

AUGMENTING VALUE

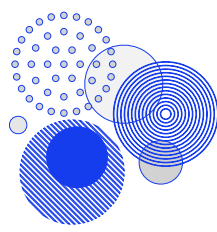
# INDIA'S POWER TRANSMISSION & DISTRIBUTION MARKET 2026

Examining Market Size, Share, Growth Trends, Investment Opportunities & Strategic Outlook till 2032

KEY QUERIES ANSWERED

- Market sizing and segmentation of India's power T&D sector till 2032
- Competitive landscape & benchmarking
- Investment outlook till 2032
- Assessing the long term revenue streams for the T&D EPC players
- Opportunity assessment for the T&D equipment OEMs till 2032

विद्युत ग्रिड  
₹ भुगतान



## India's Power T&D Market – Underpinned by a government mandated capex programme of US\$ 97 Billion by 2032

- India's power T&D sector is transforming from a domestic infrastructure builder into a global grid powerhouse. Fueled by the world's most ambitious renewable energy targets, surging electricity demand, and grid modernization imperatives, this report delivers the most comprehensive and actionable intelligence available for investors, manufacturers, EPC players, and policy practitioners.

### The inflection point – India's grid has been building towards

India's Power Transmission & Distribution (T&D) sector has crossed a threshold that would have seemed implausible a decade ago: **private capital now matches public investment** in the country's grid build-out — and the pipeline ahead is larger than anything that has come before. Underpinned by a government-mandated capex programme of **₹9.15 lakh crore (~USD 97 billion) through 2032**, India's T&D sector is undergoing a fundamental identity shift — from a domestically-focused, state-dominated infrastructure builder into a **globally competitive, institutionally-backed grid powerhouse**. The numbers that have emerged through the Tariff Based Competitive Bidding (TBCB) framework as of March 2026 tell a story of structural transformation that demands the attention of every infrastructure investor, energy developer, and policy practitioner tracking emerging-market grid investment.

### Private Capital Achieves Parity — The TBCB Scorecard at March 2026

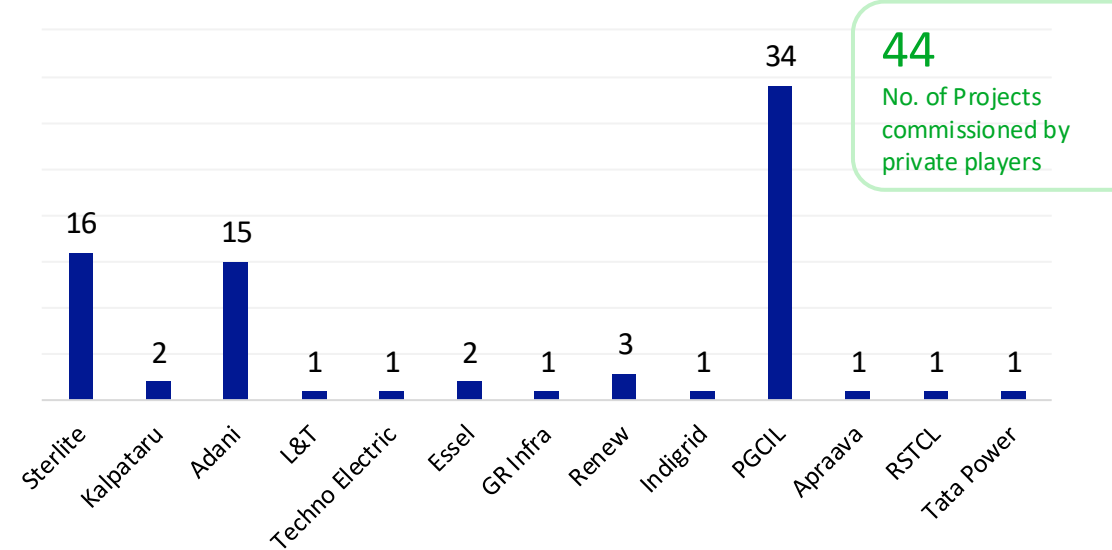
Exhibit 01 indicates a decisive structural shift in India's power T&D segment. It can be observed from the Exhibit that as of March 2026, 79 projects worth ₹1,02,993 crore (USD 10.8 billion) have been commissioned under the TBCB route since the framework's inception — with private players contributing a striking 50% of total capital deployed, or ₹513 billion across 44 projects spanning 19,850 circuit-km (ckm) of transmission lines. This private-public parity in capital deployment is not an accident. It is the direct outcome of competitive bidding reforms that have systematically de-risked private participation, established transparent price discovery, and created a replicable institutional framework for scaling India's transmission infrastructure.

## Exhibit 01: Encouraged Participation from Private Players in India's T&D Sector and the Capital Investment

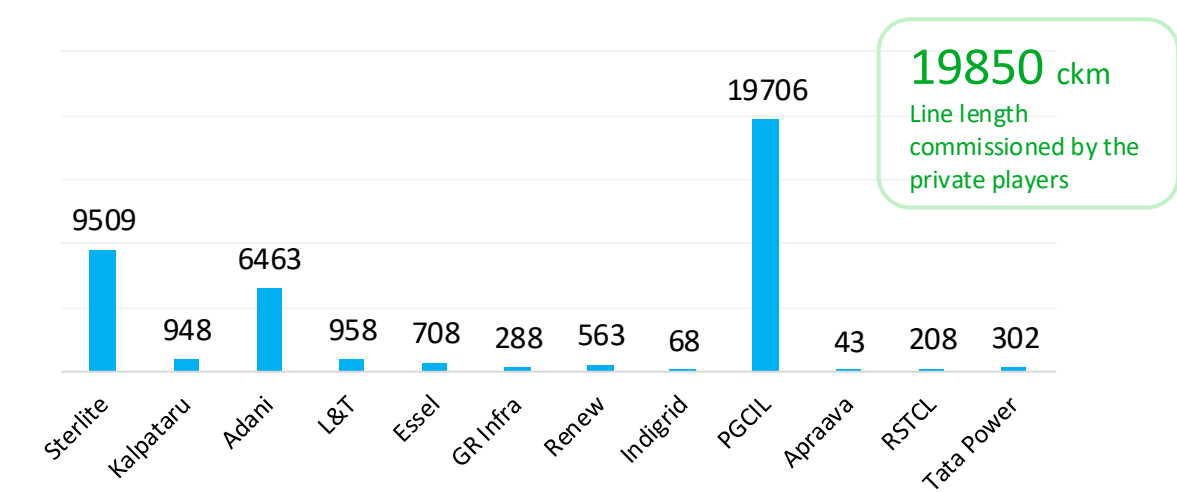
### Total T&D Projects Commissioned in India under TBCB: 2014-2026 (March)

As of March 2026 a total of 79 T&D Projects have been commissioned under TBCB Route involving a CAPEX of INR 102993 crores (US\$ 10.8 Billion), private players contributed 50% of this capital

