

RESEARCH

Reports & Services on Infrastructure Sectors

















ABOUT US

- Leading provider of information, analysis and insight on India's infrastructure sectors since 1997
- Focus areas: Energy, Transportation, Urban Infrastructure, Construction, Communications and Infrastructure Finance
- 35+ multi-client studies and market intelligence research reports every year
- Online database tracking 9,000+ key infrastructure projects
- Six leading magazines related to infrastructure Power Line, Indian Infrastructure, tele.net, Renewable Watch, Smart Utilities and Gujarat Infrastructure
- 80+ conferences a year providing platform for sharing of expertise and exchange of views
- Ten weekly newsletters covering key news and developments
- ALL ACTIVITIES FOCUSSED ON INFRASTRUCTURE

Our clients include most organisations involved in the infrastructure sectors – multinationals, top Indian corporates, commercial and investment banks, consulting companies, public sector companies, government agencies, multilateral agencies and legal firms.

For more information, please contact:

Farhan Ahmed

Vice President, Research Services
India Infrastructure Publishing Pvt. Ltd.,

Mobile: +91**-9891309676**

Email: farhan.ahmed@indiainfrastructure.com

Recent Research Reports & Services

Road Development in India	4
Railways in India	5
Ports in India	6
Water in India	7
Airports in India	8
Urban Rail Market in India	9
Opportunities in Indian Tunnelling Market	10
Logistics in India	11
Data Centre Market in India	12
Power Generation in India	13
Power Transmission in India	14
Power Distribution in India	15
Renewable Energy in India	16
Green Hydrogen in India	17
Pumped Storage Projects in India	18
India Infra Monitor	19

ROAD DEVELOPMENT IN INDIA

Sector Analysis, Network Addition and Investment Opportunities

SECTION I: SECTOR OVERVIEW, TRENDS, OPPORTUNITIES AND FUTURE OUTLOOK

Sector Progress and Key Trends

- Network Growth
- ❖ Project Update National Highways and State Roads (Q4 FY2025)
- Current Trends and Developments
- Financial Trends and Developments
- Risks and Challenges

2. Project Pipeline Analysis

- ❖ Assessment of Project Pipeline:
- Analysis by Segment (NH, SH, State Roads, Expressways, Bridges, Tunnels, Flyovers, etc.)
- Analysis by Stage of Development (Under Construction, Awarded, Under Bidding and Announced)
- Analysis by State
- ❖ Analysis by Ownership and Mode of Implementation
- Top Upcoming Projects

3. Outlook, Opportunities and Key Projections

- Network Addition Plans
- Investment Opportunities
- Project Award and Completion Targets
- Market Opportunities
- Big-ticket Opportunities
- Sector Outlook

4. Progress under Bharatmala Programme

- Overview
- Current Status
- Update on MMLPs
- * Recent Contracts
- Completed Projects
- Future Targets and Opportunities

SECTION II: FOCUS ON IMPLEMENTATION MODELS

5. Hybrid Annuity Model (HAM)

- Experience So Far
- ❖ Bidding Scenario and Competitive Intensity
- Key Players
- Key Completed Projects
- Upcoming Projects

6. EPC- Experience and Progress

- Experience So Far
- . Bidding Scenario and Competitive Intensity
- Key Players
- Key Completed Projects
- Upcoming Projects

7. Toll-Operate-Transfer (TOT) Model

- Overview
- Experience So Far
- Future Opportunities

8. Operations, Maintenance and Tolling

- ❖ Past trends: ETC and FASTag Deployment
- ❖ Quarterly trends: ETC and FASTag Deployment
- Recent Developments: GPS-based toll collection system
- Key Technology Trends for Tolling
- Key Technology Trends for Maintenance
- Focus on Maintenance
- Green Initiatives
- Focus on Safety
- Opportunities for O&M Players

SECTION III: FINANCING SCENARIO AND ACQUISITION TRENDS

9. Financing and Investment Trends

- Overall Funding Snapshot
- Trends in Financial Closures
- ❖ Trends in Bank Credit
- Trends in Budgetary Expenditure
- NHAI's Market Borrowings
- Trends in Asset Sales and Valuation
- Other Key Funding Avenues

10. Asset Acquisition Trends

- Trends in Asset Sales and Valuation
- Analysis by Investor Type
- Quarterly Acquisition Trends
- Update on Monetisation
- Kev Deals
- Key Exits

SECTION IV: EQUIPMENT AND MATERIAL MARKET SIZE & TRENDS

11. Road Equipment Trends

- ❖ Market Size and Growth
- Key Emerging Trends
- Key Recent Developments
- Technology Innovations
- Key Equipment Manufacturers
- Future Outlook

12. Materials: Market Trends

- * Market Size and Growth
- Pricing Trends
- Key Developments
- Key Players
- Other Key Materials

SECTION V: KEY PLAYERS

13. Profile of Key Developers and Contractors

Adani Road Transport Limited, APCO Infratech Private Limited, Ashoka Buildcon Limited, Ceigall India Limited, Dilip Buildcon Limited, Dineshchandra R. Agrawal Infracon Private Limited, Gawar Constructions Limited, GR Infraprojects Limited (GRIL), HG Infra Engineering Limited, IRB Infrastructure Developers Private Limited, J Kumar Infraprojects Limited, KCC Buildcon Private Limited, KNR Constructions Limited, Larsen and Toubro Limited (L&T), Megha Engineering and Infrastructure Limited, NCC Limited, Oriental Structural Engineers Limited, Patel Infrastructure Limited, PNC Infratech Limited

RAILWAYS IN INDIA

State of Sector, Recent Developments and Upcoming Opportunities

SECTION I: SECTOR ANALYSIS, OPPORTUNITIES AND OUTLOOK

1. Sector Progress and Key Trends

- Market Overview
- Growth in Traffic and Earnings
- Commodity-wise Traffic
- Budget Highlights and Analysis
- Trends in Capex
- Key Policy Initiatives and Mega Programmes
- Progress under Key Initiatives
- Emerging Sector Trends
- Focus Areas

