



## Sulfur Dioxide Emission Norms

[Source: PIB](#)

### Why in News?

Recently, the Ministry of Power has informed Lok Sabha that, for compliance with Sulphur dioxide (SO<sub>2</sub>) emission norms, Thermal Power Plants are installing [Flue Gas Desulphurisation \(FGD\) equipment](#).

- The Ministry in September 2022 had extended the deadline for **Coal-Fired power plants** to install FGD to cut **sulphur emissions by two years**.

### What is the Categorisation of Power Plants for Installing FGD?

Category	Location/Area	Timelines for compliance
Category A	Within 10 km radius of National Capital Region (NCR) or cities having million plus population (as per <a href="#">2011 census of India</a> )	Upto 31st December 2024
Category B	Within 10 km radius of Critically Polluted Areas or Non-attainment cities (as defined by <a href="#">CPCB</a> )	Upto 31st December 2025
Category C	Other than those included in category A and B	Upto 31st December 2026

### What is Flue Gas Desulfurization (FGD)?

- **About:**
  - FGD is the process of removing **sulfur compounds from the exhaust emissions of fossil-fueled** power stations.
  - This is done through the **addition of absorbents**, which can remove up to 95% of the sulphur dioxide from the flue gas.
  - Flue gas is the **material emitted when fossil fuels** such as coal, oil, natural **gas, or wood are burned** for heat or power.
- **Need for FGD in India:**
  - Indian cities have **some of the world's most polluted air**. India currently emits almost **twice the amount of SO<sub>2</sub>** than the next highest country, Russia.
  - Thermal utilities, which produce **75% of the country's power**, account for some 80% of industrial emissions of **sulphur and nitrous oxides**, which cause [Lung Diseases](#), acid rain and smog.
  - Every single day **delay in implementation of prescribed norms** and not installing the

FGD system is causing huge health and economic damage to our society.

- The high **levels of damaging SO<sub>2</sub> pollution in India are avoidable much sooner** as FGD systems have proved successful in reducing emission levels in China, which was responsible for the **highest level of SO<sub>2</sub> Pollution** in 2005.

## What is Sulfur Dioxide Pollution?

### ▪ Source:

- The largest source of **SO<sub>2</sub> in the atmosphere is the burning of fossil fuels** by power plants and other industrial facilities.
- Smaller sources of SO<sub>2</sub> emissions **include** industrial processes such as **extracting metal from ore**, natural sources such as volcanoes, and locomotives, ships and other vehicles.

### ▪ Impact:

- Short-term exposures to SO<sub>2</sub> can harm the **human respiratory system** and make breathing difficult. People with asthma, particularly children, are sensitive to these effects of SO<sub>2</sub>.
- The WHO has estimated that it causes **4.2 million deaths globally per year**.
- SO<sub>2</sub> emissions that **lead to high concentrations of SO<sub>2</sub>** in the air generally also lead to the formation of other sulfur oxides (SO<sub>x</sub>).
- SO<sub>x</sub> can react with other compounds in the atmosphere to form small particles. These particles contribute to [Particulate Matter \(PM\) pollution](#).

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