India Thermal Coal Digest: Trends, Insights & Pathways

Explore industry trends, market dynamics, and policy insights, with a focus on installed capacity, regulatory shifts, and future strategies shaping India's coal transition for thermal power sector

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Key Highlights –Coal Industry
Renewable Energy in India

- The Indian Coal Ministry promotes underground mining with incentives, stakeholder collaboration, and environmental concessions to boost production by 2025-26.
- CIL and IREL partner to develop critical minerals, enhancing resource security, reducing imports, and supporting India's self-reliance in key industries.
- Telangana partners with Queensland for mineral mining, deep coal projects, safety, and technology, advancing industrial growth and green energy goals.
- Coal India and France's EDF partner for renewable projects, including hydropower, expanding South Asia's energy infrastructure with 50-50 joint ventures.
- India and Argentina partner on lithium exploration, securing critical minerals for EV batteries and renewable energy, supporting India's clean energy goals.

Research Base

Monthly Coal Imports for blending across various states sectors in India.

The data on Monthly Coal Imports for blending across various states sectors in India reveals the coal requirements of different power plants.

1.Andhra Pradesh (State Sector - APPDCL): The Andhra Pradesh Power Development Company Limited (APPDCL) imported 2400 tons of coal, with a blending percentage of 20.0%. This shows moderate use of imported coal for blending in power generation.

2.Maharashtra (State Sector - MAHAGENCO): Maharashtra's state-owned power company, MAHAGENCO, imported 8290 tons of coal, with a high blending percentage of 175.3%. This indicates the heavy reliance on imported coal to meet energy demands.

3.Central Sector (NTPC Ltd.): NTPC Ltd. imported 28,520 tons of coal, with a very low blending percentage of 0.1%, suggesting a preference for domestic coal, with only a small amount of imported coal used for blending purposes.

4.Rajasthan (Private Sector - APL Kawai TPP): The APL Kawai Thermal Power Plant in Rajasthan imported 1320 tons of coal, with a significant blending percentage of 95.0%. This indicates a strong reliance on imported coal for its power generation.

5.Andhra Pradesh (Private Sector - SEIL-Painampuram TPP): The SEIL-Painampuram plant imported 1320 tons of coal, with a blending percentage of 21.0%, reflecting a moderate use of imported coal.

6.Andhra Pradesh (Private Sector - SEIL-SGPL TPP): The SEIL-SGPL plant in Andhra Pradesh imported 1320 tons of coal, with a blending percentage of 56.5%, suggesting a balanced approach to using both imported and domestic coal.

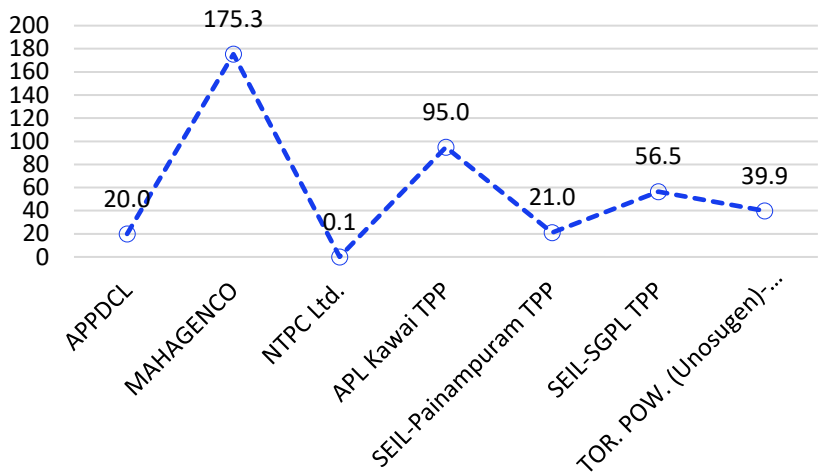
7.Gujarat (Private Sector - TOR. POW. Unosugen): The TOR. POW. Unosugen plant in Gujarat imported 362 tons of coal, with a blending percentage of 39.9%, indicating a moderate dependence on imported coal.

