

## Significance of Biomass

### Why in news?

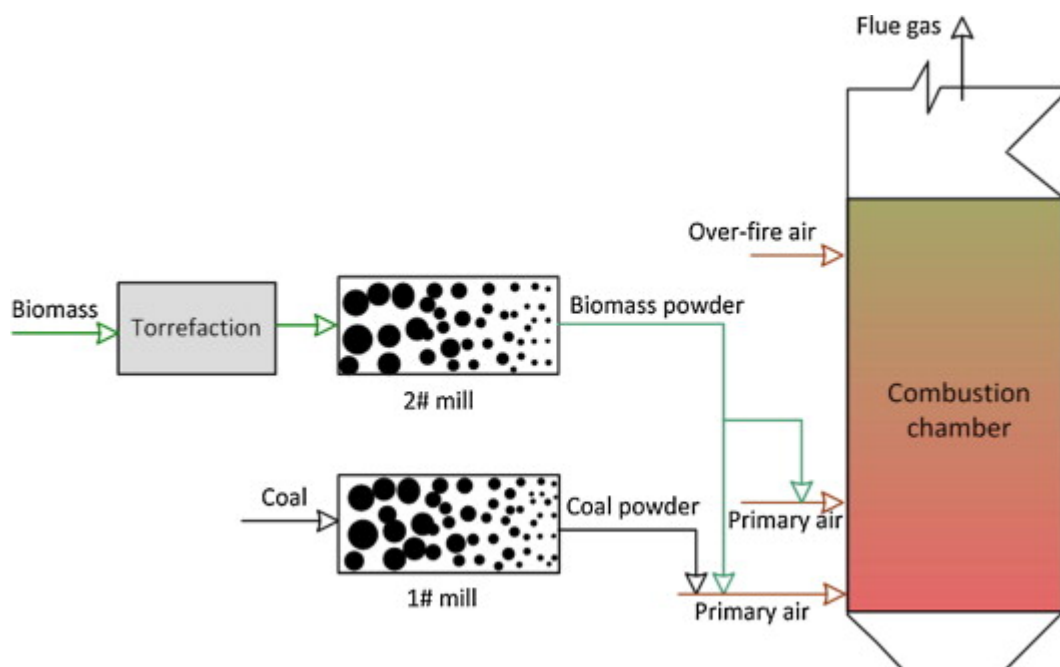
Recently, Ministry of Power revised the policy on biomass thus obligating the thermal power plants to increase the use of biomass pellets.

### What are biomass pellets?

- Biomass pellets are any materials can burn.
- It includes
  - Agricultural waste such as crop stalk and straw material, rice husk, cotton stalk, coffee husk, alfalfa straw, coconut shell, palm shell, sugarcane bagasse.
  - Forestry residue such as sawmill residue, branches, bark, leaves.
  - Solid waste such as junk paper, waste plastic, cardboard.

### What is the Biomass Co-firing Policy about?

- Biomass co-firing is a method for efficiently and cleanly converting biomass to electricity by adding biomass as a partial substitute fuel in high-efficiency coal boilers.



### Biomass Co-firing Policy

- **Aim** -To meet India's renewable energy targets and lowering greenhouse gas emissions from the power sector.
- **Revised policy 2021** -Mandates the use of 5% biomass pellets made primarily of agro-residue along with coal in thermal power plants with effect from 1 year from the date

of issue of the policy.

- Thermal power plants shall increase the usage to 7% with effect from 2 years after the date of issuance of this policy.
- **Cutting coal supply** -Government is considering cutting coal supply for those thermal power plants that do not comply with the policy on biomass co-firing.

### What is the significance of biomass?

- Enable generation of green electricity
- Cut down coal consumption
- Create employment
- Reduce CO2 emissions and air pollution
- Help in achieving India's global commitment towards 45% emission reduction by 2023
- Cheaper than imported [coal](#) and reduce stubble burning
- Economic alternative for all thermal power plants

### What are the challenges in using biomass?

- Providing a single window for clearances
- Lack of steady and consistent supply of biomass
- Varied availability and quality of biomass across India
- Difficult to store since they attract moisture
- Lack of infrastructure in transport and storage of biomass
- The process to retrofitted biomass co-firing equipment is expensive
- Lack of market for biomass pellets

### What measures were taken for promotion of biomass in power plants?

- **Pellet manufacturing sector** -Being encouraged to bridge the demand-supply gap of biomass pellets.
- **Financial assistance schemes** -For biomass pellet manufacturing units from Ministry of New and Renewable Energy and Central Pollution Control Board.
- **Priority Sector Lending (PSL)** -Biomass pellet manufacturing have been included in the [priority sector lending](#).
- **E-Marketplace** - The biomass pellets can be procured through the government e-Marketplace by the thermal power plants.
- **SAMARTH (Sustainable Agrarian Mission on use of Agro Residue in Thermal Power Plants)** -Provides for co-firing of biomass waste in Thermal Power Plants.
- **Energy Conservation (Amendment) Act 2022** -Specifies that all thermal power plants will have to use renewable fuel sources either as energy or feedstock.

### What is the need of the hour?

- Robust regulatory framework that offers incentives and support for biomass co-firing.
- Creation of competitive market for biomass in order to ensure equitable pricing and distribution.
- A framework to support inter-ministerial coordination.
- The Biomass Co-firing Policy needs to be backed by a strong policy and regulatory

framework that provides incentives and support for biomass co-firing.

## References

1. [The Hindu Business Line | Biomass](#)
2. [Ministry Of Power | Biomass Co-Firing](#)

