National Mission on use of Biomass in Coal Based Thermal Power Plants

Why in News

Recently, the Ministry of Power has decided to set up a **National Mission on use of Biomass in coal based thermal power plants.**

Key Points

- **About:**
  - The proposed National Mission on biomass will also contribute to the National Clean Air Programme (NCAP)**.**
  - It would further **support the energy transition in the country** and our targets to move towards **cleaner energy sources.**
- **Aim:**
  - To **address the issue of** air pollution due to farm **stubble burning** and to **reduce carbon footprints of thermal power generation.**
- **Objective:**
  - Increase the **level of** biomass co-firing **from present 5% to higher levels** to have a larger share of carbon neutral power generation from the thermal power plants.
    - **Biomass co-firing** stands for adding biomass as a partial substitute fuel in high efficiency coal boilers.
  - **Take up R&D (Research & Development)** activity in boiler design to handle the higher amount of silica, alkalis in the biomass pellets.
  - **Facilitate overcoming the constraints in supply chain of biomass** pellets and agro-residue and its transport upto to the power plants.
  - Consider **regulatory issues in biomass co-firing.**
- **Proposed Structure:**
  - The Mission would have a **Steering Committee headed by the Secretary (Ministry of Power)** comprising all stakeholders including **representatives from the Ministry of Petroleum & Natural Gas , Ministry of New & Renewable Energy etc.**
  - **National Thermal Power Corporation Limited** will play a larger role in providing logistics and infrastructure support.
- **Duration:**
  - The duration of the proposed National Mission would be a **minimum 5 years.**
- **Initiatives to Reduce Pollution from Coal Power Plants:**
  - **Stringent emission standards** for coal based thermal power plants have been notified.
    - Compulsory adoption of emissions standards for installing **Flue Gas**

Desulphurization (FGD) units that cut emissions of toxic sulphur dioxide.
    - **Approved automatic transfer of coal linkage from inefficient power plants to new supercritical plants** subject to certain conditions to promote setting up of supercritical units in place of old ones.
    - Thermal power plants within 50 km of sewage treatment facilities will **mandatorily use treated sewage water.**
- **Other Initiatives to Reduce Air Pollution:**
    - Bharat Stage-VI (BS-VI) emission norms**.**
    - UJALA scheme**.**
    - International Solar Alliance**.**
    - National Action Plan on Climate Change (NAPCC)**.**

Biomass

- **About:**
    - **Biomass** is plant or animal material used as fuel to produce electricity or heat. Examples are wood, energy crops and waste from forests, yards, or farms.
    - Biomass has always been an **important energy source for the country considering the benefits it offers.**
- **Benefits:**
    - It is **renewable, widely available, carbon-neutral** and has the potential to provide **significant employment in the rural areas.**
    - It is also capable of providing firm energy. About **32% of the total primary energy use in the country is still derived from biomass** and more than **70% of the country's population depends upon it** for its energy needs.
- **Biomass power & cogeneration programme:**
    - **About:**
        - Initiated by the **Ministry of New and Renewable Energy.**
        - For efficient utilization of biomass, **bagasse based cogeneration in sugar mills and biomass power generation** have been taken up under the programme.
        - **Biomass materials used for power generation include** Rice husk, straw, cotton stalk, coconut shells, soya husk, de-oiled cakes, coffee waste, jute wastes, groundnut shells, saw dust etc.
    - **Objective:**
        - **Promoting technologies for optimum use** of the country's biomass resources for grid power generation.

Source: PIB