCL)	50.0%	944	6,043
Jhabua Power	50.0%	600	3,597
Bangladesh - India Friendship Power Company Pvt. Ltd	50.0%	1,320	0
Total		7,344	26,982

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Aggressive capacity expansion >

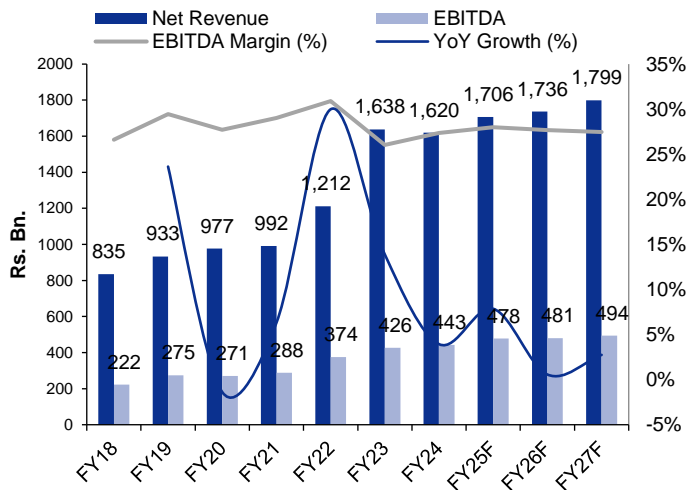
NTPC’s ambitious expansion pipeline includes 26GW of renewable energy projects under execution and 11GW of thermal projects in development. The company has plans for Rs 7tr capital expenditure (capex) by FY32F, earmarking 50% for renewables, highlighting its strategic shift toward green energy. NTPC has partnered with international and domestic players, including NPCIL, ONGC, Indian Oil Corporation or IOCL, and World Bank, for renewable and nuclear energy ventures. NTPC recently completed its first international project in Bangladesh (1.3GW), solidifying its global presence and capacity for cross-border collaborations.



Financial resilience and growth ➤

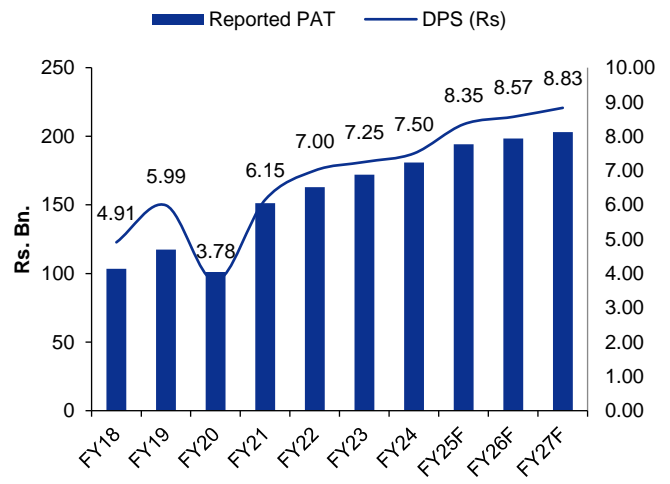
NTPC has posted steady financial performance over the past five years, with revenue growing from Rs977.04bn in FY20 to Rs1,619.85bn in FY24, marking a 13.5% CAGR. Net profit surged from Rs101.13bn in FY20 to Rs180.79bn in FY24. NTPC's plant load factor (PLF) for coal-based power plants stood at 77.25% in FY24, significantly above India's national average of 69.5%.

Figure 40: Standalone revenue vs. EBITDA



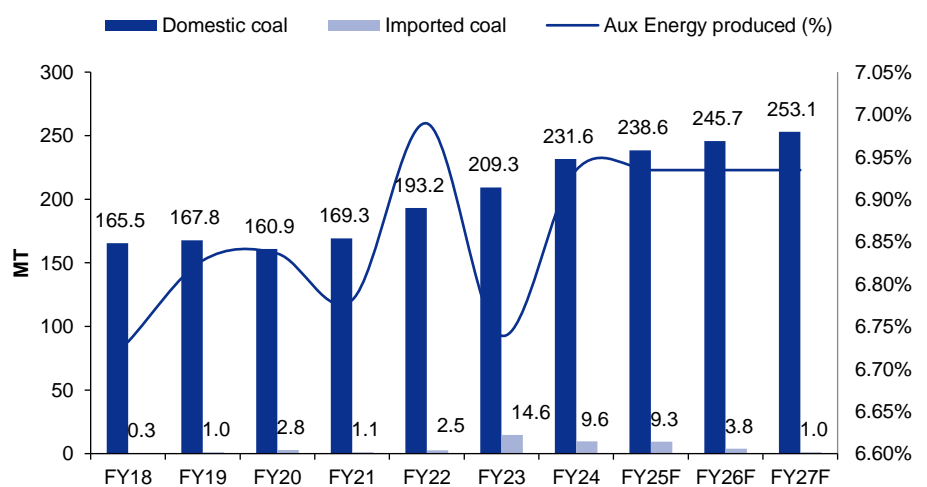
SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 41: Standalone PAT vs. DPS



