

# Coal-based Power Generation in India 2018

Future Prospects, Issues and Opportunities

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**Executive Summary****SECTION I: OVERVIEW AND RECENT DEVELOPMENTS****1. Size and Growth**

- ❖ Growth in Installed Capacity
- ❖ Analysis of the Existing Capacity
  - By Sector
  - Location
  - Size of Units
  - Type of Coal
- ❖ Trends in Generation
- ❖ Trends in PLF

**2. Policy Initiatives and Developments**

- ❖ Update on SHAKTI
- ❖ Revised Mega Power Policy
- ❖ Methodology for Flexible Utilisation of Coal for IPPs
- ❖ CEA's FGD Perspective Plan
- ❖ SC Ruling on Tribunal Order in Compensatory Tariff Case
- ❖ Replacement and Upgradation of Old Units
- ❖ Status of Auctioned Captive Coal Blocks for Power

**3. Update on Stressed Assets**

- ❖ Stressed Assets in Power Sector
- ❖ Stressed Projects and Developers
- ❖ Measures to Revive Stressed Assets
- ❖ Recent Acquisitions
- ❖ Deals under Discussions
- ❖ Potential Buyers
- ❖ Future Outlook

**4. Need for Flexibilisation**

- ❖ Growth Drivers
- ❖ All-India Load Pattern Analysis
- ❖ Existing Policy and Regulatory Provisions for Flexibilisation
- ❖ Flexible Generation Options for Coal-based Plants
- ❖ Retrofits and Modifications to Enhance Flexibility
- ❖ Performance of Flexibilised Plants
- ❖ Impact on Costs
- ❖ Key Limitations and Challenges
- ❖ Flexibilisation Initiatives Underway in India
- ❖ Design Requirements and Market Readiness
- ❖ Future Outlook

**5. Emission Control Regulations: Timelines, Costs and Status**

- ❖ Trends in Emissions from Coal-based Plants
- ❖ Existing and Upcoming Capacity Impacted by Emission Norms
- ❖ Overview of Revised Environmental Standards

- ❖ Rationale for New Standards
- ❖ Timelines for Implementation
- ❖ Impact on Cost of Generation and Tariffs
- ❖ Implementation Status
- ❖ Key Technologies
- ❖ Industry Issues and Concerns

**6. Impact of Renewables**

- ❖ Current Share of Electricity Generation from Coal and Renewables
- ❖ Coal versus Renewables Generation Cost Comparison
- ❖ Projected Renewable Capacity Additions
- ❖ Projected Fuel Mix by 2022 and 2027
- ❖ Future Load Generation Scenario
- ❖ Role of Coal-based Plants in Grid Balancing
- ❖ Flexibility Requirements with High Share of Renewables

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- ❖ Size of Plants and Units
- ❖ Subcritical and Supercritical Units
- ❖ Age of Units
- ❖ Boiler and Turbine Makes
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- ❖ Heat Rate Trends Analysis
- ❖ Auxiliary Consumption Trends

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- ❖ Current O&M Projects
- ❖ Potential for O&M
- ❖ Candidates for O&M
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- ❖ Supply of Coking versus Non-coking Coal
- ❖ Captive Coal Production
- ❖ Trends in Coal Imports
- ❖ Projections of Coal Demand and Supply

**10. Trends on Coal Procurement**

- ❖ Source Comparison
- ❖ Linkage Volume and Trends
- ❖ E-auction Volume and Trends
- ❖ Captive Volume and Trends
- ❖ Imported Volume and Trends

**11. Coal Prices**

- ❖ Domestic Coal Prices
- ❖ E-auction Prices
- ❖ Trends in Prices of Imported Coal
- ❖ Pricing Outlook and Forecasts

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- ❖ Share of Various Modes in Coal Transport
- ❖ Railways Infrastructure for Coal Transport
- ❖ Trend in Rail Freight Costs
- ❖ Status of Critical Rail Connectivity Projects
- ❖ Ports Capacity for Handling Coal
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- ❖ Tariff Trends
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- ❖ Tariff Discovered under Case 1 and 2 Bids
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- ❖ Prices on Power Exchanges

**14. Generation Costs**

- ❖ Trends in Generation Costs
- ❖ Factors Affecting Cost of Generation
- ❖ Cost Comparison with Other Fuels Options
- ❖ Energy Charges for New Plants
- ❖ Equipment Costs for New Plants
- ❖ Other Costs (AFC and O&M)
- ❖ Future Outlook

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- ❖ Analysis of Capacity Under Construction
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  - By Expected CoD
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- ❖ Time and Cost Overruns in Upcoming Projects
- ❖ Stalled Projects
- ❖ Issues and Concerns

**16. Future Outlook**

- ❖ Power Procurement
- ❖ Capacity Utilisation
- ❖ Merchant Sales
- ❖ Outlook for PPAs and Power Demand
- ❖ Outlook on Generation Tariffs
- ❖ Challenges and Outlook for Meeting Emission Norms

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- ❖ Control and Instrumentation (C&I) Systems
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- ❖ Jindal Power Limited
- ❖ JSW Energy Limited
- ❖ GMR Energy Limited
- ❖ Essar Power Limited
- ❖ RattanIndia Power Limited
- ❖ Lanco Infratech Limited
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- ❖ Maharashtra State Power Generation Company Limited
- ❖ Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited
- ❖ Rajasthan Vidyut Utpadan Nigam Limited
- ❖ Tamil Nadu Generation and Distribution Corporation Limited
- ❖ West Bengal Power Development Corporation Limited
- ❖ Karnataka Power Corporation Limited
- ❖ Madhya Pradesh Power Generating Company Limited
- ❖ Gujarat State Electricity Corporation Limited
- ❖ Chhattisgarh State Power Generation Company Limited
- ❖ Telangana State Power Generation Corporation Limited
- ❖ Andhra Pradesh Power Generation Corporation Limited
- ❖ Haryana Power Generation Corporation Limited
- ❖ Punjab State Power Corporation Limited

*Each profile will include information on current capacity, upcoming projects, operating performance and financial performance.*

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