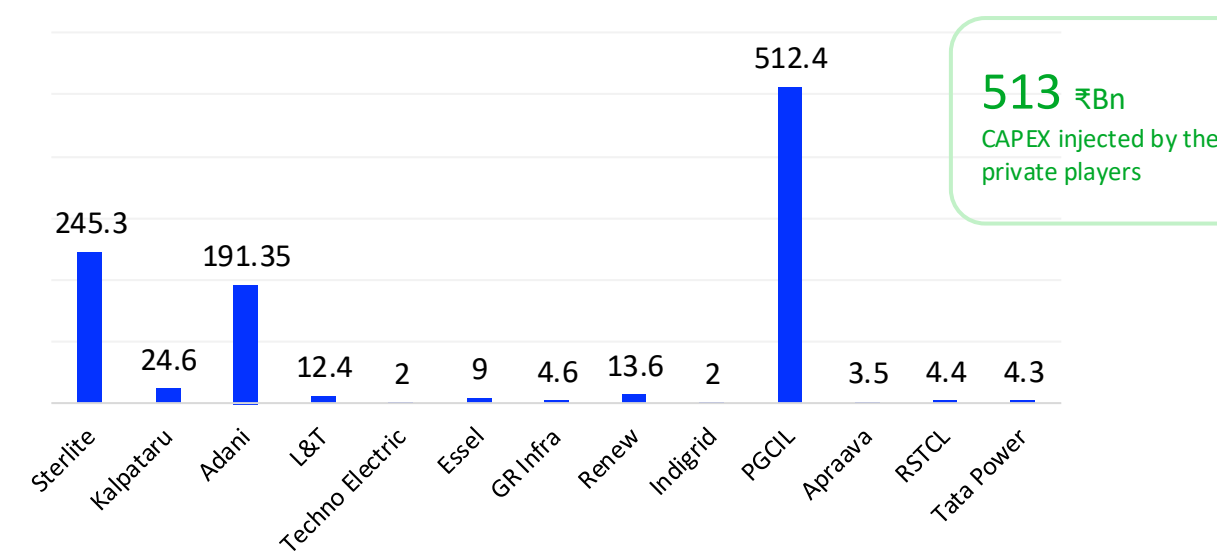
Number of Projects Commissioned as of March 2026



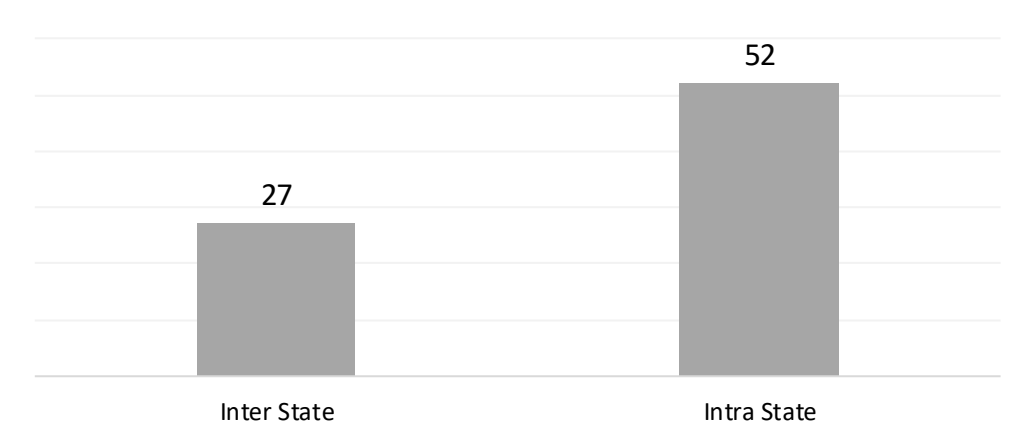
Transmission Line Length Commissioned as of March 2026

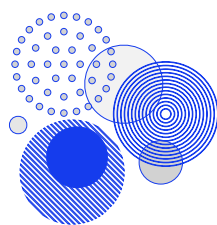


Capital investment done under TBCB as of March 2026



Inter & Intra State Projects Commissioned TBCB as of March 2026





The TBCB model has significantly encouraged private sector participation by creating a de-risked and scalable framework for accelerating India's grid infrastructure expansion in line with its ambitious renewable energy targets. Private developers have enhanced cost efficiencies, introduced innovative financing approaches, and leveraged global best practices, thereby improving project execution timelines and minimizing budget overruns.

**Key structural highlights from the March 2026 data**

- **PGCIL vs. Private — A statistical dead heat:** Power Grid Corporation of India (PGCIL) leads in absolute spend at ₹512 billion (35 projects), but the **aggregate private contribution of ₹513 billion across 44 projects** — spread across a growing and diversified developer base — signals a maturing investor ecosystem that no longer depends on a single public utility to anchor the grid.
- **Sterlite (Resonia) and Adani dominate private rankings:** With **16 and 15 commissioned projects** respectively, Resonia Ltd (formerly Sterlite Power) and Adani Energy Solutions Ltd (AESL) collectively rival PGCIL's 35-project portfolio in both scale and execution ambition. Between them, these two private developers have transformed from TBCB pioneers into India's most prolific grid builders outside the public sector.
- **Intra-state demand surges:** A notable **52 of the 79 commissioned projects** are intra-state schemes, signaling the rapid acceleration of state-level grid strengthening — driven overwhelmingly by the imperative to integrate renewable energy at the distribution edge, not just at the inter-regional backbone.
- **The TBCB flywheel is accelerating:** Of the 84 ISTS-TBCB schemes under construction as of April 2025, **45 were awarded in FY25 alone** — the single most active year in TBCB history — with 12+ distinct private developers competing for projects. By September 2025, the under-construction pipeline had grown to 87 ISTS-TBCB schemes envisaging total investment of **₹2,23,291 crore**, underscoring the structural depth of the opportunity.

