

## Is it the Beginning of End for India's Thermal Power Plants?

### What is the issue?

Not adding any more thermal power capacity is important for India keeping in view its commitment to become carbon neutral by 2070.

### How important is thermal power for India?

- At present, thermal power accounts for almost 60% of India's total installed power generation capacity.
- It is produced by burning fossil fuels like coal, gas, etc. and out of this, coal alone accounts for more than half of India's installed electricity generation.
- It has been the centrepiece of India's energy ecosystem for several decades because it is the cheapest natural resource and is abundant in India.
- It plays an important role in determining transportation costs, thereby determining the price of the end product.
- India's coal reserves are expected to last 100 years, compared to around 50 years for gas and about 16 years for oil.
- An expert group formed by NITI Aayog expects India's coal-based power generation capacity to touch 250 GW by 2030 from around 202 GW currently.

### Why is the world turning against coal-fired power plants?

- The 2018 report by the IPCC warned against climate changes and stressed on limiting the operation of coal-fired power plants by 2050 to limit global warming.
- Coal-based power plants are significant contributors to pollutants such as particulate matter (PM), nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>).
- **India's plan-** Various committees and expert groups formed by Ministries and Departments have suggested not adding more coal-fired plants.
- It is important for India to become carbon neutral by 2070 and to have around 500 GW of renewable energy power by the same time.
- With growth in renewable energy power generation, the share of coal-based thermal power in the total power generation mix will decline from the existing 72% to a range of 50-55% by 2030.
- Generally, coal-based plants are decommissioned after the completion of their useful life, which varies between 30 to 45 years in India.
- The Council on Energy, Environment and Water suggested considering 30 GW of India's coal-based capacity for accelerated decommissioning as it would result in a one-time saving of Rs. 10,000 crore by avoiding pollution control retrofits.
- The proposed plants overlap with those identified for retirement in the **National Electricity Plan, 2018**.

To know about National Electricity Policy, click [here](#)

# What challenges will India face in decarbonising its power sector?

- **Twin challenge-** India faces a twin challenge in decarbonising its power sector
  1. Replacing thermal power with RE sources in a phased manner
  2. At the same time, meeting rising demand for power
- Electricity demand in India is expected to grow at a CAGR of 5% during 2018-2040, which makes it crucial for India to urgently adopt cleaner technologies at scale and promote sustainable power generation.
- **Challenges in renewable power-** RE cannot produce power at all times during the day.
- Besides, the low-capacity utilisation of the transmission system is also impacting its growth.
- **Operation issues-** Another operation issue is grid operations and creating the right mix of various power sources like RE, coal-fired, etc.
- **Optimum utilisation-** Optimum utilisation of transmission resources is an issue which needs a clear picture of power requirements across the country and how an optimum mix of RE and thermal power can be devised to meet demand.

## References

1. <https://www.thehindubusinessline.com/blexpainer/is-it-the-beginning-of-end-for-indias-thermal-power-plants/article38025578.ece>