This data underscores varying levels of dependence on imported coal across different states and sectors.

Research Objectives

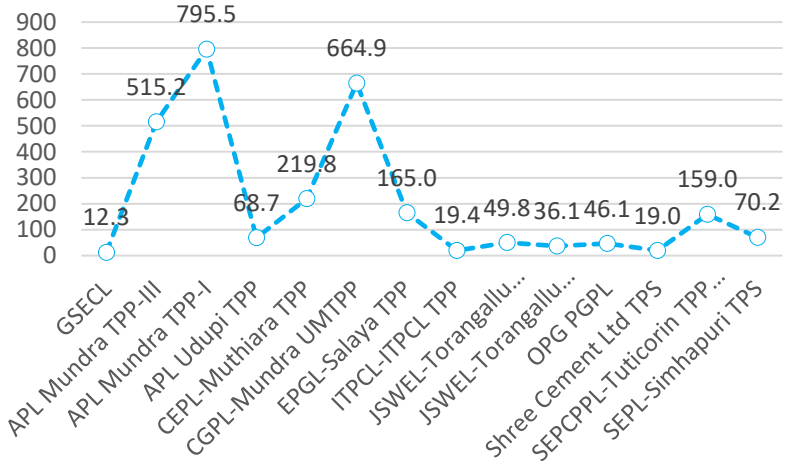
- The Coal Ministry's Mumbai roadshow showcased investments, cleaner technologies, and auctions. Officials emphasized sustainability, modern mining, and 113 allocated mines enhancing India’s energy security.
- India's clean energy pipeline (56,000 MW) grows 35%, but 30,000 MW new coal plants sustain coal dominance, with capacity possibly reaching 355,000 MW amid rising demand.
- India extended imported coal plants' full capacity mandate until April, using technology to optimize coal use, ensuring grid stability amid rising 270 GW summer demand.
- Minister G. Kishan Reddy emphasized coal’s future with green tech, private investment, reduced imports, auctions, digitalization, and sustainability, targeting 1,000 million tonnes production.
- India extended imported coal plants' full capacity mandate until April 30, ensuring power supply amid rising demand and allowing cost recovery under Section 11.