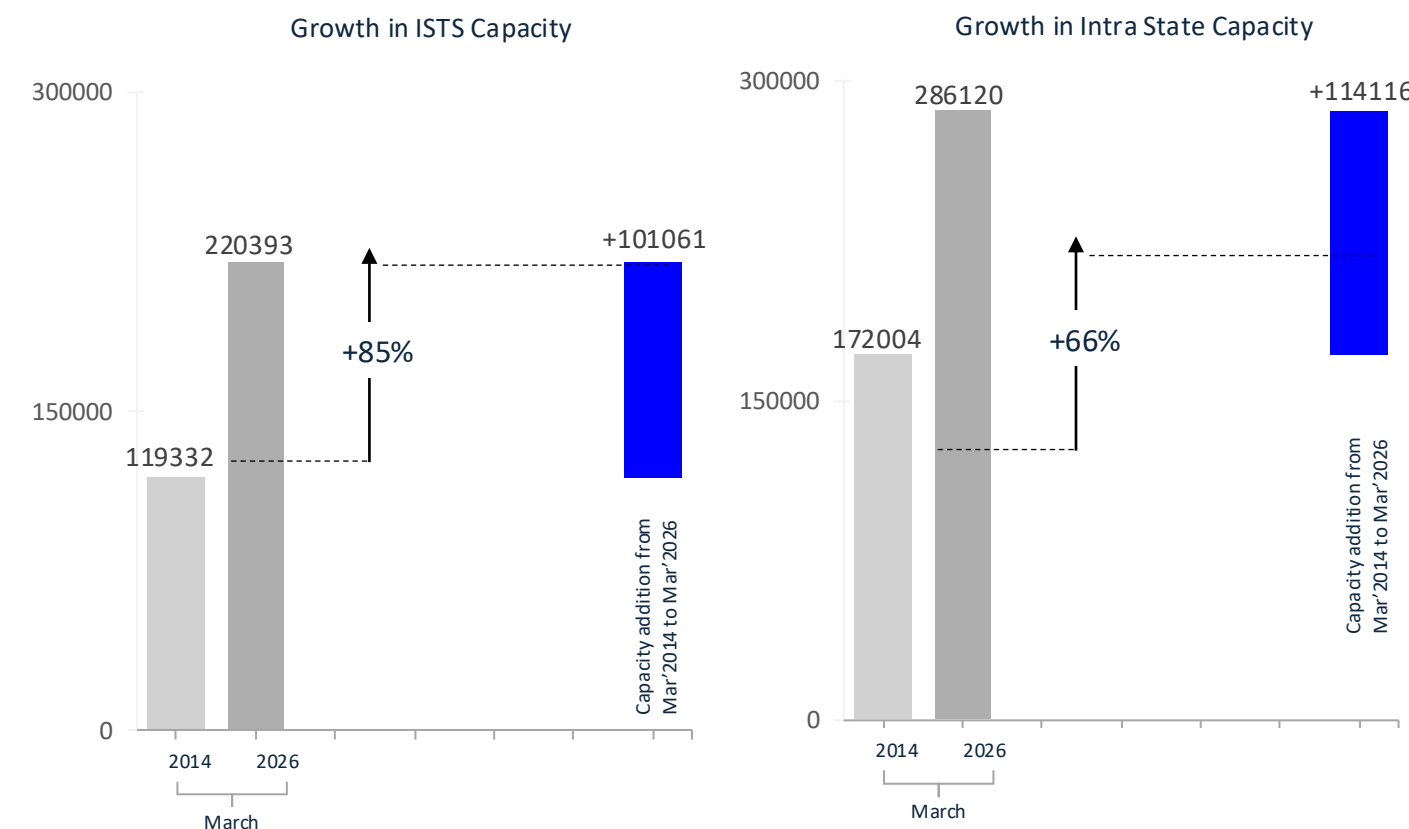
**Strategic Implications: What the parity moment means for the sector ?**

The achievement of private-public capex parity in commissioned TBCB assets is not merely a statistical milestone — it carries deep strategic implications for the next phase of India's grid build-out.

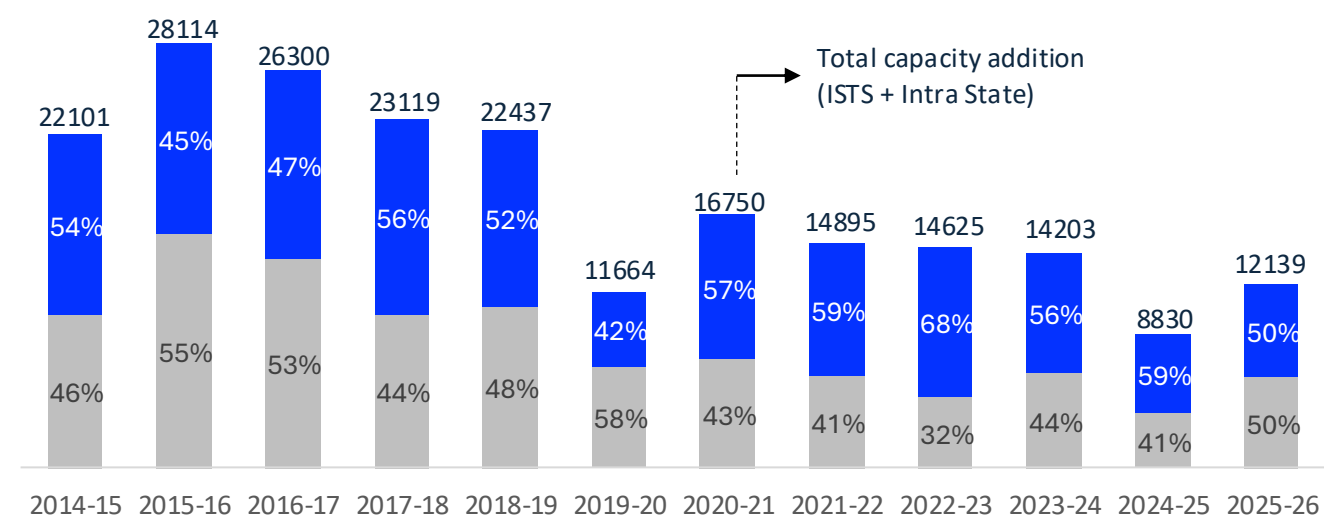
- **For investors and developers,** the TBCB framework has validated an asset class that combines the revenue predictability of regulated infrastructure (35-year BOOT concessions, fixed annual transmission charges unaffected by energy volume risk) with the growth profile of an emerging-market infrastructure supercycle. The InvIT route — pioneered by IndiGrid and now replicable by multiple developers — provides a built-in capital recycling mechanism that meaningfully improves equity IRRs and opens the sector to institutional capital at scale.
- **For equipment manufacturers and EPC players,** the convergence of HVDC project awards, 765kV corridor expansion, GIS substation deployment, and smart grid (AMI) rollout under the RDSS creates a multi-year, multi-technology order book that will stretch well beyond 2030.
- **For policy practitioners,** the TBCB commissioning data validates the competitive bidding model as the right instrument for mobilizing private capital without compromising grid reliability. The next frontier — **intra-state TBCB (InSTS-TBCB)**, where states like Maharashtra and Karnataka are beginning to open ₹2.9 trillion of distribution-edge investment to private developers — is set to extend this model from the inter-regional backbone to the last mile of India's grid.

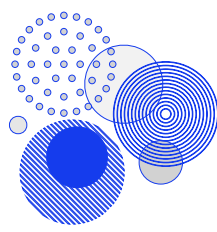
The concentration of **52 intra-state schemes among the 79 commissioned TBCB projects** is the clearest signal of where the sector's center of gravity is shifting: from national transmission highways to the state-level grid fabric that will ultimately determine whether India's renewable energy ambitions translate into reliable, affordable kilowatt-hours reaching homes and industries.

**Exhibit 02: YoY Trends in the Transmission lines (ckm) Commissioned in India , Period from 2014-2026 (March)**



YoY Split of ISTS & Intra State Transmission Lines Capacity Share in the Total Network Commissioned





**2025: Landmark developments that refined participation of private players in India's T&D landscape**

Calendar year 2025 was not merely an incremental step in private sector grid participation — it was a year of category-defining milestones that permanently reset the ambition ceiling for private T&D investment in India.