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 42: Coal consumption vs. aux. energy production



SOURCE: INCRED RESEARCH, COMPANY REPORTS

Sustainability and ESG leadership ➤

NTPC has 3.6GW of renewable energy capacity installed and aims to reach 60 GW by FY32F, contributing to India's net-zero target. It has also planted 39m trees since inception, including 1m in FY24 alone, as a part of its environmental conservation efforts. NTPC's CSR investments of Rs4.84bn in FY24 focused on health, education, skill development, and women empowerment, impacting over 1.6m beneficiaries nationwide. Its flagship Girls Empowerment Mission (GEM) has supported 10,000+ girls through training and development programs.

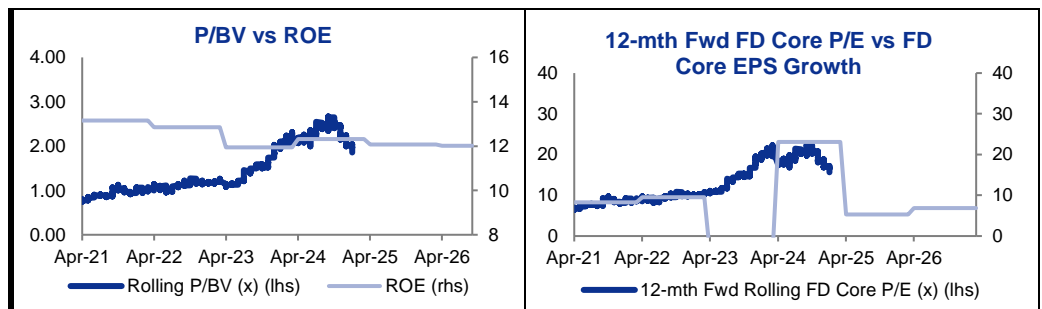
Key management personnel ➤

Figure 43: Key management personnel

Name of the Director	Designation	Profile
Gurdeep Singh	Chairman & Managing Director	An alumnus of NIT Kurukshetra and IIM Ahmedabad, with management training from Harvard and Oxford Business Schools, Gurdeep Singh has over three decades of expertise in the power sector. As CMD, he has spearheaded NTPC's transformation into a sustainable energy company, earning accolades such as the S&P Platts Global CEO of the Year award for his innovative and people-centric leadership.
Jaikumar Srinivasan	Director (Finance)	A chartered accountant by profession, Jaikumar Srinivasan has over 30 years of experience in finance, taxation, and commercial operations in power and mining sectors. His academic qualifications include degrees in finance and accounting, and he has served on the boards of major organizations like NLC India and MSEDCL, contributing to their financial growth and operational excellence.
K. Shanmugha Sundaram	Director (Projects)	A graduate in Electronics and Communication Engineering from Government College of Technology, Coimbatore, with a PGDM in Strategy & Finance from MDI Gurgaon, K. Shanmugha Sundaram has over 35 years of experience in project management. He has been instrumental in commissioning India's first supercritical power project at Sipat and leading NTPC's thermal, hydro, and renewable energy projects.
Shivam Srivastava	Director (Fuel)	A Mechanical Engineering graduate from Kamala Nehru Institute of Technology, Sultanpur, with a PGDM from MDI Gurgaon and leadership training at Harvard Business School, Shivam Srivastava brings over three decades of expertise in fuel management and power plant operations. His leadership in NTPC's coal mining projects has been critical for fuel security and operational efficiency.
Ravindra Kumar	Director (Operations)	A Mechanical Engineering graduate from BIT Sindri, Ravindra Kumar has over 34 years of technical and operational expertise in the power sector. He has served in key roles, including CTO of BIFPCL, where he led the Maitree Supercritical Power Project in Bangladesh. As Director (Operations), he ensures NTPC's plants operate safely, sustainably, and efficiently while meeting environmental compliance.
Piyush Singh	Govt. Nominee Director	An IAS officer from the 2000 batch of the Maharashtra cadre, Piyush Singh holds a B.Tech in Civil Engineering from IIT Delhi. With experience in public administration and planning, he has served in roles across health, social welfare, and infrastructure development. As Joint Secretary in the Ministry of Power, he contributes to shaping India's energy policies.
Sangitha Varier	Independent Director	A commerce graduate and bachelor's in education (B.Ed.) degree, Sangitha Varier has held leadership roles in education and healthcare. She has managed The Arya Vaidya Pharmacy Ayurveda Hospital and played a pivotal role in advancing education as the head of four Chinmaya Vidyalaya Schools. Her contributions in healthcare and social welfare have significantly impacted communities across Tamil Nadu.
Jitendra Jayantilal Tanna	Independent Director	A chartered accountant and commerce graduate, Jitendra Jayantilal Tanna has extensive expertise in direct taxation, audits, and financial management. His strategic insights have consistently driven financial and operational excellence, making him a vital asset to NTPC's governance framework.
Vivek Gupta	Independent Director	A management graduate with a law degree, Vivek Gupta is an accomplished entrepreneur and business leader. He has founded and led innovative companies in agriculture and research, including Jaipur Scientific Instrument and Jaipur Scientific Agriculture Research Solutions Pvt. Ltd. His entrepreneurial vision aligns with NTPC's commitment to innovation and growth.
Vidyadhar Vaishampayan	Independent Director	An M.Tech graduate from IIT-Mumbai with an Executive Development qualification from IIM-Bangalore, Vidyadhar Vaishampayan has a rich background in cooperative banking and technical innovation. He has served as Chairman and Director of TJSB Sahakari Bank and contributed to urban cooperative banking policies as a member of RBI's Task Force from 2014 to 2019.

