Sulfur Dioxide Emission Norms Delayed

Why in News

The **Ministry of Power** has **proposed pushing back the deadlines for adoption of new emission norms by coal-fired power plants**, stating "an unworkable time schedule" would burden utilities and lead to an increase in power tariffs.

Key Points

- **Background:**
  - India initially had set a **2017 deadline** for **thermal power plants** to comply with **emissions standards for installing Flue Gas Desulphurization (FGD) units** that cut emissions of toxic sulphur dioxide.
    - This was **later changed to varying deadlines for different regions, ending in 2022.**
- **Flue Gas Desulphurisation (FED):**
  - **Removal of Sulfur Dioxide** is called as Flue-gas Desulphurization (FGD).
  - It seeks to remove gaseous pollutants viz. SO_2 from exhaust flue gases generated in furnaces, boilers, and other industrial processes due to thermal processing, treatment, and combustion.
- **Proposal of the Ministry of Power:**
  - It has proposed **a "graded action plan,"** whereby areas where plants are located would be graded according to the severity of pollution, with **Region 1 referring to critically polluted areas**, and **Region 5 being the least polluted.**
    - **Strict control of emissions** shall be required in such key areas for thermal power stations categorised under **Region 1**.
    - Plants in **Region 2** could begin to **take action one year after those in Region 1.**
    - Presently **no action** is required for power plants that are situated under **Region 3, 4 & 5.**
  - According to the Ministry, the target should be to maintain **uniform ambient air quality** across the country and **not uniform emission norms** for thermal power plants.
    - This could avoid immediate increase in power price in various relatively clean areas of the country (and) avoid unnecessary burden on power utilities/consumers.

Sulfur Dioxide Pollution

- **Source:**
  - The largest source of SO_2 in the atmosphere is the **burning of fossil fuels** by power plants and other industrial facilities.
  - Smaller sources of SO_2 emissions include: industrial processes such as extracting metal from ore; **natural sources such as volcanoes**; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content.
- **Impact:** SO_2 can affect both **health and the environment.**
  - **Short-term exposures** to SO_2 can **harm the human respiratory system** and make breathing difficult. People with asthma, particularly children, are sensitive to these effects of SO_2.

- SO_2 emissions that lead to high concentrations of SO_2 in the air generally also lead to the **formation of other sulfur oxides (SOx)**. SOx can react with other compounds in the atmosphere to form small particles. These particles **contribute to** particulate matter (PM) **pollution.**
    - Small particles may penetrate deeply into the lungs and in sufficient quantities can contribute to health problems.

- **India's Case:**
    - India's sulphur dioxide (SO_2) emissions **recorded a significant decline of approximately 6% in 2019 compared to 2018**, the steepest drop in four years, according to a report from Greenpeace India and the Centre for Research on Energy and Clean Air (CREA).
        - However, India remained the **largest emitter of SO_2.**
    - In **2015**, the **Ministry of Environment, Forest and Climate Change (MoEF&CC) introduced Sulfur Dioxide (SO_2) emission limits for coal power stations.**
    - **Air Quality sub-index** has been evolved for **eight pollutants** (PM10, PM2.5, NO_2, SO_2, CO, O_3, NH_3, and Pb) for which short-term (upto 24-hours) **National Ambient Air Quality Standards** are prescribed.

Source:TH