Exhibit 01: Monthly Coal Imports for Blending-Dec24

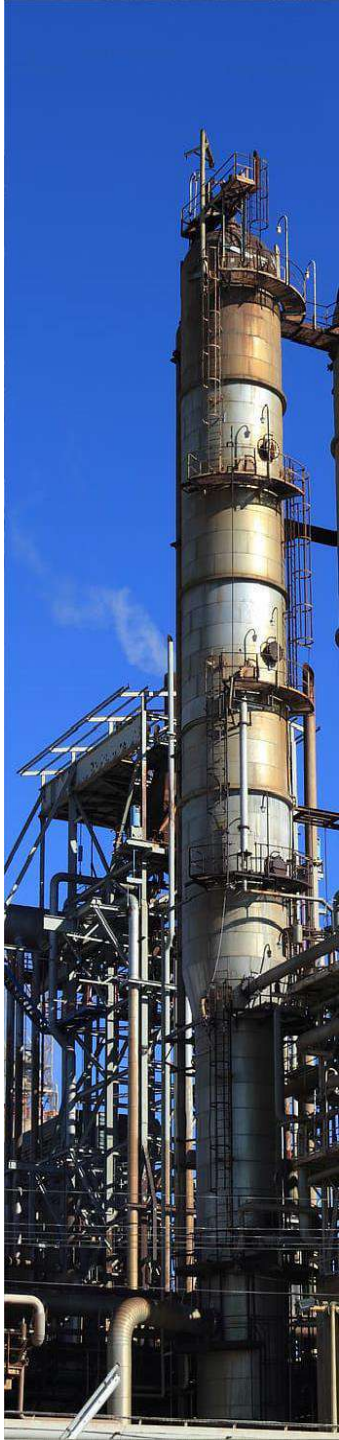


Source: CEA , Eninrac Consulting

Exhibit 02: Coal Imports for Plants designed on Imported Coal



Source: CEA, Eninrac Consulting



Research Results

- Coal Market size is expected to reach 1.5 billion tons by 2030
- India's 2024 energy transition balanced renewables and coal, expanded crude imports, boosted solar, Green Hydrogen, natural gas, biofuels, and digitalization.
- WCL bid for two Maharashtra coal blocks, marking Coal India's first participation. Focus on cost efficiency, leveraging infrastructure; results pending.
- SECL expanded Dipka coal evacuation with new silos, boosting capacity to 40 MTPA. Gatishakti projects improve efficiency, reduce transport dependency.
- Rajhara North coal mine started in Jharkhand, with 22 lakh tonnes reserves, 500+ jobs, ₹102 crore revenue, and local infrastructure plans.
- Coal stocks at thermal plants rose to 50.6 MT, targeting 55 MT by March 2025, ensuring stable power amid rising demand.

Research Case

Is India the next Coal Industries (Domestic and Imported Coal) in the coming decade?

The coal market in India is expected to reach 1.5 billion tons by 2030. This is a significant amount, even though India is also promoting Renewable Energy.

India's coal market is projected to reach 1.5 billion tons by 2030, highlighting the continued dominance of coal in the country's energy mix. Despite strong commitments to Renewable Energy expansion, coal remains a crucial resource for meeting India's growing power demand. The government has been actively auctioning coal blocks to boost domestic production and reduce dependence on imports.

Coal India Limited (CIL), the state-run coal producer, is expected to play a key role in achieving this target. Efforts to increase coal output include technological advancements, underground mining expansion, and private sector participation. Additionally, India is encouraging environmentally sustainable mining practices, balancing coal production with green energy initiatives.

At the time, India is ramping up investments in Renewable Energy, such as solar, wind, and hydropower projects. The government aims to achieve 500 GW of non-fossil fuel capacity by 2030, which will help transition toward cleaner energy while ensuring energy security.

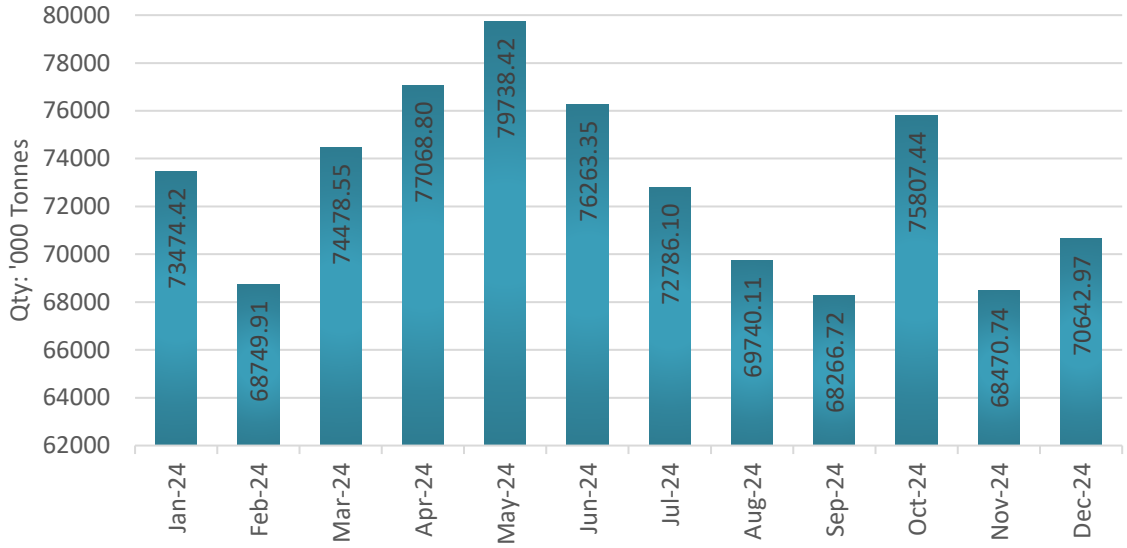
With a rasamepidly growing economy and increasing energy needs, India faces the challenge of managing its coal dependence while pursuing sustainability. Policymakers are focusing on carbon capture technologies, clean coal usage, and hybrid energy models to make coal usage more environmentally friendly.