**1. India's First Private-Sector HVDC TBCB Award — Adani Energy Solutions (January 2025)**

In a landmark development for India's transmission sector, Adani Energy Solutions became the first private player to secure an HVDC project under the TBCB route through the acquisition of Rajasthan Part I Power Transmission Ltd from REC Power Development and Consultancy Limited. The ₹22,700 crore project includes two ±800kV, 6,000 MW HVDC terminals and a 955 km transmission corridor linking Rajasthan and Uttar Pradesh. By outbidding major players including Power Grid Corporation of India Limited and Sterlite Power, AESL's win marks a pivotal shift toward greater private-sector leadership in India's next-generation grid infrastructure.

**2. Resonia Expands into Andhra Pradesh with Anantapur II REZ Project (March 2025)**

Resonia Limited acquired the Anantapur II REZ Transmission SPV from PFC Consulting Limited to develop a transmission scheme integrating 4.5 GW of renewable energy from Andhra Pradesh's Anantapur-II REZ. The project marks Resonia's 11th TBCB win and its entry into the Andhra Pradesh market, further strengthening its position as India's leading private transmission developer with a portfolio exceeding ₹32,500 crore.

**3. AESL Secures Maharashtra ISTS-TBCB Project for Pumped Storage Integration (May 2025)**

Adani Energy Solutions acquired WRNES Talegaon Power Transmission Ltd from REC Power Development and Consultancy Limited to develop an ISTS-TBCB transmission scheme supporting pumped storage evacuation near Pune, Maharashtra. The project includes a 2×1,500 MVA, 765/400kV substation with 3,000 MVA transformation capacity and is scheduled for commissioning by January 2028. With this addition, AESL's transmission portfolio expanded to over 26,600 ckm and 93,000 MVA across 14 states.

**4. Private Developers Overtake PGCIL in Q3FY26 Transmission Commissioning Pipeline (October 2025)**

An October 2025 analysis showed private developers accounting for 10 of the 15 ISTS-TBCB schemes slated for commissioning in Q3FY26, surpassing Power Grid Corporation of India Limited's 5 projects. Led by Adani Energy Solutions, the projects are expected to collectively add 4,824 ckm of transmission lines and 26,400 MVA of transformation capacity, highlighting the growing execution dominance of the private sector in India's transmission expansion.

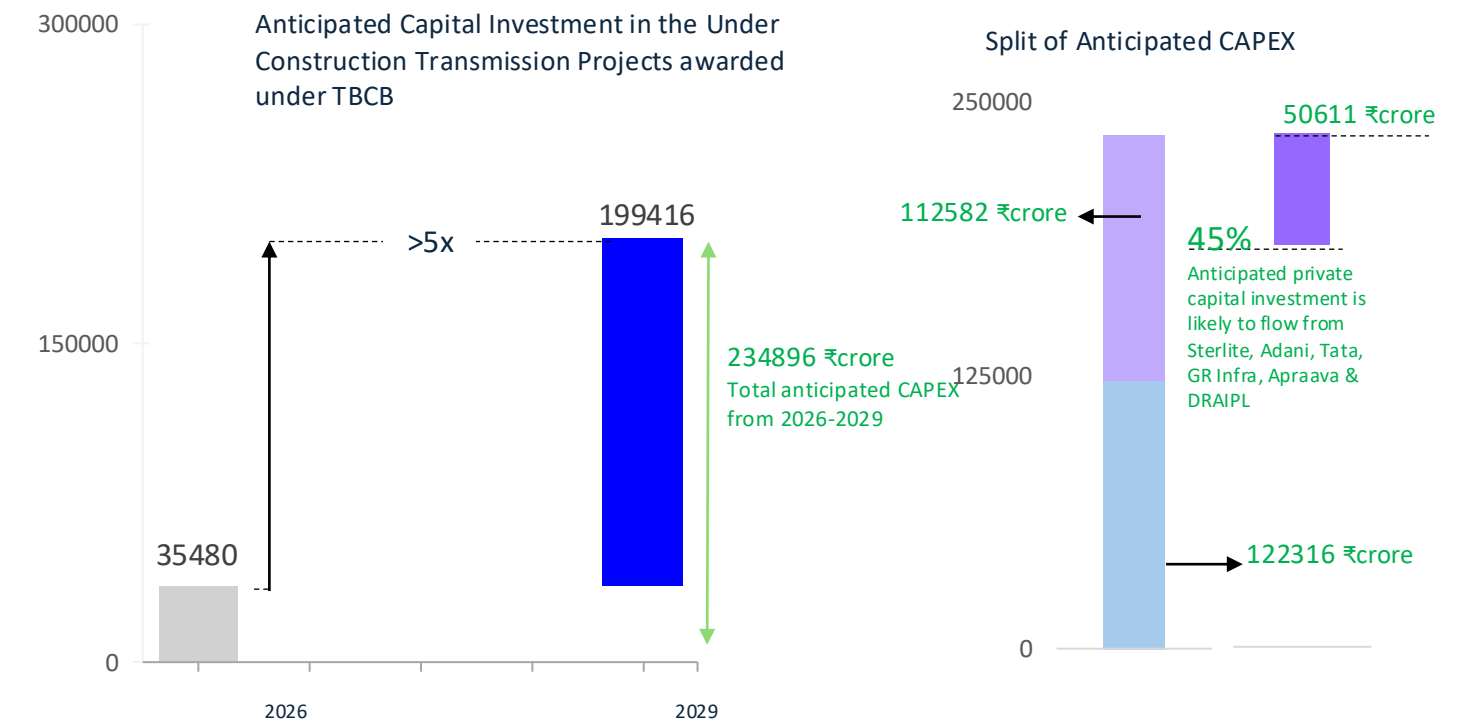
**5. NCT Approves Six ISTS-TBCB Mega Projects Worth ₹29,092 Crore (August 2025)**

The National Committee on Transmission approved six major ISTS-TBCB schemes worth ₹29,092 crore in August 2025 — marking the largest such clearance in recent years. Spanning multiple regional grids, the projects focus on RE integration, inter-regional strengthening, green hydrogen evacuation, and hydro-power connectivity, and are expected to add over 5,000 ckm of transmission lines and ~48,000 MVA of transformation capacity, significantly strengthening the future private-sector project pipeline.