2. Project Pipeline Analysis

- Pipeline Assessment
- ❖ Analysis by Stage of Development
- Analysis by Segment
- Analysis by State
- ❖ Top 10 projects

Market Outlook, Opportunities and Projections

- Projected network addition
- Freight traffic projections
- Investment Requirements
- Material and Equipment Demand
- Investment Opportunities

SECTION II: PROGRESS AND OPPORTUNITIES UNDER MEGA PROGRAMMES

4. Dedicated Freight Corridors

- Programme Overview
- Key Features
- Project Cost and Funding
- Progress so Far -Section/Package-wise Snapshot
- Operational Performance
- Commissioned Stretches and Key Developments

High Speed Rail Corridors

- Mumbai-Ahmedabad High Speed Rail Project (MAHSR)
- ❖ New Corridors/Sections Planned

Station Infrastructure Redevelopment

- Overview
- State-wise Analysis
- Fund Allocation and Expenditure
- Details of Completed Projects

- Recent Developments
- Key Trends
- Project Updates: Top Ongoing and Upcoming Projects
- Future Outlook and Opportunities

7. New Suburban Rail Systems

- ❖ Bengaluru Suburban Rail System
- ❖ Mumbai Urban Transport Project Phases 3 and 3A

SECTION III: FOCUS ON KEY SEGMENTS

8. Track Construction

- Size and Growth Trends
- Fund Allocation and Utilisation
- Project Analysis
- ❖ Key Emerging Trends
- * Expansion Plans and Investment Requirements

9. Rolling Stock and Production Capacity

- Production Overview
- Competitive Landscape
- Modernisation of Rolling Stock
- * Recent Developments
- Key Contracts/Deals and Upcoming Tenders
- Capacity Augmentation and Investment Requirements
- Key Player Profiles

10. Track Electrification and Focus on Decarbonisation

- * Track Electrification Progress so Far
- ❖ Focus on Decarbonisation

11. Signalling and Telecommunication

- Current Infrastructure
- . Budget Allocation, Expenditure and Investments
- ❖ Focus on Indigenisation

SECTION IV: KEY PROFILES

12. Update on Zonal railways

- Zonal Profiles
- Projects under Pink Book 2024-25

SECTION V: DATASET

The database includes upcoming projects (ongoing and planned) in the sector with details on project name, sub-sector, cost, capacity, location, implementing agency, current status, mode of implementation, contractor, consultant etc.

PORTS IN INDIA

State of Sector, Recent Developments and Upcoming Opportunities

SECTION I: SECTOR ANALYSIS. OPPORTUNITIES AND OUTLOOK

1. Sector Progress and Key Trends

- Cargo Traffic Trends: Overall
- * Traffic Trends Analysis: Port-wise. Coast-wise and State-wise
- Existing Capacity and Utilisation Analysis
- Efficiency Trends at Major Ports
- ❖ Port Dwell Time
- Policy Initiatives
- . Growth Drivers and Focus Areas
- Future Targets

2. Progress under Mega Projects

- Sagarmala Programme
- ❖ Jal Marg Vikas Project
- ❖ 106 New National Waterways

3. Project Pipeline Analysis

- Assessment of Project Pipeline
- Port-wise Analysis
- Analysis by (category, theme, ownership, state)
- Key Upcoming Projects

4. Commodity-wise Traffic Trends

- Coal
- Iron Ore
- ❖ POL
- Fertilisers

Containers

- Traffic Trends
- Key Recent Developments
- Market Outlook

6. Investment and Market Opportunities

- Investment Opportunities
- Project Completion Targets
- Market Opportunities for stakeholders

7. Financing Trends

- Budgetary Allocation
- Key Funding Sources
- Key Financing Developments

8. Private Sector Participation

- Private Sector Experience
- Key Ongoing/Upcoming PPP Projects
- Key Players Profiles

SECTION II: FOCUS ON KEY SEGMENTS

Port Connectivity

- Rail-Port and Road-Port Connectivity at Key Ports
- Update on Dedicated Freight Corridor
- * Recent Developments
- Investment Requirements and Upcoming Projects

10. Inland Waterways

- Traffic Trends
- Key Initiatives and Recent Developments

- ❖ Indo-Bangladesh Protocol
- * Traffic Projections and Investment Requirements

11. Coastal Shipping

- Traffic Trends
- Fleet Size of Indian Shipping Industry
- * Key Government Schemes and Initiatives
- Industry Structure
- ❖ Traffic Projections (till 2029-30)

12. Dredging Scenario

- Market Size and Overview
- Policy Framework
- Recent Trends and Developments
- Issues and Challenges
- Key Projects
- Future Outlook and Opportunities

13. Port Modernisation & Digitalisation

- ❖ Technology Interventions at Indian Ports
- * Recent Government Initiatives
- * Recent Developments
- Other Digital Initiatives
- . Challenges in implementing digital solutions at ports

14. New and Emerging Opportunity Areas

- ❖ Roll-on, roll-off (Ro-ro)
- Cruise Shipping
- ❖ Port-led Industrial Cities
- LNG Terminals
- Multi-Modal Logistics Parks
- Sustainable Initiatives
- Shipbuilding and Ship-repair
- Others

SECTION III: KEY PORT PROFILES

15. Major Ports Profiles

Overview, Chennai Port, Cochin Port, Deendayal Port(erstwhile Kandla Port), Jawaharlal Nehru Port Trust, Kamarajar Port, Mormugao Port, Mumbai Port, New Mangalore Port, Paradip Port, Syama Prasad Mookerjee Port (erstwhile Kolkata Port), V.O. Chidambaranar Port, Visakhapatnam Port

16. Key Non-Major Port Profiles

Overview, Angre Port, Maharashtra, Dahej Port, Gujarat, Dhamra Port, Gujarat, Dighi Port, Maharashtra, Gangavaram Port, Andhra Pradesh, Gopalpur Port, Odisha, Hazira Port, Gujarat, JSW Jaigarh Port, Maharashtra, Kakinada Seaports, Andhra Pradesh, Karaikal Port, Puducherry, Kattupalli Port, Tamil Nadu, Krishnapatnam Port, Andhra Pradesh, Mundra Port, Gujarat, Port of Pipavav, Gujarat, Vizhinjam Port, Kerala

17. Key Upcoming Greenfield Ports

- Snapshot
- Port Profiles

SECTION VI: DATASET OF KEY PROJECTS

The database includes upcoming projects (ongoing and planned) in the sector with details on project name, segment/component, cost, capacity, location, implementing agency, current status, mode of implementation, etc.