SOURCE: INCRED RESEARCH, COMPANY REPORTS

BY THE NUMBERS



Profit & Loss

(Rs mn)	Mar-23A	Mar-24A	Mar-25F	Mar-26F	Mar-27F
Total Net Revenues	1,637,698	1,619,850	1,709,111	1,758,065	1,839,485
Gross Profit	632,620	640,659	682,513	690,364	723,214
Operating EBITDA	426,373	443,166	475,738	483,588	506,560
Depreciation And Amortisation	(131,367)	(139,432)	(147,394)	(141,355)	(144,732)
Operating EBIT	295,006	303,735	328,344	342,232	361,828
Financial Income/(Expense)	(99,792)	(102,508)	(103,800)	(107,251)	(111,947)
Pretax Income/(Loss) from Assoc.					
Non-Operating Income/(Expense)	39,546	37,222	39,274	40,398	42,269
Profit Before Tax (pre-EI)	234,760	238,449	263,817	275,380	292,150
Exceptional Items					
Pre-tax Profit	234,760	238,449	263,817	275,380	292,150
Taxation	(62,793)	(66,000)	(72,251)	(73,780)	(76,725)
Exceptional Income - post-tax	(8,827)	(16,744)			
Profit After Tax	163,140	155,705	191,566	201,600	215,425
Minority Interests					
Preferred Dividends					
FX Gain/(Loss) - post tax					
Other Adjustments - post-tax					
Net Profit	163,140	155,705	191,566	201,600	215,425
Recurring Net Profit	171,967	172,448	191,566	201,600	215,425
Fully Diluted Recurring Net Profit	171,967	172,448	191,566	201,600	215,425