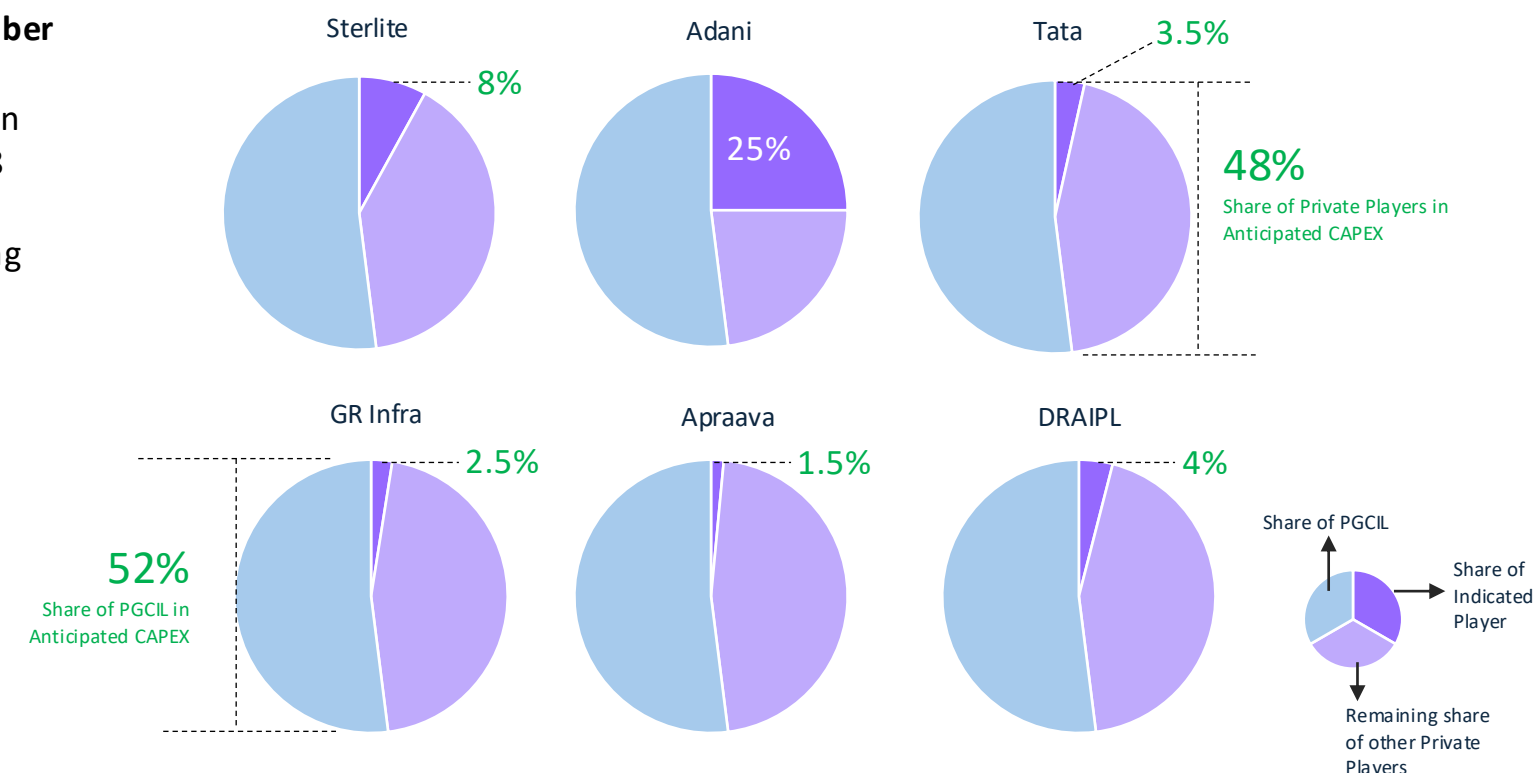
**6. AESL Transmission Portfolio Nears 28,000 ckm Milestone (December 2025)**

By December 2025, Adani Energy Solutions expanded its transmission portfolio to 27,901 ckm and 1,18,175 MVA capacity, supported by 28 under-construction projects worth ₹77,787 crore. The company also commissioned the North Karanpura Transco TBCB scheme, reinforcing its position as one of India's largest and fastest-scaling private transmission developers.

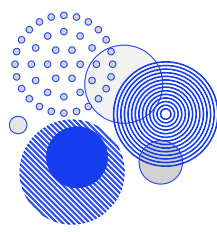
**Exhibit 03: Anticipated Capital Investment by Private Players in Under Construction TBCB Transmission Projects in India**



Key Players Leading the Capital Investment & their Percent Share



Source: Eninrac Consulting, Ministry of Power



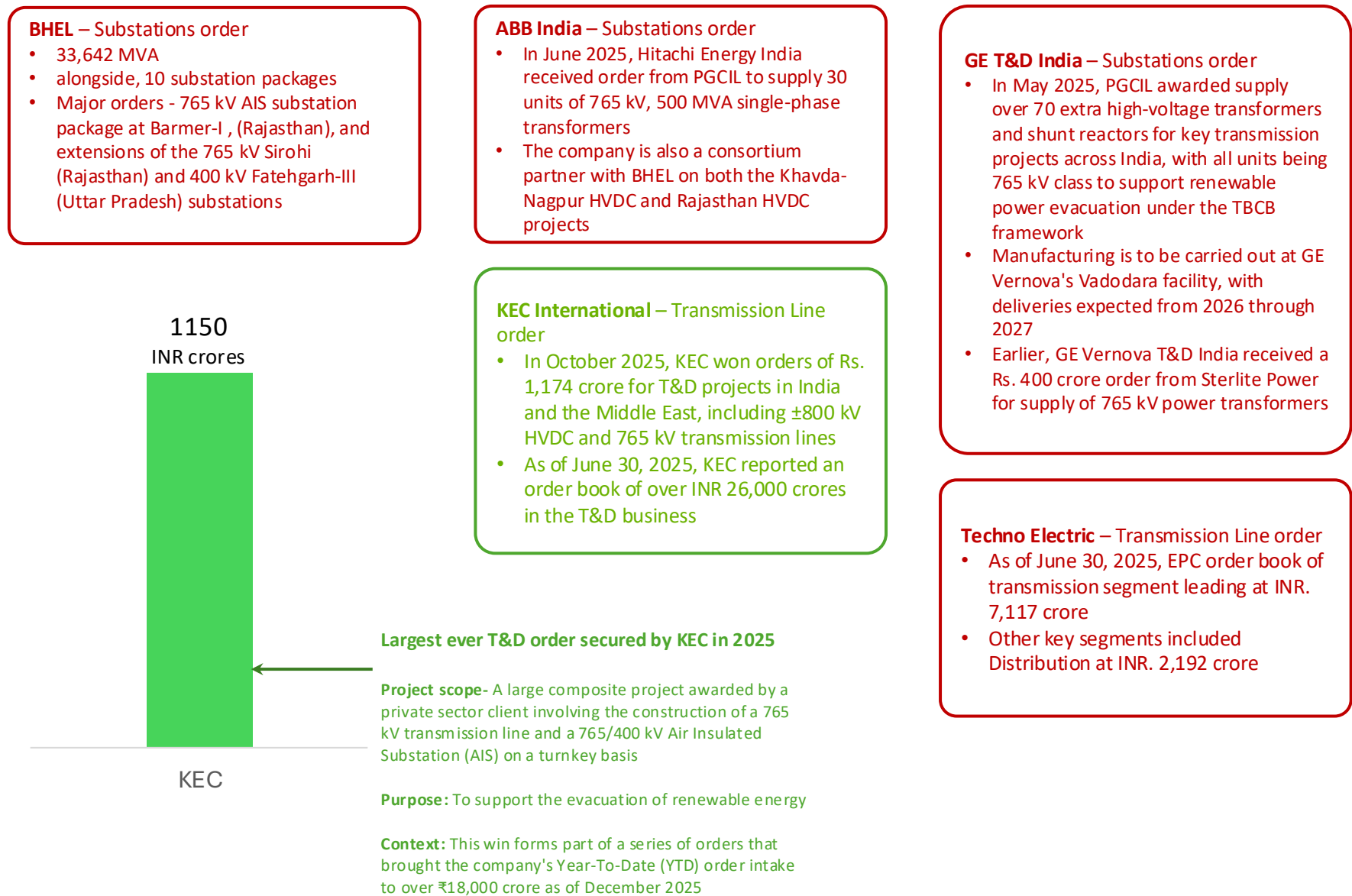
Top Power Transmission Companies in India