WATER IN INDIA

State of Sector, Recent Developments and Upcoming Opportunities

1. Sector Overview and Key Trends

- Size and Growth
- Policy and Regulatory Frameworks
- Budgetary Allocations
- Key Trends and Developments
- Key Issues and Challenges
- Key Recommendations
- Capacity Addition Plans

Government Programmes: Progress and Opportunities

- Jal Jeevan Mission
- * Atal Mission for Rejuvenation and Urban Transformation
- ❖ Namami Gange Programme
- Smart Cities Mission
- Swachh Bharat Mission

Project Pipeline Analysis

- Analysis by Segment, Stage of Development, State, Mode of Implementation and Completion Period
- Top Upcoming Projects in Terms of Investment

4. Future Outlook and Opportunities

- Projected Water Requirement
- Expected Network Addition and Investment
- * Assessment based on Completion Timelines
- Key Upcoming Projects
- Segment Outlook

5. Municipal Segment Size and Growth

- Growth in Municipal Water Supply
- Emerging Trends
- Digital Initiatives for Municipal Water Supply
- * Recent Developments to Strengthen Water Supply Infrastructure
- ❖ 24x7 Water Supply
- Segment Outlook

6. Industrial Segment Size and Growth

- Overview
- Key Trends and Developments
- State and Municipal Level Initiatives
- Industry Level Initiatives
- Key Recommendations for Water Conservation
- Emerging Technologies
- Potential Interventions for Specific Industries
- Projected Water Demand

7. Demand from Key Industries

- Overview
- Water Consumption by Key Players
- Projected Water Demand

This section covers industries of thermal power, pulp and paper, steel, oil refinery, and cement industries.

8. Wastewater/ Usedwater Market

- Market Overview
- State-wise Analysis of Sewage Generation, Existing STP capacity, Capacity Utilised and Gap in Treatment
- Emerging Trends

- Government Initiatives
- National-level Initiatives
- State-level Initiatives
- Treatment Technologies
- Focus on ZLD Systems
- Municipal Segment
- Initiatives for River Pollution Abatement
- Digital and Technological Interventions
- Private Sector Participation
- Sector Outlook

9. Recycle and Reuse Market

- Focus Areas
- Government Initiatives
- Case Study for Recycle/ Reuse
- * Recent Developments
- Major Challenges
- Segment Outlook

10. Network 0&M and Asset Management

- Overview
- Key Players
- Key Trends
- Technology Initiatives
- Major Challenges
- Segment Outlook
- Key Upcoming Projects

11. NRW Reduction Strategies and Metering Practices

- Overview
- NRW Reduction Strategies
- Best Practices
- Recent Developments
- Challenges in NRW Reduction and Metering
- Policy Recommendation
- Segment Outlook

12. Desalination Market

- Current Size
- Key Operational and Upcoming Desalination Plants
- Key Emerging Trends
- Innovations and New Practices
- Focus on Sustainability
- Segment Outlook

13. Key Players

JWIL Infra Limited, Larsen & Toubro Limited, Nagarjuna Construction Company Limited, Shapoorji Pallonji and Company Limited, Suez India, Swach Environment Private Limited, TATA Projects, Toshiba Water Solutions Private Limited, VA Tech Wabag, Vishvaraj Environment Private Limited, and Welspun Enterprises

DATASET OF KEY PROJECTS

The database includes upcoming projects (announced, bidding, awarded and under construction) in the sector with details on project name, segment/component, cost, capacity, location, implementing agency, current status, mode of implementation, government schemes, etc.

AIRPORTS IN INDIA

Sector Trends, Capacity Addition and Investment Opportunities

SECTION I: SECTOR OVERVIEW, KEY TRENDS, OPPORTUNITIES AND FUTURE **OUTLOOK**

Sector Overview and Key Trends

- Sector Size and Growth
- Policy Initiatives
- Update on Regional Connectivity Scheme
- Key Trends and Developments
 Airports as Multimodal Hubs
- Challenges and Recommendations
 Future Outlook

- Project Pipeline Analysis

 ❖ Snapshot of Project Pipeline
- Analysis by Type
 Analysis by Stage of Development (Announced, Bidding, Awarded, Under Construction)
- Analysis by Mode of Implementation (EPC and PPP/Private)
- Key Upcoming Airports

Sector Projections and Market Opportunities

- Traffic Projections: Passenger and Freight
 Expected Capacity Additions: Passenger and Cargo
- Investment Projections
- Future Capacity AdditionMarket Opportunities
- Other Emerging Opportunities

Operational and Financial Performance of Key Players

- Airports Authority of India
- Private Operators' Performance

Smart and Sustainable Airports

- Technology and Sustainability Trends
- Technological initiatives
 Digitalisation in Construction
- Carbon Accounting and Energy Efficiency
 Sustainable Design and Planning

Financing and Investment Trends ❖ Budgetary Allocations ❖ Bank Credit

- Financial Closures
- Funding Strategies
- M&A and Private Equity
- Key Risks and Future Outlook

SECTION II: FOCUS ON KEY SEGMENTS

Airlines Industry

- Industry Size and Growth
- Kev Performance Metrics
- ❖ Airlines' Operational and Financial Performance Market Share Analysis of Key Airlines
- Airlines' Operational and Financial Performance
- Segment Outlook

Cargo Infrastructure Development

- Existing Capacity and Traffic Trends
- Key Growth Drivers

- Operational Facilities
- Key Initiatives and Developments
- Upcoming Cargo Facilities
- Segment Outlook and Opportunities

Air Traffic Management: Communication, Navigation and Surveillance

- Overview
- Recent Trends and Advancements
- Recent Developments
- * Recent Deployments and Plans
- Sector Outlook