Cash Flow

(Rs mn)	Mar-23A	Mar-24A	Mar-25F	Mar-26F	Mar-27F
EBITDA	234,760	238,449	263,817	275,380	292,150
Cash Flow from Invt. & Assoc.					
Change In Working Capital	(117,078)	(95,929)	(19,623)	(20,071)	(14,944)
(Incr)/Decr in Total Provisions					
Other Non-Cash (Income)/Expense					
Other Operating Cashflow	162,086	159,910	147,394	141,355	144,732
Net Interest (Paid)/Received	60,246	65,286	64,527	66,853	69,678
Tax Paid	(62,793)	(66,000)	(72,251)	(73,780)	(76,725)
Cashflow From Operations	277,221	301,715	383,864	389,738	414,891
Capex	(245,970)	(194,435)	(227,006)	(279,826)	(300,006)
Disposals Of FAs/subsidiaries					
Acq. Of Subsidiaries/investments					
Other Investing Cashflow	(65,204)	(41,460)	(4,555)	7,902	(1,748)
Cash Flow From Investing	(311,174)	(235,895)	(231,560)	(271,924)	(301,754)
Debt Raised/(repaid)	4,031	2,210	44,462	80,162	89,443
Proceeds From Issue Of Shares					
Shares Repurchased					
Dividends Paid	(70,301)	(72,725)	(79,175)	(82,915)	(88,454)
Preferred Dividends					
Other Financing Cashflow	110,169	13,283	(108,521)	(105,783)	(109,505)
Cash Flow From Financing	43,898	(57,233)	(143,235)	(108,536)	(108,516)
Total Cash Generated	9,946	8,588	9,068	9,277	4,621
Free Cashflow To Equity	(29,922)	68,030	196,765	197,975	202,581
Free Cashflow To Firm	(133,745)	(36,688)	48,503	10,563	1,190

SOURCE: INCRED RESEARCH, COMPANY REPORTS

BY THE NUMBERS...cont'd

Balance Sheet					
(Rs mn)	Mar-23A	Mar-24A	Mar-25F	Mar-26F	Mar-27F
Total Cash And Equivalents	37,417	46,005	55,073	64,351	68,972
Total Debtors	247,415	273,475	288,545	296,810	310,556
Inventories	136,798	173,698	187,300	192,665	201,587
Total Other Current Assets	224,329	231,055	243,787	250,770	262,383
Total Current Assets	645,959	724,233	774,705	804,594	843,498
Fixed Assets	2,591,499	2,597,680	2,677,292	2,815,762	2,971,036
Total Investments	297,698	331,579	349,851	359,871	376,538
Intangible Assets					
Total Other Non-Current Assets	288,718	279,453	305,009	327,485	354,836
Total Non-current Assets	3,177,914	3,208,712	3,332,152	3,503,119	3,702,410
Short-term Debt	286,820	390,596	422,316	454,037	485,758
Current Portion of Long-Term Debt					
Total Creditors	120,073	94,747	99,968	102,831	107,593
Other Current Liabilities	301,418	300,503	317,062	314,740	329,316
Total Current Liabilities	708,311	785,845	839,346	871,608	922,667
Total Long-term Debt	1,563,157	1,461,591	1,474,332	1,522,773	1,580,495
Hybrid Debt - Debt Component					
Total Other Non-Current Liabilities					
Total Non-current Liabilities	1,563,157	1,461,591	1,474,332	1,522,773	1,580,495
Total Provisions	163,506	186,660	181,939	183,407	185,850
Total Liabilities	2,434,974	2,434,095	2,495,616	2,577,788	2,689,012
Shareholders Equity	1,388,899	1,498,850	1,611,241	1,729,926	1,856,896
Minority Interests					
Total Equity	1,388,899	1,498,850	1,611,241	1,729,926	1,856,896

Key Ratios					
	Mar-23A	Mar-24A	Mar-25F	Mar-26F	Mar-27F
Revenue Growth	35.2%	(1.1%)	5.5%	2.9%	4.6%
Operating EBITDA Growth	13.9%	3.9%	7.3%	1.6%	4.8%
Operating EBITDA Margin	26.0%	27.4%	27.8%	27.5%	27.5%
Net Cash Per Share (Rs)	(186.93)	(186.27)	(189.92)	(197.23)	(205.98)
BVPS (Rs)	143.23	154.57	166.16	178.40	191.50
Gross Interest Cover	2.96	2.96	3.16	3.19	3.23
Effective Tax Rate	26.7%	27.7%	27.4%	26.8%	26.3%
Net Dividend Payout Ratio	40.9%	42.2%	41.3%	41.1%	41.1%
Accounts Receivables Days	55.15	58.69	60.01	60.76	60.26
Inventory Days	42.44	57.87	64.18	64.95	64.46
Accounts Payables Days	39.48	40.04	34.61	34.66	34.40
ROIC (%)	7.2%	7.2%	7.5%	7.4%	7.4%
ROCE (%)	9.0%	8.9%	9.2%	9.2%	9.2%
Return On Average Assets	6.6%	6.4%	6.7%	6.7%	6.8%

SOURCE: INCRED RESEARCH, COMPANY REPORTS

DISCLAIMER

This report (including the views and opinions expressed therein, and the information comprised therein) has been prepared by Incred Research Services Private Ltd. (formerly known as Earnest Innovation Partners Private Limited) (hereinafter referred to as "IRSPL"). IRSPL is registered with SEBI as a Research Analyst vide Registration No. INH000011024. Pursuant to a trademark agreement, IRSPL has adopted "Incred Equities" as its trademark for use in this report.