Exhibit 4: Company-wise presence across the transmission value chain – Key Players

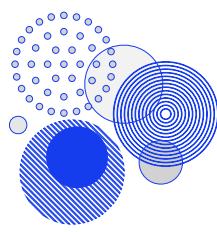
Name of the Company	Transmission Line	Substation	Transformer	Conductor
BHEL		✓	✓	
L&T	✓	✓		
ABB India		✓	✓	
Siemens India		✓	✓	
CG Power		✓	✓	
GE T&D India		✓	✓	
KEC International	✓	✓		
Kalpataru Power	✓	✓		
Techno Electric	✓	✓		
Voltamp			✓	
Bharat Bijlee			✓	
TIL			✓	
Ino Tech Transformer			✓	
Sterlite Technologies	✓			✓

Source: Eninrac Consulting, Press Release

Exhibit 5: Key Developments of T&D Players in India - 2025



Source: Eninrac Consulting, Press Release



Siemens Energy India - Leader in HVDC

Valuation

Significant power transmission and generation capacity augmentation in India are expected to provide bountiful ordering opportunities in the energy transmission and generation space. SEIL is well placed as a key transmission and generation product and services supplier with past execution track record. Siemens Energy India holds leading position in High Voltage Direct Current (HVDC) technology in India supported by global expertise with a proven execution track record. India's transmission network is in the midst of substantial capacity upgradation to address energy transition with RE forming 50% of total energy generation portfolio. As per National Electricity Plan (NEP) investments worth ₹9.2 trillion (trn) is needed to strengthen the electricity grid. Moreover 91% of substation capacity addition is focused on high voltage (>220 kV) equipment.

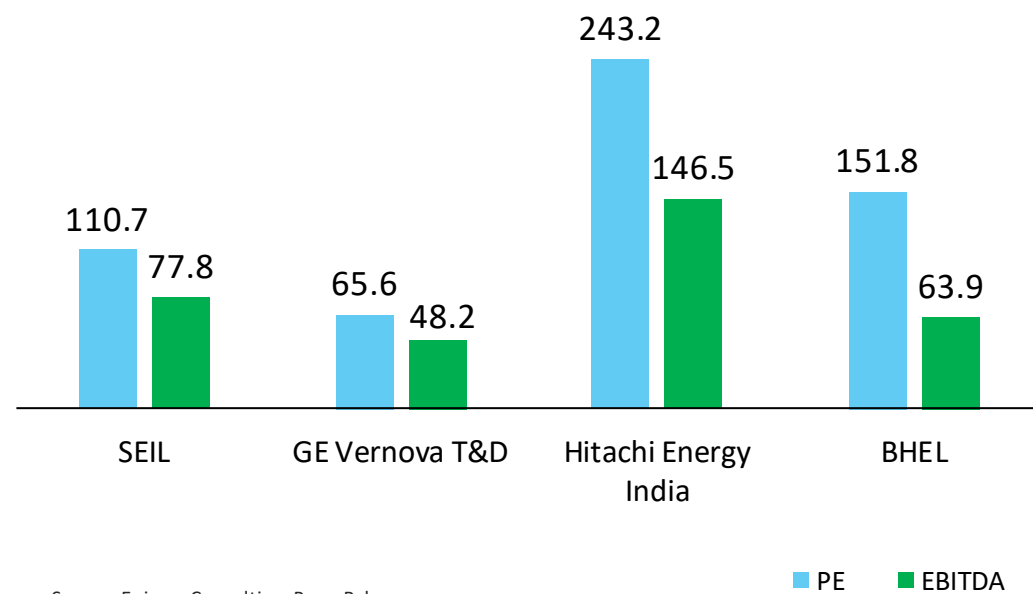
Order Books

SEIL has announced capex plans to augment its manufacturing capabilities across factories. This is aimed at meeting growing demand for transmission equipment both globally and in India. It is well positioned to grow through high voltage equipment opportunities in the transmission space. High technological and execution barriers ensure resilient margins. SEIL orderbook as of 9MFY25 stood at ~₹15827 crore which is ~2.5x FY24 revenue the ordering outlook remains strong with capex to the tune of ₹3 trillion expected in transmission network upgradation over the next 3 years.

Government's sharpening focus in T&D segment

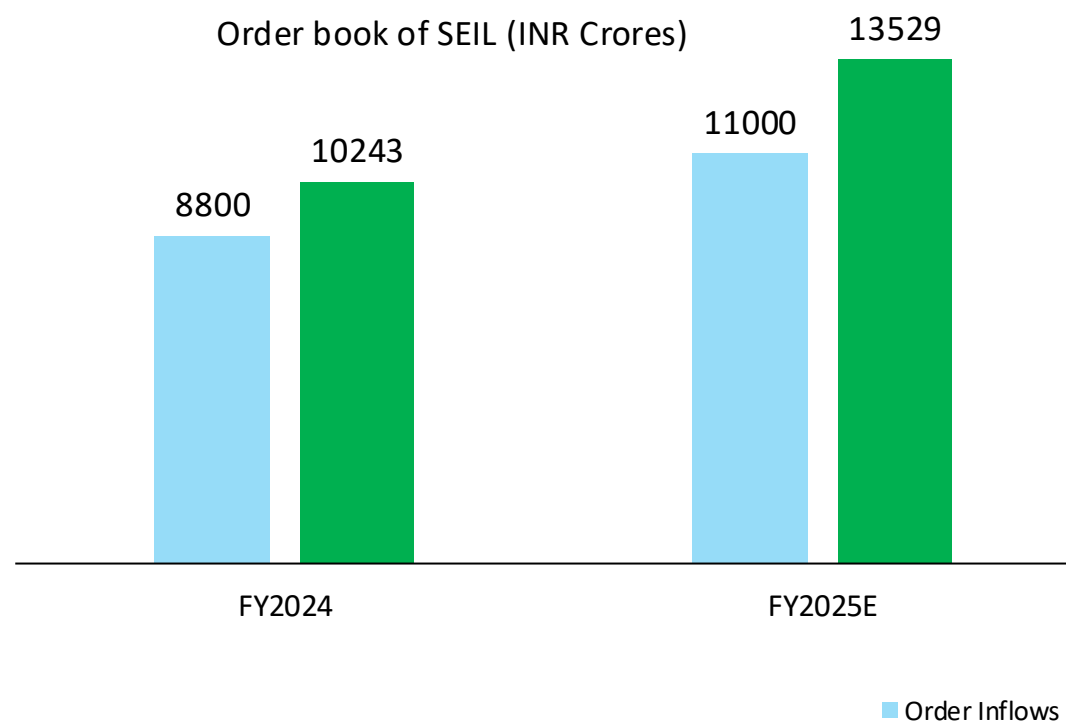
With reforms nearly over in power generation space, we strongly believe that a pick-up in T&D capex cycle is imminent and is the crux of power sector reforms. As a thumb rule, 20% of T&D capex is represented by substations. A sizable chunk of inter-state transmission projects will continue to be bid under the competitive model (tariff based competitive bidding - TBCB), which will enable more private sector participation.