Maintenance, Repair and Overhaul

- Market Size and Overview
- Emerging Trends and Growth Drivers
- ❖ Key Players and Recent Activity
- Industry Activity and Recent Developments
- MRO Facilities across India
- * Recently Developed and Upcoming Facilities
- Policy Landscape and Initiatives
- Leasing
- Market Projections, Outlook and Opportunities

SECTION III: PROJECT UPDATES AND OPPORTUNITIES

11. Key Operational/Completed Airports

Key Project Profiles

12. Mega Greenfield Airports

- Manohar International Airport, Goa
- Navi Mumbai International Airport, Maharashtra
- ❖ Jewar International Airport, Uttar Pradesh Progress and Current Status | Recent Updates and Future Plans

13. Upcoming Airports ❖ Project Snapshot

- Bhogapuram Airport, Andhra Pradesh
- Dholera Airport, GujaratHassan Airport, Karnataka
- Dabra Airport, Madhya Pradesh
- Karaikal Airport, Puducherry
 Mandi Airport, Himachal Pradesh
- * Kalyani Airport, West Bengal
- Purandar Airport, Maharashtra
- A Parandur Airport, Tamil Nadu
- Sabarimala Airport, Kerala

DATASET

The dataset includes the following:

- Pipeline
- Completed Projects
- ❖ Traffic Trends Airport Wise
- ❖ Traffic Trends State Wise
- Financial Deals
- List of Operational Airports
- Airline-wise data
- Key Contracts
- Key Tenders

URBAN RAIL MARKET IN INDIA

EXECUTIVE SUMMARY

SECTION I: OVERVIEW, KEY TRENDS AND OUTLOOK

Sector Overview, Key Trends and Outlook ❖ Network Size and Growth

- Ridership Trends and Analysis
- Fare Trends and Analysis
- Policy and Regulatory Framework
- Emerging Trends and Recent Developments
- Recent Project Developments
- Future Outlook and Growth Drivers

Project Pipeline Assessment and Analysis

- Analysis by (forms, stages, mode, alignment, completion)
- State-wise Analysis
- Analysis of Upcoming Projects
- Key Upcoming Tenders

Emerging Modes of Transit

This chapter includes Metrolite, MetroNeo, RRTS, Water Metro and others

- Current Market Size
- * Key Operating Features, Standards and Specifications
- Cost Economics and Analysis
- Key Collaborations
- New Mobility Options
- Key Upcoming Projects

Investment and Financing Trends

- Trends in Funding
- * Key Revenue Sources
- ❖ New Revenue Streams
- Emerging Funding Options
- Investment Outlook

Market Opportunities and Projections

- Projected Network Addition
- Projected Investment
- Projected Ridership
- Market Opportunities

Emerging Opportunities

- ❖ Focus on Integrated Mobility
- Key Components of Integrated mobility
- * Real Estate and Commercial Development
- Project Management
- Train leasing and 0&M Outsourcing
- Technology and Digital Solutions
- Energy Conservation

SECTION II: SEGMENT OVERVIEW AND ANALYSIS

Rolling Stock

- ❖ Market Size and Growth
- Systems in Use and their Specifications
- Key Requirements and Procurement Plans
- Emerging Trends and Recent Developments
- Competitive Landscape and Key Suppliers
- Segment Outlook

Signalling, Train Control and Telecommunications

- * Market Size and Growth
- Systems in Use and their Specifications
- Emerging Trends and Recent Deployments
- ❖ Competitive Landscape and Key Players
- Segment Outlook and Projections

Fare Collection and Advancements

- Market Size and Growth
- Systems in Use and their Specifications
- Emerging Trends and Recent Deployments
- Competitive Landscape and Key Players
- ❖ Recent Contract Awards
- Segment Outlook and Projections

10. Construction: Elevated and At-grade Structures

- Market Size and Growth
- Cost Analysis
- Prevalent and Emerging Methods and Techniques
- Recent Developments
- * Key Contractors and Market Share
- Recent Contract Awards
- Segment Outlook and Opportunities

11. Construction: Metro Tunnels

- Size and Growth
- Cost Analysis
- Prevalent and Emerging Methods and Techniques
- Analysis of TBM Market
- * Key Contractors and Market Share
- * Best Practices in Tunnel Design and Construction
- * Recent Contract Awards
- Segment Outlook and Opportunities

12. Traction

- Market Size and Growth
- Systems in Use
- Prevalent and Emerging Methods and Techniques
- Energy Management and Conservation Initiatives
- Key Contractors and Market Share
- Segment Outlook and Projections

13. Station Infrastructure

- Market Size and Growth
- * Recent Developments under key components:
- Key Players
- * Recent Contract Awards
- Segment Outlook and Opportunities

SECTION III: KEY PROFILES: OPERATIONAL AND UPCOMING PROJECTS

14. Key Project Profiles

- Metro Rail
- Metrolite/LRT
- MetroNeo
- RRTS
- Water Metro

OPPORTUNITIES IN INDIAN TUNNELLING MARKET

Emerging Trends, Market Outlook and Future Projections

SECTION I: MARKET OVERVIEW, OUTLOOK AND FUTURE PROJECTIONS

Market Overview and Key Trends

- * Market Overview and Growth Drivers
- ❖ Recent Developments
- ❖ Key Project Awards
- Methods of tunnelling
- Key Emerging Trends
- Issues and Challenges

2. Project Pipeline Analysis

- Snapshot of Project Pipeline
- ❖ Analysis of Ongoing Projects
- ❖ Analysis of Upcoming Projects
- Big Ticket Projects (in terms of investments)
- Upcoming Tenders

3. Future Outlook and Projections

- Projected Network Addition
- Projected Investment Requirements
- Demand Projections for Equipment and Materials
- Future Outlook
- Upcoming Tunnelling Opportunities

SECTION II: OPPORTUNITIES ACROSS SECTORS

4. Metro Rail

- Key Trends and Recent Developments
- Project Awards
- Key Players
- Analysis of Ongoing Projects
- Analysis of Key Upcoming Projects
- Sector Outlook

