

Coal crisis in India

November 24, 2021

Manifest pedagogy:

Post-covid recovery has resulted in a surge of power demand. Domestic and international circumstances have resulted in coal shortages that have impacted the Indian power sector.

Output has been crimped in India as heavy rains flooded key production hubs. Measures have been taken by the government to handle the situation but in the long run alternatives like hydro and renewables have a larger role to play in the energy scenario in India.

In news: India's thermal power plants are facing a severe coal shortage.

Placing it in syllabus: S&T- Energy sources

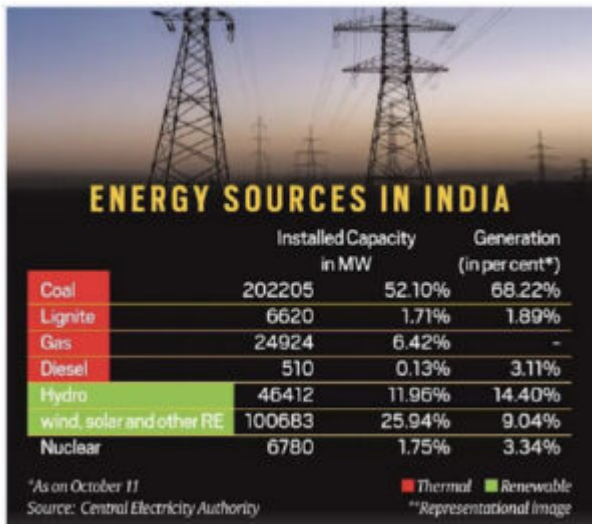
Dimensions

- Coal dependent energy scenario in India
- Reasons for shortage of coal
- Steps taken by Government to handle the coal shortage
- Feasible options before India

Content:

Coal dependent energy scenario in India:

- **India is the third biggest energy consumer** after China and USA with 5.8% global share.
- About 80% of India's electricity generation is from fossil fuels.



- India is expected to be the second-largest contributor to the increase in global energy demand by 2035, accounting for 18% of the rise in global energy consumption.

	North	West	South	East	North-East
Coal	59.42	84.63	52.08	80.51	15.87
Lignite	2.38	0.62	4.36	0.00	0.00
Gas, Diesel and Napatha	4.76	2.72	0.99	0.00	47.62
Hydro	21.73	4.89	15.25	18.81	36.51
Wind, solar and other RE	8.73	4.58	20.50	0.68	0.00
Nuclear	2.98	2.56	6.83	0.00	0.00

- India has the **world's 5th largest proven coal reserves** with nearly 170 billion metric tons.
- It is also the **second-largest importer of coal and the second-largest consumer of coal** in 2018.
- India is also **home to the world's largest coal company, Coal India Ltd**, which controls 85% of the country's coal production with 7.8% production share of coal (including lignite) in the world.
- Other than electricity production, Coal is also used for cement and steel production in substantial quantities.

Reasons for shortage of coal

- Sharp uptick in power demand as the economy recovered from the effects of the pandemic.
- Unseasonal rainfall in Indonesia, Covid-induced production cuts in Australia, and rising power demands in China have led to the price rise of coal. ([India currently sources 43 percent of its imported coal from Indonesia and 26 percent from Australia](#)).
- Heavy rains in coal bearing areas in September month led to lower production and fewer despatches of coal from coal mines.
- A consistent move to lower imports coupled with high international prices of coal have also led to plants cutting imports.
- Non-building of adequate coal stocks before the onset of monsoon and legacy issues of heavy dues of coal companies from certain states like Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh, Rajasthan and Madhya Pradesh.
- The issue of logistics, especially railway and the lack of a dedicated freight corridor are also the reason in some states, those who don't have any coal mining within their territory and depend on mines in other states hundreds of kilometres away.

Steps taken by Government to handle the coal shortage

- Government ministries and industry are working to closely monitor stocks, and could move again to divert supplies away from industrial users, like aluminum and cement makers to prioritize power generation.
- State-run Coal India Ltd has sought to increase daily coal supply to 1.9 million tons from about 1.7 million tons currently.
- The government has allowed companies that have been allotted coal and lignite mines for their own use to sell 50% of their annual output in a bid to ease

shortages.

- The power ministry has permitted power generators using local coal to use up to a 10 per cent blend of imported coal to boost coal stocks.
- Generators could seek to increase the price they charge to discoms under Power Purchase Agreements with power distribution companies.

Feasible options before India

- Soaring power prices could potentially make it viable for some coastal plants to use high-cost imported coal, easing some of the burden on domestic miners.
- New guidelines are being drafted to allow generation companies to sell surplus electricity on the exchanges, in part to spur idled plants back into action.
- Solar energy and wind energy could be used as clean sources of energy for both domestic and commercial needs.
- Large hydro-electric projects on dams are India's major electricity source after coal and the monsoon is likely to boost hydro-power generation.
- Coal gas can be produced by underground coal gasification where the coal deposits are located deep in the ground or uneconomical to mine the coal.
- **Synthetic natural gas (Syngas)** production technologies have tremendous scope to meet the transport sector requirements fully using the locally available coal in India. E.g. Dankuni coal complex is producing syngas which is piped to the industrial users in Calcutta.

Mould your thought:

1. Why has the coal crisis exacerbated in India in recent times? What steps has the government taken in this regard?

Approach to the answer-

- Briefly write about coal scenario
- Reasons for coal crisis
- Steps taken by government in recent times
- Way ahead (Brief about other options available)