Valuation matrix of key HVDC T&D players

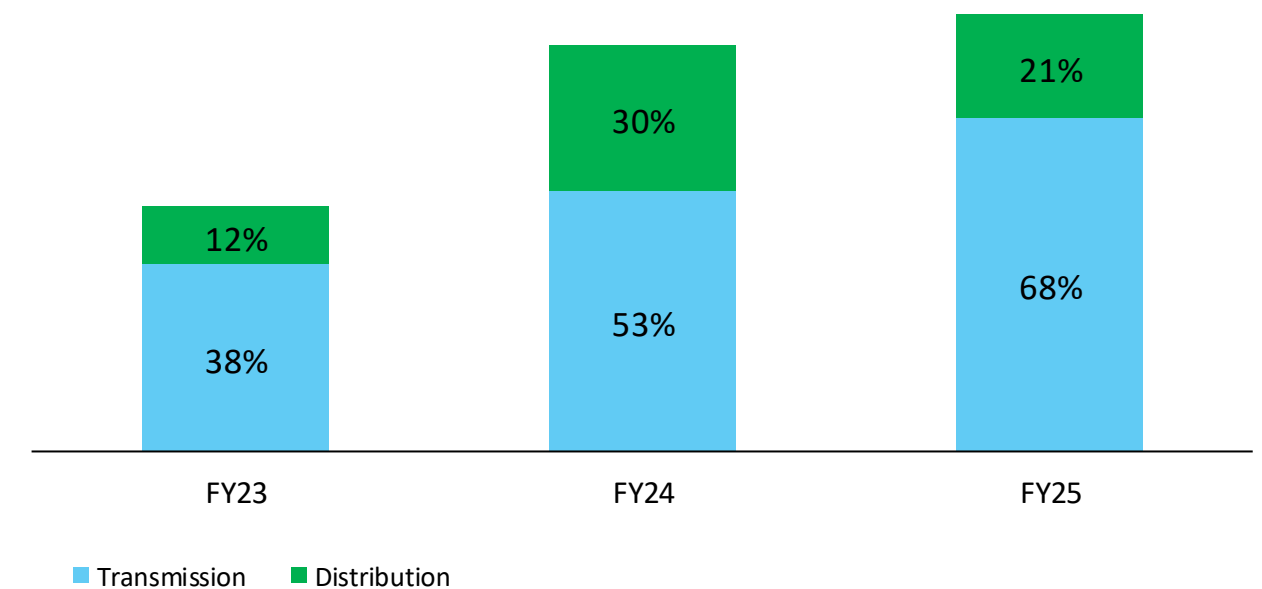


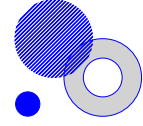
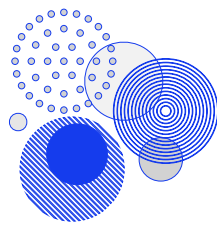
Source: Eninrac Consulting, Press Release

Order book of SEIL (INR Crores)



Order book breakup indicates rising skew towards T&D





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- Consulting, Technical Advisory & Due Diligence Firms
- Multilateral development bodies
- Funding bodies



## Company Profiling

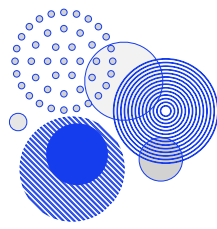
- Sterlite
- Kalpataru
- Adani
- L&T
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- Tata Power
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India Power T&D Sector — Market Study & Outlook to 2032

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**KEY QUESTIONS ANSWERED:**

- How will India's energy supply mix evolve by 2035, particularly the share of renewable & new energy sources?
- How will advancements in energy storage technologies such as - BESS, PSP, green hydrogen shape India's energy future by 2035?
- What investments would be needed for grid expansion, smart grids and transmission networks to integrate clean energy sources?
- Which states would offer most lucrative returns in the green energy investment?

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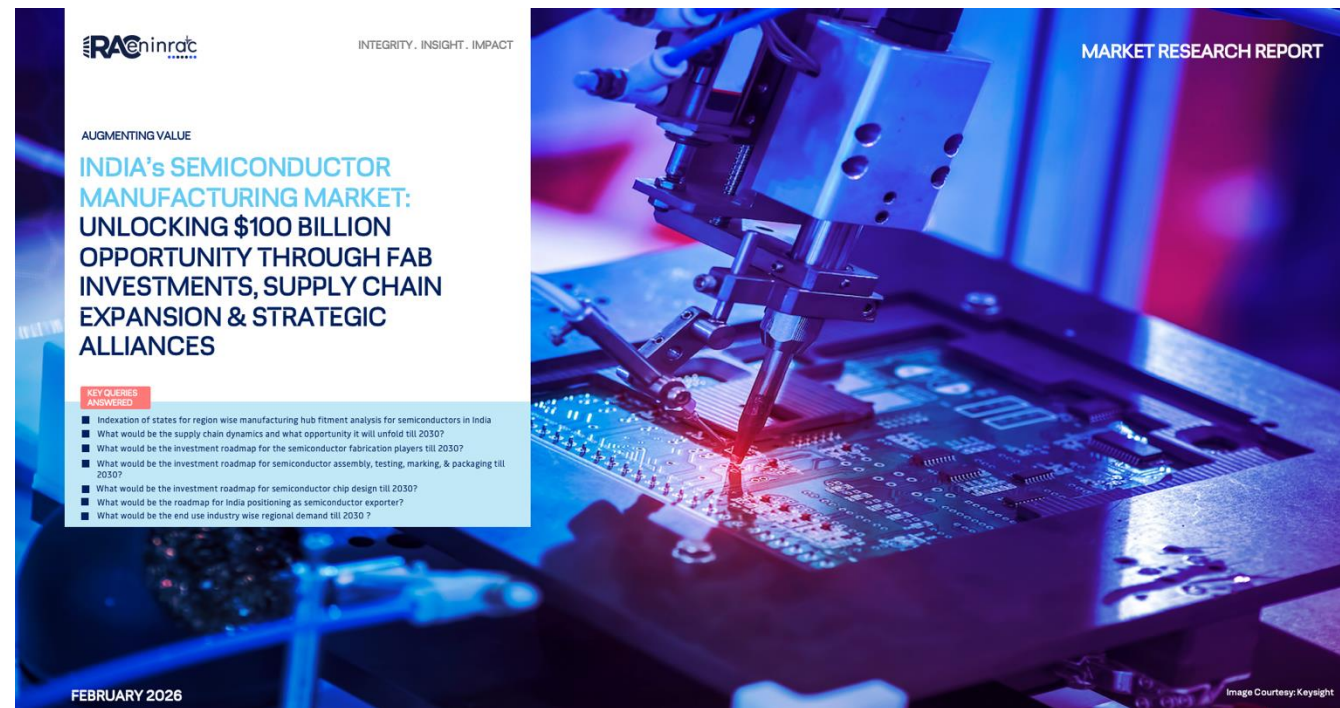
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The \$200 Billion Market- A complete strategic intelligence on market, policy, finance, risk & 250+ projects intelligence tracker