5. Roads

- Key Trends and Recent Developments
- Project Awards
- Kev Players
- Analysis of Ongoing Projects
- Analysis of Key Upcoming Projects
- Sector Outlook

6. Railway

- Key Trends and Recent Developments
- Project Awards
- Key Players
- Analysis of Ongoing Projects
- ❖ Analysis of Key Upcoming Projects
- Sector Outlook

7. Hydro

- Key Trends and Recent Developments
- Project Awards
- Key Players

- Analysis of Ongoing Projects
- Analysis of Key Upcoming Projects
- Sector Outlook

8. Irrigation

- * Key Trends and Recent Developments
- Project Awards
- Key Players
- Analysis of Ongoing Projects
- Analysis of Key Upcoming Projects
- Sector Outlook

9. Water Supply and Sewerage

- * Key Trends and Recent Developments
- Project Awards
- Key Players
- Analysis of Ongoing Projects
- Analysis of Key Upcoming Projects
- Sector Outlook

SECTION III: FOCUS ON TUNNELLING METHOD AND TECHNOLOGY

10. Tunnel Boring Machine Technique

- Deployment Status
- Key Trends and Best Practices
- OEMs and Key Suppliers
- Issues and Challenges
- Market Outlook and Opportunities

11. New Austrian Tunnelling Method

- Deployment Status
- ❖ Key Trends and Best Practices
- OEMs and Key Suppliers
- Issues and Challenges
- Market Outlook and Opportunities

12. Drill and Blast Method

- Deployment Status
- ❖ Key Trends and Best Practices
- OEMs and Key Suppliers
- Issues and Challenges
- Market Outlook and Opportunities

13. Tunnel Safety & MEP Systems

- Overview
- Trends and Advancements
- . Best Practices and Industry Initiatives
- Challenges
- Future Focus Areas

SECTION IV: DATABASE OF KEY PROJECTS

The database includes upcoming projects (planned, under bidding and ongoing) across different sectors with details on project name, segment/sector, cost, capacity, location, implementing agency, current status, tunnel contractor, tunnelling method, etc.

LOGISTICS IN INDIA

Growth Trends and Market Opportunities

India Infrastructure Research has recently released the 11th edition of the "Logistics in India" research report. The subscription has two elements:-

- Logistics in India research report
- 11 monthly updates weekly newsletters

SECTION I: MARKET GROWTH, KEY TRENDS AND OUTLOOK

- Sector Overview: Trends and Developments
- Investment Trends and Opportunities
- Technology and Automation: Trends and Requirements
- Future Outlook, Market Opportunities and Key Projections

SECTION II: FREIGHT MOVEMENT: SEGMENT TRENDS, INITIATIVES AND TRAFFIC PROJECTIONS

- Railways
- Roads
- Ports, Coastal Shipping and IWT
- Air Cargo

SECTION III: WAREHOUSING AND STORAGE: INDUSTRY ANALYSIS, OPPORTUNITIES AND PROJECTIONS

- Agricultural Warehousing and Silo Storage
- Industrial Warehousing
- Liquid and Gas Storage
- Cold Chain, Cold Storage and Reefer Containers

SECTION IV: LOGISTICS INFRASTRUCTURE: GROWTH, DEVELOPMENTS AND OUTLOOK

- Container Freight Stations (CFSs)/ Inland Container Depots (ICDs)
- Logistics Parks/Multi-modal Logistics Parks
- Container Market

SECTION V: SUPPLY CHAIN MANAGEMENT: MARKET SIZE, OUTLOOK AND PROJECTIONS

- 3PL, 4PL and Reverse Logistics
- Express Logistics
- Freight Forwarding

SECTION VI: DEMAND FROM USER INDUSTRIES

Key End User Industries – Food Processing, Healthcare, Pharmaceutical, Automobiles, E-commerce, Electronics, Chemicals, Textiles, Engineering Goods, Brick and Mortar Retail, Cement and Steel. Each of the industries will include size and growth, trends and developments, logistics and warehousing needs and requirements, and industry outlook.

DATA CENTRE MARKET IN INDIA

Market Overview and Future Projections

SECTION I - MARKET OVERVIEW, DEMAND DRIVERS, GROWTH PROJECTIONS

1. Market Overview and Key Developments

- ❖ Market Size and Growth
- Key Demand Drivers
- Policy and Regulatory Framework
- Industry Landscape
- Analysis of Existing Capacity
- * Key User Industries and Adoption Trends
- Trends in Occupancy and Absorption
- Rentals and Recurring Charges
- Key Emerging Trends
- Issues and Challenges
- Market Outlook

2. Market Classification – Existing and New Models

- Hyperscale Data Centres
- Edge Data Centres
- ❖ Al-ready Data Centres
- ❖ Data Centres Parks/Clusters

3. Key DC Hotspots – Analysis of Prominent and Emerging Markets

- Top DC markets
- Upcoming Markets Tier 2 and 3

4. Investment Trends and Outlook

- Current Landscape
- ❖ DC Investments
- Demand Drivers
- Equity Investments and Capital Deployment
- Returns and Risks
- Investment Plans and Announcements

State Initiatives

- States with Dedicated Policies
- State-level Incentives and Recent Developments
 - Andhra Pradesh
 - Chhattisgarh
 - Gujarat
 - Haryana
 - Himachal Pradesh
 - Karnataka
 - Madhya Pradesh
 - Maharashtra
 - Odisha
 - Rajasthan
 - Tamil Nadu
 - Telangana

- Uttar Pradesh

- West Bengal
- National Informatics Centre Data Centres
- ❖ Data Centres by STPI

6. Market Outlook and Capacity Additions

- Demand Drivers
- Projected Capacity Additions
- Developer Plans
- Future Outlook

7. DC Design and Construction

- Key Requirements
- Cost Considerations
- * Regulatory and Compliance Framework
- Emerging Trends
- Sustainable Construction

8. Energy Efficient, Sustainable and Green DCs

- Current Trends in Power Usage and Sourcing
- Green Data Centres
- Adoption of Renewable Energy
- ❖ Net Zero Targets
- New and Emerging Solutions
- Advanced Cooling Solutions
- Water Usage and Management

SECTION II: KEY PLAYERS — EXISTING CAPACITIES, KEY INITIATIVES AND FUTURE PLANS

Profiles of Key Players

- Adani ConneX
- · CapitaLand Investment Limited
- Colt Data Centre Services
- CtrlS
- Digital Connexion
- Digital Edge DC
- Equinix
- ESDS Software Solution
- Iron Mountain Data Centers
- L&T –Cloudfiniti
- Lumina CloudInfra
- NTT Data
- Nxtra by Airtel
- Princeton Digital Group
- Sify Technologies
- STT GDC India
- Techno Data Center
- Yotta Infrastructure
- Other Players

.....