The term "IRSPL" shall, unless the context otherwise requires, mean IRSPL and its affiliates, subsidiaries and related companies. This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject IRSPL and its affiliates/group companies to registration or licensing requirements within such jurisdictions.

This report is being supplied to you strictly on the basis that it will remain confidential. No part of this report may be (i) copied, photocopied, duplicated, stored or reproduced in any form by any means; or (ii) redistributed or passed on, directly or indirectly, to any other person in whole or in part, for any purpose without the prior written consent of IRSPL.

The information contained in this report is prepared from data believed to be correct and reliable at the time of issue of this report.

IRSPL is not required to issue regular reports on the subject matter of this report at any frequency and it may cease to do so or change the periodicity of reports at any time. IRSPL is not under any obligation to update this report in the event of a material change to the information contained in this report. IRSPL has not any and will not accept any, obligation to (i) check or ensure that the contents of this report remain current, reliable or relevant; (ii) ensure that the content of this report constitutes all the information a prospective investor may require; (iii) ensure the adequacy, accuracy, completeness, reliability or fairness of any views, opinions and information, and accordingly, IRSPL and its affiliates/group companies (and their respective directors, associates, connected persons and/or employees) shall not be liable in any manner whatsoever for any consequences (including but not limited to any direct, indirect or consequential losses, loss of profits and damages) of any reliance thereon or usage thereof.

Unless otherwise specified, this report is based upon reasonable sources. Such sources will, unless otherwise specified, for market data, be market data and prices available from the main stock exchange or market where the relevant security is listed, or, where appropriate, any other market. Information on the accounts and business of company(ies) will generally be based on published statements of the company(ies), information disseminated by regulatory information services, other publicly available information and information resulting from our research. While every effort is made to ensure that statements of facts made in this report are accurate, all estimates, projections, forecasts, expressions of opinion and other subjective judgments contained in this report are based on assumptions considered to be reasonable as of the date of the document in which they are contained and must not be construed as a representation that the matters referred to therein will occur. Past performance is not a reliable indicator of future performance. The value of investments may go down as well as up and those investing may, depending on the investments in question, lose more than the initial investment. No report shall constitute an offer or an invitation by or on behalf of IRSPL and its affiliates/group companies to any person to buy or sell any investments.

The opinions expressed are based on information which is believed to be accurate and complete and obtained through reliable public or other non-confidential sources at the time made (information barriers and other arrangements may be established, where necessary, to prevent conflicts of interests arising. However, the analyst(s) may receive compensation that is based on his/their coverage of company(ies) in the performance of his/their duties or the performance of his/their recommendations. In reviewing this report, an investor should be aware that any or all of the foregoing, among other things, may give rise to real or potential conflicts of interest. Additional information is, subject to the duties of confidentiality, available on request. The report is not a "prospectus" as defined under Indian Law, including the Companies Act, 2013, and is not, and shall not be, approved by, or filed or registered with, any Indian regulator, including any Registrar of Companies in India, SEBI, any Indian stock exchange, or the Reserve Bank of India. No offer, or invitation to offer, or solicitation of subscription with respect to any such securities listed or proposed to be listed in India is being made, or intended to be made, to the public, or to any member or section of the public in India, through or pursuant to this report.

The research analysts, strategists or economists principally responsible for the preparation of this research report are segregated from the other activities of IRSPL. Information barriers and other arrangements have been established, as required, to prevent any conflicts of interests.

The research analysts, strategists or economists principally responsible for the preparation of this research report are segregated from the other activities of IRSPL. Information barriers and other arrangements have been established, as required, to prevent any conflicts of interests.

IRSPL may have issued other reports (based on technical analysis, event specific, short-term views, etc.) that are inconsistent with and reach a different conclusion from the information presented in this report.

Holding of Analysts/Relatives of Analysts, IRSPL and Associates of IRSPL in the covered securities, as on the date of publishing of this report

Research Analyst or his/her relative(s) or InCred Research Services Private Limited or our associate may have any financial interest in the subject company.

Research Analyst or his/her relatives or InCred Research Services Limited or our associates may have actual or beneficial ownership of 1% or more securities of the subject company(ies) at the end of the month immediately preceding the date of publication of the Research Report.

