



MAD- 2020
Day - 27
ECONOMY

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Question:

Domestic coal production continues to be a major challenge for India. What is ailing Indian coal sector. Suggest measures to improve this situation.

Structure of the answer:

- Give a quick historical idea of the sector
- Discuss some attempts to reform the sector
- Discuss how the challenges still persist
- Suggest some way forward and their possible impact

(Adding some extra points, that (we never know when) can help us answer similar questions in the exam)

Historical Context:

- First published reference to the mining of coal in India dates back to 1774, during the time of **Warren Hastings** and first systematic geological survey of the field was made during 1845-46 by Mr. **D. H. Williams** (Geological surveyor to the East India Company).
- For the first century of coal mining in India, **Raniganj field** was the only and most important producer.
- In 1951 **Working Party** for the coal Industry was set up with representatives of coal industry, labour unions and government which suggested the amalgamation of small and fragmented producing units. Thus, the idea for a nationalized unified coal sector was born.
- **Nationalization of coal industry** in India in the early seventies was a fall out of two related events.
 - **Oil price shock**, which led the country to take up a close scrutiny of its energy options.
 - Much needed **investment needed for growth of this sector** was not forthcoming with coal mining largely in the hands of private sector.
- **1973-74:** Nationalization of coal mines, for a higher growth in coal sector to meet the growing energy needs of the country. Incorporated as 'Coal Mines Authority Limited'.
- **1975-76:** Change of name to 'Coal India Limited'.

India's Coal Sector:

- India's coal sector plays an important role in the country:
 - From an energy security perspective, it is the country's **most abundant non-renewable fuel**.
 - **Coal-fired power dominates electricity** generation and from economic contribution.
 - **Coal mining and power generation** are two major industries in India that account for around **a tenth of the country's industrial production**.
 - They directly **employ** around half a million people.

- India has the **world's fifth largest proved recoverable reserves** of coal with the states of Jharkhand, Odisha, Chhattisgarh and West Bengal accounting for most of total proved reserves.
- Indian coal has **lower energy content, high ash content and low sulphur** content.
- The **moisture content of Indian coal is variable**, and is typically higher in coal produced during the monsoon season.
- To improve the combustion efficiency of India's coal-fired fleet, the **quality of India's coal can be improved** either by:
 - **Blending domestic coal with higher quality imported coal**
 - **Washing domestic coal** to reduce the impurities.
- In 2013, India overtook Japan to become the **world's second largest thermal coal importer**, and has increasingly become a driving force in international thermal coal markets.
- **Imports declined for a couple of years beginning 2013-14, due to government efforts to boost production** combined with slowing industrial production growth.
- However, imports bounced back in the subsequent years, as power demand rebounded. **India now relies on imports for around a fifth** of its thermal coal consumption.
- **Indonesia has been the primary source** of thermal coal imports for India, driven by two key factors:
 - **Similar properties** of Indonesian and Indian coal make it easy to substitute Indonesian coal into India's coal-fired power generation fleet, which has largely been designed for low-energy, high-ash coal.
 - The relatively **low cost** of Indonesian coal is also appealing to Indian buyers, who are relatively price sensitive.

India's coal production

Challenges:

- **Land acquisition:** Land acquisition has been a substantial barrier to improving coal supply in India. With coal reserves, rail projects and prospective coal plants in, or near, areas that are privately or state owned, it can be challenging acquiring land for new projects.
- **Transport and infrastructure:** Logistics are another key constraint. The majority of India's coal-fired generation capacity is located in the northern and western regions of the country, while coal production is concentrated in the eastern region. As such, most of India's domestically-produced coal needs to be transported long distances, adding to costs.
- **Competition and private investment:** At present, coal production in India is effectively a monopoly, with production dominated by Coal India.
- **Changing Laws and Cancellation of fields** (Supreme Court ruling canceling coal fields).
- **Emergence of renewable energy** as a viable key substitute.
- **Increased cost of compliance** due to the strict regulatory environment.
- **Small-scale mining prevalent across the sector** with limited mechanisation, low operating performance as compared to global peers.
- **Emergence of imported coal as a viable substitute.**

- **COP21 (Paris agreement) commitments** by India.
- Apparent *shrinkage in global coal consumption*.
- *Downward revision of the economic growth projections* of India.
- *Tepid response to recent tranches of coal blocks auctions*.
- **NPA crisis** especially in the steel and power sector that are two *major* consumers of coal and important sectors linked to economic growth.
- The key challenge is *fragmentation by companies and blocks*, which if consolidated can help develop better common infrastructure and standardize equipment.
- Coal sector *regulated by Central government, state governments and various local agencies* involved in supervising the industry is also facing problems due to delays in getting clearances.
- Several approvals from multiple agencies are required for the commencement of mining operations. However, *the process is not streamlined* leading to delays and cost overruns.

Way forward

(Based on the Ministry of Coal's UNLEASHING COAL: NEW HOPES FOR ATMANIRBHAR BHARAT report).

- **Auction of coal mines for commercial mining will:**
 - Allow new companies to participate in the bidding process
 - Reduced upfront amount
 - Adjustment of upfront amount against royalty
 - Transparent bidding process
 - 100% FDI through automatic route and reasonable financial terms and revenue sharing model based on National Coal Index.
- In the wake of **recent disruption of global supply chains** and India's call for self-reliance, it is imperative that we allow our private sector to mine coal in India and for India.
- With nationalised coal mines failing to meet our demand, commercial coal mining is the only panacea for India to get rid of coal imports, achieve energy security and reduce import bill.
- Commercial mining licenses, regulatory oversight and monitoring will facilitate **employment opportunities** for tribal communities and local populations.
- Entry of private sector in the coal sector has immense forward and backward linkages:
 - **Backward linkage** of transportation and physical infrastructure
 - **Forward linkage** of cement, fertilisers, steel, and aluminum will bolster tremendous growth.
- **Global mining technology, management and competition** is bound to revamp the sector from inside.
- **Specific focus on the gasification** of coal, which will be used in sectors of transport and cooking, and will create further value addition in the sector.
 - Coal gasification is a cleaner and more efficient process.
 - An ambitious coal targets of gasifying 100 million tonnes of coal by 2030.

- Advanced **technologies of critical and super-critical power plants** will control pollutants and increase the amount of electricity produced.
- **Socio-economic benefits** of opening the coal sector for commercial mining are enormous.
 - The impact on **employment generation**
 - **Infrastructure** development
 - **Multiplier impact** on other sectors
 - **Cluster development**
 - **Import bill reduction** will go a long way in transforming India's growth trajectory.