POWER GENERATION IN INDIA

Sector Analysis, Recent Developments, Trends and Outlook

Overview

- ❖ Market Size and Growth
- ❖ Peak and Energy Demand Trends
- Annual Capacity Addition
- Changes in Generation mix
- Trend in Energy Generation
- Trends in Captive Power-Generation
- Issues and Challenges
- Emerging Trends
- Capacity Projections and Outlook

2. Policy and Regulatory Developments

- * TBCB Guidelines for PSPs
- Extension of Timelines for SOx compliance
- CEA advisory on FGD Technology Selection
- ALMM Updates
- ❖ Amendment to Bidding Guidelines for renewable energy projects
- * Advisory on co-locating ESS with Solar Plants
- ❖ Draft Guidelines for Solar Cold Storage with TES Backup
- Guidelines for Verifying Captive Status of Captive Power Plants
- Union Budget 2025-26 Highlights
- CEA's Paper on Methodology for Capacity Credits & Coincident Peak Requirement
- National Critical Minerals Mission
- PM Surya Ghar Muft Bijli Yojana Updates
- . Efficiency Standards for Solar Modules, Inverters, and Batteries
- Draft guidelines for REIA designation
- . Compliance streamlining for renewable energy projects
- Revision of Emission Control System compensation for Section 63 Thermal Power Plants
- ❖ VGF Guidelines for 1 GW Offshore Wind Projects
- Green Hydrogen Updates
- Budgetary support scheme for hydro-electric projects and Other Hydro Updates
- NEP, Volume II, Transmission
- Quality Control Order for Solar Thermal Systems
- Uniform Protection Protocol for Grid Users
- ❖ Draft Carbon Credit Certificates Regulations, 2024
- Policy Interventions in the Biomass space
- Others

3. Coal

- Overview
- Trends in Capacity Additions
- ❖ Trends in Capacity Decommissioned
- Trends in Coal-based Generation
- PLF trends
- Fuel Supply Scenario and Coal Imports
- Key Players
- * Recent Developments impacting Coal-based Power
- Updates on Emission Norms Compliance
- Costs and Tariffs
- Capacity Addition Projections and Forecast
- Challenges

4. Renewable Energy

- Overview
- Trends in Capacity Additions
- ❖ Trends in Renewable Power Generation
- ❖ Technology-wise Market Size and Growth

Solar Power

Wind Energy

Bioenergy

Hydropower

- Key Players
- Recent Developments
- Trends in Tariffs
- Emerging Technologies
- Challenges
- Capacity Addition Projections and Forecast

5. Gas, Diesel & Other Liquid Fuels

- Overview
- * Trend in Capacity Additions/ Decommissioned
- Trends in Generation
- PLF Trends
- Fuel Supply Scenario
- Key Players
- * Recent Developments
- Costs and Tariffs
- Challenges
- Capacity Addition Projections and Forecast
- ❖ Diesel-based Generation

Nuclear Power

- Overview
- Trend in Capacity Additions
- Trends in Generation
- Operating Performance
- ❖ Fuel Supply Scenario
- Key Players
- Recent Developments impacting Nuclear-Power
- Costs and Tariffs
- Challenges
- Capacity Addition Projections and Forecast
- Under Construction & Upcoming Projects

7. Investment Outlook and Opportunities

- Growth Drivers
- Projected Installed Capacity
- Projected Capacity Additions
- Investment Projections by Segment
- Issues and Challenges

Data set (excel)

- Projects in operation, construction/ development

POWER TRANSMISSION IN INDIA

Sector Analysis, Recent Developments, Trends and Outlook

1. Segment Size and Growth

- Growth in Transmission Line Length
- Growth in AC Transformer Capacity
- Growth in Transformer Capacity -HVDC
- Trends in Substation Additions
- Growth in Interregional Transfer Capacity
- Growth in HVDC Power Transfer
- * Region-wise Interregional Transfer Capacity
- ❖ Total Transfer Capability
- Cross-border Power Transfer Capacity
- System Availability and Reliability

Kev Policy and Regulatory Developments

- * Key Policy & Regulatory developments
 - Manual on Transmission Planning Criteria
 - Union Budget 2025-26 Highlights
 - Workforce Adequacy Guidelines for Load DespatchCentres
 - Workshop on Asset monetization for private capital in Transmission
 - Draft Cross Border Trade of Electricity (Second Amendment) Regulations, 2024
 - Draft Connectivity and GNA to the ISTS Regulations, 2024
 - NEP Volume II. Transmission
 - CEA Advisory on Energy Storage Systems
 - Draft Sharing of ISTS Transmission Charges and Losses (Fourth Amendment) Regulations, 2024
 - Draft DSM Regulations (Fourth Amendment), 2024
 - CERC (Indian Electricity Grid Code) (First Amendment) Regulations, 2024
 - Staff Paper on Stakeholder's suggestions for necessary modifications in Connectivity and GNA Regulations
 - Report of the Committee for Calculation of Reduction of RoWwidth
 - Report on High Frequency Operation in the Indian Power System
 - Budgetary Support for Cost of Enabling Infrastructure for Hydro Projects
 - Guidelines for RoWCompensation
 - Fees and Charges of RLDC Regulations, 2024
 - Connectivity and GNA to the ISTS (Second Amendment) Regulations, 2024
 - Transmission License Regulations, 2023
 - Terms and Conditions of Tariff Regulations, 2024
 - Guidelines on Availability of Communication System, 2024
 - Electricity (Amendment) Rules, 2024
 - Removal of Difficulties (Second Order) in giving effect to Grid Code Regulations, 2023
 - ISTS charges waiver for renewable energy projects
 - SC order on GIB Region Issue