**KEY QUESTIONS ANSWERED:**

- Identification of states for region wise manufacturing hub fitment analysis for semiconductors in India
- What would be the supply chain dynamics and what opportunity it will unfold till 2030?
- What would be the investment roadmap for the semiconductor fabrication players till 2030?
- What would be the investment roadmap for semiconductor assembly, testing, marking, & packaging till 2030?

MARCH 2026 Image Inspiration: Mado Energy eninrac.com



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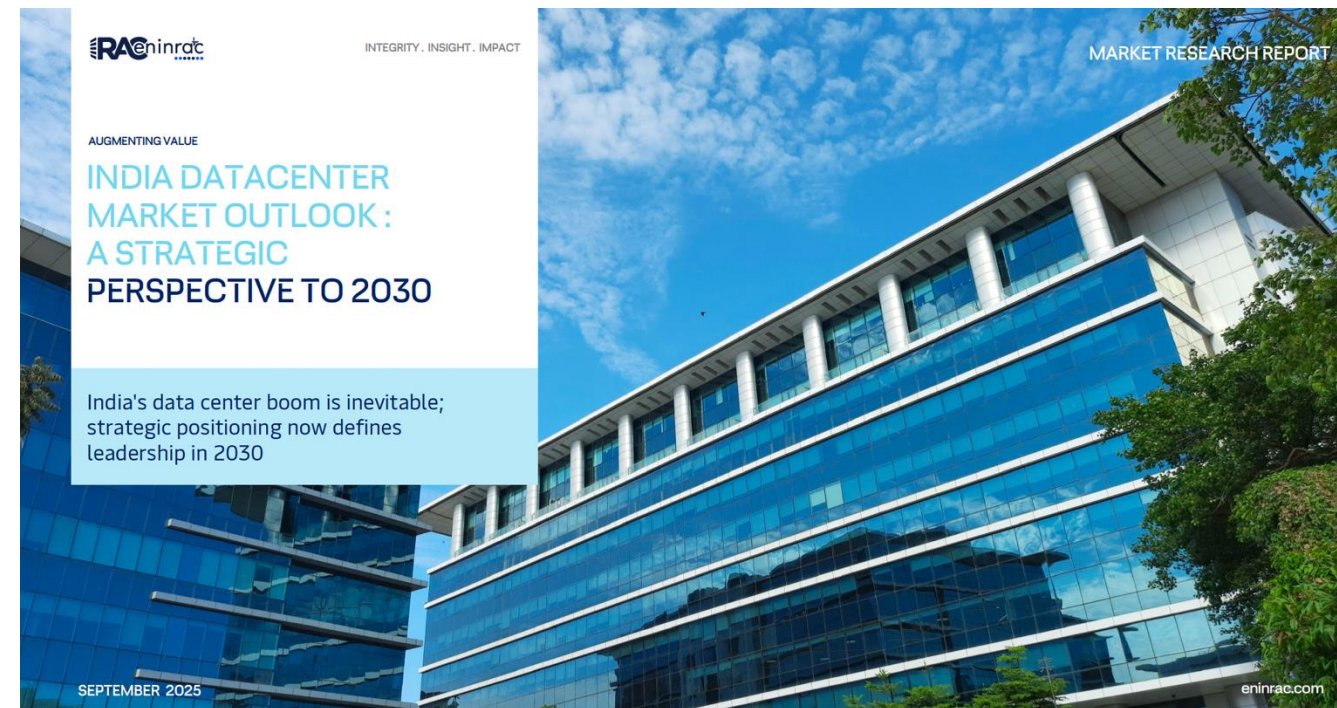
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### INDIA'S SEMICONDUCTOR MANUFACTURING MARKET: UNLOCKING \$100 BILLION OPPORTUNITY THROUGH FAB INVESTMENTS, SUPPLY CHAIN EXPANSION & STRATEGIC ALLIANCES

**KEY QUESTIONS ANSWERED:**

- Identification of states for region wise manufacturing hub fitment analysis for semiconductors in India
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- What would be the investment roadmap for semiconductor assembly, testing, marking, & packaging till 2030?
- What would be the investment roadmap for semiconductor chip design till 2030?
- What would be the roadmap for India positioning as semiconductor exporter?
- What would be the end use industry wise regional demand till 2030 ?

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“ The life of a man consists not in seeing visions and in dreaming dreams, but in active charity and in willing service

- Henry Wadsworth Longfellow

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Eninrac Consulting is a global market research and advisory firm that specializes in providing comprehensive insights and strategic solutions across various industries. Our services are designed to help businesses navigate market complexities, identify growth opportunities, and achieve sustainable success.

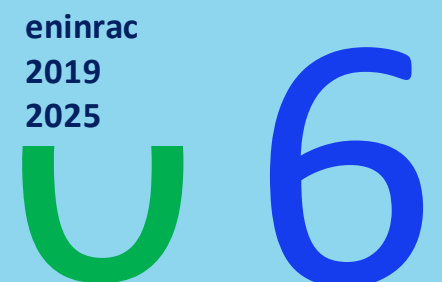
Eninrac's USP lies in its ability to deliver pragmatic, data-driven solutions tailored to the unique needs of each client. By maintaining close collaboration and adopting a hands-on approach, they ensure that their insights are actionable and aligned with clients' strategic objectives. This personalized guidance through diverse markets and cultures sets them apart in the consulting landscape. By leveraging the services offered, Eninrac Consulting empowers businesses to improve processes, understand customers, and solve problems effectively, thereby driving growth and maintaining a competitive edge in their respective industries.

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