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 CO_2 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

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