3. Recent Developments

- * Key Commissioned Projects in last 12 months
- * Recently Awarded Projects
- Key M&A Transactions
- InvITs-related developments
- Recent Financings

4. TBCB Update

- Current Status
- Private Participation Trends
- ❖ ISTS TBCB Projects –Commissioned and Under Construction
- Trends in Tariffs Discovered
- ❖ Intra-state TBCB Projects
- Projects identified for Bidding
- Future Project Pipeline

5. Transmission System Development for evacuation of Renewable Energy

- Overview
- Transmission System for Planned RE
- State-wise Transmission Planned for RE
- Status of Green Energy Corridors I and II
- Transmission systems for additional hydro power projects by 2030
- * Transmission System for Green Hydrogen & Green Ammonia projects
- Off-shore Wind Power Transmission
- HVDC and Inter-regional corridors
- ❖ REMCs
- Outlook

6. Project Pipeline and Investment Outlook

- Projected Line Length
- Projected Transformer Capacity
- Projected Substation Additions
- Projected Investments
- Project Pipeline (under construction, under bidding, Announced projects etc.)

7. STU Network & Operational Performance

- Growth in Intrastate line length
- Growth in Intrastate transformer capacity
- Growth in Number of Substations
- ❖ Transmission Loss Performance
- System Availability Performance

8. STU Financial Performance in Last 5 years

- Revenues
- Expenditure
- O&M Costs
- ❖ Net Profit/Loss
- Capex
- Transmission Charges and Tariffs
- Return on Equity

9. Future Outlook and CapexPlans

- Network Addition Plans
- Projected Inter-regional Transfer Capacity
- Investment Projections
- Projected Capex by Powergrid and STUs
- Planned Cross-border Regional Interconnections
- Outlook for Private Participation

Dataset

- Excel of under construction, planned, announced transmission projects

POWER DISTRIBUTION IN INDIA

Segment Size and Growth

- Overview
- Power demand and supply trends
- ❖ Segment Performance
- * Hours of Supply and DT failure rate
- Network Size and Growth
- Energy Sales
- Smart Metering Deployments
- State-wise Prepaid Metering
- ❖ State-wise RPO Compliance
- Challenges and Outlook

2. Recent Developments

- Key Policy & Regulatory developments
 - PFC's Ratings Report of Discoms
 - Union Budget 2025-26 Highlights
 - Tariff bidding guidelines for PSPs
 - Methodology for capacity credits and coincident peak requirements
 - Standardisation and interoperability guidelines in AMI systems
 - Draft discussion paper on adjustments to the FPPAS model
 - Draft Amendment to Renewable Consumption Obligation (RCO)
 - Draft amendments to CEA (Installation and Operation of Meters) Regulations, 2006
 - Short Term National Resource Adequacy Assessment Plan : 2025-26
 - Amendment to TBCB guidelines for grid connected RE projects
 - Guidelines for installation and operation of battery charging and swapping stations
 - · Advisory on co-locating ESS with solar plants
 - Guidelines for sharing fiber cores of OPGW/UGFO cables for power system applications
 - Revised Procedure for Implementation of LPSC Rules 2022 and amendments
 - Benchmarking Guidelines for the efficient 0&M practices of Discoms
 - PM Surya Ghar : Muft Bijli Yojana updates
 - Guidelines for Periodicity of Type Tests for Major Equipment used in Electrical Power System
 - CEA's Uniform Protection Protocol for Grid Users
 - Electricity Distribution (Accounts and Additional Disclosure) Rules, 2024
 - Draft Late Payment Surcharge and Related Matters) (Amendment) Rules, 2024
 - Guidelines for automatic enhancement of sanctioned load by discoms
 - Draft Cyber Security in Power Sector Regulations, 2024
 - CEA's Draft Distribution Perspective Plan 2030
 - Uniform Renewable Energy Tariff Mechanism Regulations
 - Electricity Third Amendment Rules, 2024
- PPA-related Developments
- Open Access
- Discom Privatisation updates

Update on RDSS

- Overview
- Funds sanctioned/ disbursed
- * Targets and Achievements under Smart Metering
- Smart Meter Tender Updates
- ❖ AMISP Providers
- Key Contracts Awarded under RDSS
- ❖ Impact of RDSS
- Issues and Concerns

4. Outlook and Key Projections

- Network Projections
- Utility-wise Projected Line Length Additions
- Utility-wise Projected Transformer Capacity Additions
- Smart metering projections and Opportunity
- Outlook on Tariffs and Costs
- Investment Projections

Inter-discom Performance

- Consumer Base
- Energy Sales
- Substations and Substation Capacity
- Line Length
- Transformer Capacity
- Smart Metering Status
- Discom-wise Hours of Supply
- DT failure rates
- Interruption Index

6. Operational and Financial Performance

- * Recent Discom Operational performance
- * Recent discom financial performance

7. Trends in Power Procurement

- Short-term power trading market scenario
- Power procurement from exchanges
- * REC trading Trends
- Procurement trends from DEEP e-auctions
- * Recent developments impacting power trading market
- Challenges and Outlook

8. Capital Expenditure

- Capex trends
- * Key Capex Components
- Planned Capex
- Proposed Capex Break-up of Key Discoms

9. Costs & Tariffs

- Power Purchase Costs
- Source-wise Power Purchase costs
- O&M Costs
- Category-wise Tariff Trends
- Green Tariffs
- Cross-subsidies Trends

RENEWABLE ENERGY IN INDIA

Brief Summary and Insights

State of the Sector

- Market Size and Growth
- ❖ Segment-Wise Growth Trends
- Share in Capacity Mix
- Share in Generation Mix
- Energy Generation Trends
- Key Players
- . Growth Drivers
- Key Challenges and Solutions