In conclusion, while coal will continue to be a major player in India's energy sector, the simultaneous push for Renewable Energy signals a balanced approach toward meeting energy needs while addressing climate commitments.

Investment Opportunities in Thermal Power/Coal segment

- India’s coal imports dropped 5.35%, saving ₹30,007 crore. Domestic production hit 997.82 MT. Imports for power blending fell 23.56%. Sustainability efforts continue.
- DVC will build a 1600-MW supercritical plant in Jharkhand with ₹16,500 crore investment, boosting efficiency, employment, and environmental compliance.
- India’s power sector needs $700 billion for decarbonization, with coal expansion and 450 GW renewables. Private and foreign investments are essential.
- BHEL secured a ₹6,700 crore order from SCCL to build an 800 MW thermal unit in Telangana, strengthening India's energy security.
- Coal Secretary Vikram Dev Dutt stressed underground mining’s role in auctions for sustainable extraction, highlighting reforms, investor support, and sector diversification.

Exhibit 03: Coal Consumption from January-24 to December-24



Source: CEA, Eninrac Analysis

India's 2024 coal consumption fluctuated seasonally, peaking in March (74,478.55 thousand tonnes) and May (79,738.42 thousand tonnes) due to heating and cooling needs. Consumption declined during the monsoon, reaching a low of 68,266.72 thousand tonnes in September. Demand rebounded in October (75,807.44 thousand tonnes) and December (70,642.97 thousand tonnes) as winter approached, highlighting India’s reliance on coal for energy security amid varying seasonal demands.