Research Analyst or his/her relative or InCred Research Services Private Limited or our associate entities may have any other material conflict of interest at the time of publication of the Research Report.

In the past 12 months, IRSPL or any of its associates may have:

- a) Received any compensation/other benefits from the subject company,
- b) Managed or co-managed public offering of securities for the subject company,
- c) Received compensation for investment banking or merchant banking or brokerage services from the subject company,
- d) Received compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company

We or our associates may have received compensation or other benefits from the subject company(ies) or third party in connection with the research report.

Research Analyst may have served as director, officer, or employee in the subject company.

We or our research analyst may engage in market-making activity of the subject company.

Analyst declaration

- The analyst responsible for the production of this report hereby certifies that the views expressed herein accurately and exclusively reflect his or her personal views and opinions about any and all of the issuers or securities analysed in this report and were prepared independently and autonomously in an unbiased manner.
- No part of the compensation of the analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations(s) or view(s) in this report or based on any specific investment banking transaction.
- The analyst(s) has(have) not had any serious disciplinary action taken against him/her(them).
- The analyst, strategist, or economist does not have any material conflict of interest at the time of publication of this report.
- The analyst(s) has(have) received compensation based upon various factors, including quality, accuracy and value of research, overall firm performance, client feedback and competitive factors.

IRSPL and/or its affiliates and/or its Directors/employees may own or have positions in securities of the company(ies) covered in this report or any securities related thereto and may from time to time add to or dispose of, or may be materially interested in, any such securities.

IRSPL and/or its affiliates and/or its Directors/employees may do and seek to do business with the company(ies) covered in this research report and may from time to time (a) buy/sell the securities covered in this report, from time to time and/or (b) act as market maker or have assumed an underwriting commitment in securities of such company(ies), and/or (c) may sell them to or buy them from customers on a principal basis and/or (d) may also perform or seek to perform significant investment banking, advisory, underwriting or placement services for or relating to such company(ies) and/or (e) solicit such investment, advisory or other services from any entity mentioned in this report and/or (f) act as a lender/borrower to such company and may earn brokerage or other compensation. However, Analysts are forbidden to acquire, on their own account or hold securities (physical or uncertificated, including derivatives) of companies in respect of which they are compiling and producing financial recommendations or in the result of which they play a key part.

InCred Research Services Private Limited

Research Analyst SEBI Registration Number: INH000011024

Registered Office: Unit No 1203, 12th Floor, B Wing, The Capital, C-70, G Block, BKC, Bandra (E), Mumbai – 400051

Phone: +91-22-6844-6100

Corporate Office: 05th floor, Laxmi Towers, Plot No. C-25, G Block, Bandra – Kurla Complex, Bandra (East), Mumbai – 400051

Phone: +91-22-4161-1500

Name of the Compliance Officer: Mr. Yogesh Kadam

Email ID: compliance@incredresearch.com, Phone No: +91-22-41611539

For any queries or grievances, you may contact the Grievance Officer.

Name of the Grievance Officer: Mr. Rajarshi Maitra

Phone no. +91-022-41611546

Email ID: rajarshi.maitra@incredresearch.com

CIN: U74999MH2016PTC287535

Recommendation Framework**Stock Ratings**

Definition:

- Add** The stock's total return is expected to exceed 10% over the next 12 months.
- Hold** The stock's total return is expected to be between 0% and positive 10% over the next 12 months.
- Reduce** The stock's total return is expected to fall below 0% or more over the next 12 months.

The total expected return of a stock is defined as the sum of the: (i) percentage difference between the target price and the current price and (ii) the forward net dividend yields of the stock. Stock price targets have an investment horizon of 12 months.

Sector Ratings

Definition:

- Overweight** An Overweight rating means stocks in the sector have, on a market cap-weighted basis, a positive absolute recommendation.
- Neutral** A Neutral rating means stocks in the sector have, on a market cap-weighted basis, a neutral absolute recommendation.
- Underweight** An Underweight rating means stocks in the sector have, on a market cap-weighted basis, a negative absolute recommendation.

Country Ratings

Definition:

- Overweight** An Overweight rating means investors should be positioned with an above-market weight in this country relative to benchmark.
- Neutral** A Neutral rating means investors should be positioned with a neutral weight in this country relative to benchmark.
- Underweight** An Underweight rating means investors should be positioned with a below-market weight in this country relative to benchmark.