2. Policy Highlights

- Central Level Policies
- State Level Policies

3. Solar Power Segment

- Utility-Scale
 - · Annual Capacity and Generation Trends
 - · State-Wise Potential and Growth Trends
 - Announced Tenders
 - · Auction Results
 - · Tariff Trends and Outlook
 - Equipment Price Trends
 - Recent Developments
- Distributed Solar (Rooftop Solar and Solar Pumps)
 - · Progress and Status
 - State-Wise Capacity Deployment
 - · Auction Results
 - Announced Tenders
 - Recent Developments

4. Wind Power Segment

- Onshore Wind
 - Annual Capacity and Generation Trends
 - · State-Wise Potential and Growth Trends
 - · Announced Tenders
 - Auction Results
 - · Tariff Trends and Outlook
 - Equipment Price Trends
 - Recent Developments
- Offshore Wind
 - · Potential and Plans
 - · Recent Developments

5. Bioenergy Segment

- Annual Capacity Trends
- Potential of CBG

- Growth Trends in Bioethanol Space
- State-Wise Growth Trends
- ❖ Policy and Regulatory Developments
- · Recent Project and Announcements

6. Hybrids, Energy Storage and Green Hydrogen

- Renewable Energy Hybrids
 - · Market Overview
 - Recent Tenders
 - · Auction Results
 - · Tariff Trends and Outlook
- Green Hydrogen
 - · Government Focus and Policies
 - Recent Tenders
 - Auction Results
 - · Updates from PSUs and Private Sector
- Energy Storage
 - Overview
 - · Potential and Status of PSPs
 - · Government Focus and Policies
 - · Auction Results
 - · Recent Projects

Green Power Procurement

- ❖ Power Offtake Mechanisms
- Recent C&I Project Announcements (Open Access, Group Captive and Captive)
- Power Trading Trends
- Status of REC Markets

8. Financial Highlights

- . Financing Landscape of Renewable Energy in India
- * Renewable Energy Financing Trends in FY2025
- Key Renewable Energy Deals in FY2025

Projections and Outlook

- Project Pipeline
- Capacity Projections
 - Short-Term Outlook (till 2032)
 - Long-Term Outlook (2032 and beyond)
- Investment Outlook

This report will have a comprehensive dataset with commissioned and underimplementation projects. Some parameters covered here will include project developer, location, capacity, and status of the project.

GREEN HYDROGEN IN INDIA

Projects, Policies and Outlook

Summary and Key Insights

Market Size and Potential

- Market Overview
- Key Areas of Application
- . Demand and Key Applications
- Demand and Supply Trends
 - Key Trends
 - · Current Demand Concentration
 - Future Estimation
- Estimated Potential
- Potential Business Models
- Key Growth Drivers

2. Policy Framework and Roadmap

- Timeline of Key Government Initiatives
- Green Hydrogen Policy
- National Green Hydrogen Mission
- Green Hydrogen Standards
- Incentive Schemes
 - · ISTS Waiver
 - · ALMM and RLMM Waiver
 - Electrolyser Manufacturing
 - · Green Hydrogen Production
- Scheme Guidelines
 - · Use in Transport
 - Use in Steel
 - Use in Shipping Sectors
 - · Hydrogen Hubs
 - Funding Testing Facilities
- State Level Policies and Initiatives
- Key Alliances and Collaborations

3. Major Players and Plans

- Recent Tenders
- Recent Auctions

- Key Upcoming Projects
- Plans of Key Players
 - · Renewable Energy Developers
 - Oil and Gas Companies
 - Electrolyser Manufacturers
 - · Other Stakeholders
- Case Studies

4. Technology Trends

- Types of Hydrogen
- Types of Electrolysers
 - Proton Exchange Membrane
 - · Alkaline Electrolysers
 - Other
- * Focus on Fuel Cells
- Storage and Transportation
- ❖ Applicable Standards

5. Cost of Production and Investments

- Cost of Green Hydrogen Production
- Cost Variability Across Key States
- Emerging Financing Options
- Cost and Investment Outlook

Future Outlook

- Project Pipeline
- Capacity Outlook
 - Based on Demand Trends
 - Demand Scenario Analysis
 - · Based on Electrolyser Manufacturing
- Key Issues and Challenges
- Way Forward

This report will have a comprehensive green hydrogen project dataset with commissioned, announced and under-implementation projects. Some parameters covered here will include project developer, location, capacity, application, and status of the project.

PUMPED STORAGE PROJECTS IN INDIA

Summary and Key Insights

2. Potential and Key Trends

- Overview
- Industry Structure
- Estimated Potential
- ❖ Identified Sites for PSPs
- Status of PSP Development
- Installed Capacity and Projects
- Growth Drivers and Applications

3. Policy and Regulatory Environment

- Timeline of Policies for PSPs
- PSP Guidelines
- Guidelines for Formulation of Detailed Project Reports
- Guidelines for Acceptance, Examination and Concurrence of Detailed Project Reports
- List of Clearances Required
- Checklist of Documents Required for Examination of DPR
- ❖ ISTS Waiver for Pumped Storage Projects
- Other Central Level Initiatives
- State-Level Policies and Initiatives

4. Projects and Players

- Recent Auction Results
- Tender Announcements

- Key Upcoming Projects
- Key Players
 - Developers (State GENCOs, Private and CPSUs)
 - FPC Contractors
 - Technology Providers
- Case Studies

5. Cost Considerations and Viability

- Key Cost Components
- Cost Variability across States
- Comparison with Other Storage Technologies
- Levelised Cost of Storage
- Business Models
- ❖ Integrated Renewable Energy Storage Plants
- Case Studies

6. Projections and Outlook

- Project Pipeline
- Capacity Projections
- Key Issues and Challenges
- The Way Forward

This report will have a comprehensive PSP dataset with announced, under permitting and under-implementation projects.

Some parameters covered here will include project developer, location, capacity, and detailed status of the project.

Most Accurate, Comprehensive, Up-to-date Online Database of Large Infrastructure Projects



Provides detailed information (25 parameters) on 8,500+ infrastructure projects (costing Rs 1 billion and above) across 12 sectors in real time. Deep analytics capability can generate thousands of reports and charts based on a combination of the above parameters.



Mobile: +91-9891309676 | Email: farhan.ahmed@indiainfrastructure.com