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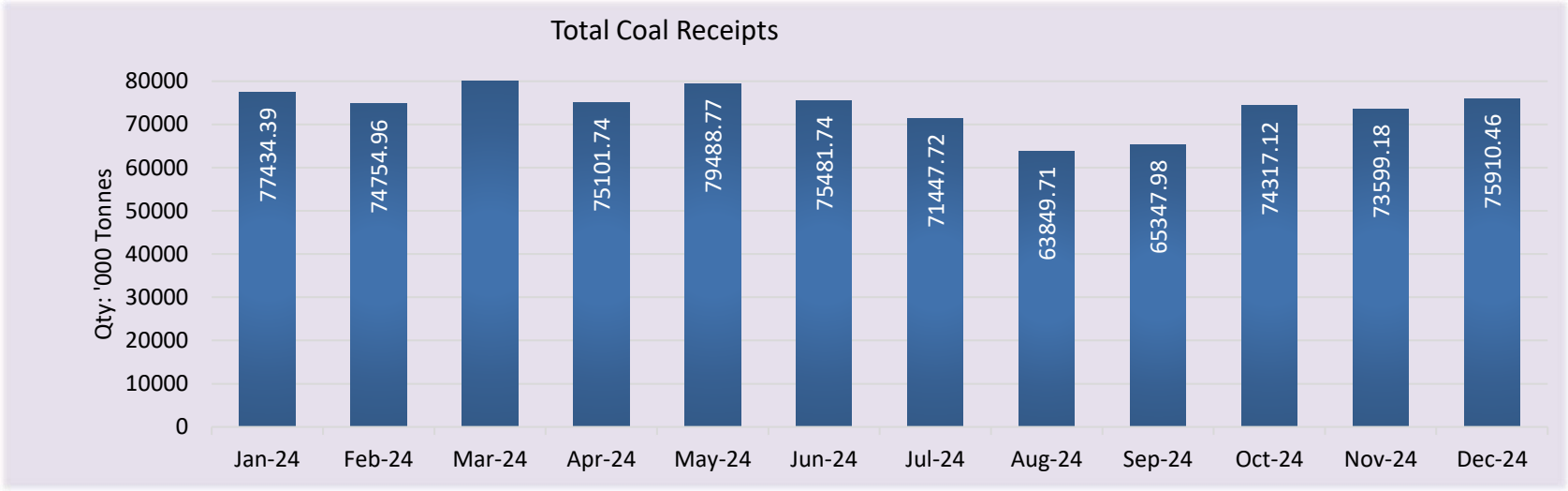
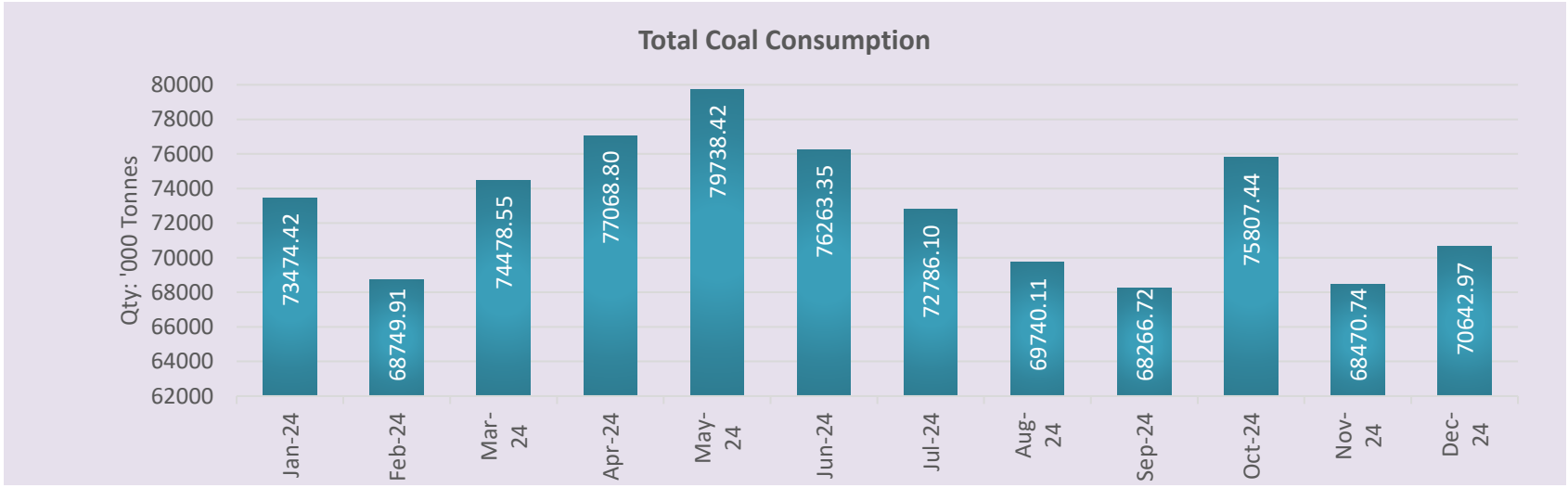
Exhibit 04: Exports of Indian Basic & Organic Chemicals in FY'2023-24: A Snapshot of Export Value (USD Billion) for Leading Countries





Source: DGCI&S, Eninrac Analysis

Must Buy For

- Power Generating Companies
- Steel & Iron Ore Producers
- Cement Producers
- Coal Mining Companies (CIL and Subsidiaries)
- International Coal Mining Companies
- Logistics Companies
- Captive Coal Mining Operators
- Coal Traders
- FIIs/Banks
- Government Agencies

Key Queries Resolved

- What are the game-changing trends shaping India’s thermal coal consumption?
- How is India’s electricity generation mix evolving, and what does it mean for thermal coal transition?
- Which regulatory shifts are transforming India’s power and thermal coal landscape?
- What are the cutting edge strategies & market opportunities that are steering India's journey towards coal transition?

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