

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

LOK SABHA
UNSTARRED QUESTION NO. 3469
TO BE ANSWERED ON 11.08.2025

Installation of FGD Systems

3469. SHRI MANISH JAISWAL:
SHRI DHAIRYASHEEL SAMBHAJIRAO MANE:
SHRI SUDHEER GUPTA:
SHRI MANISH TEWARI:
SHRI CHAVAN RAVINDRA VASANTRAO:
SHRI MANICKAM TAGORE B:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) whether the Government has recently exempted a substantial number of coal-fired thermal power plants from the mandatory installation of Flue Gas Desulphurisation (FGD) systems;
- (b) if so, the details thereof along with the specific criteria and rationale used to determine these exemptions, including the reasons for adopting location-based emission norms instead of uniform national standards;
- (c) the details of exempted units along with the criteria and scientific basis for classifying units into Categories A, B, and C for the purpose of FGD requirements;
- (d) whether any health impact assessments or regional air quality modelling studies were conducted prior to issuing the exemption, particularly in areas downwind of major coal clusters, if so, the details thereof;
- (e) the details of the alternative pollution control technologies, emission limits, or monitoring protocols will be mandated in lieu of FGD installation to mitigate the environmental and public health impacts from such exempted plants;
- (f) Government plan to strike a balance between reducing air pollution and supporting the economic viability of thermal power plants, especially those exempted from FGD compliance; and
- (g) the status of implementation of the recommendations made by the Expert Committee on the issue of emission control in the thermal power plants?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(SHRI KIRTI VARDHAN SINGH)

(a) to (g):

The Ministry of Environment, Forest and Climate Change (MoEFCC) notified emission standards for coal/lignite-fired Thermal Power Plants (TPPs) vide Notification dated 07.12.2015. The SO₂ emission standards prescribed vide Notification dated 07.12.2015 have been reviewed by the Central Government taking into consideration the various representations received

regarding exemption or relaxation in timelines of these emission standards due to limited availability of technology providers, its techno-economic feasibility, negative impact of COVID-19 pandemic on supply chain, price escalation due to high demand and low supplies, low Sulphur dioxide concentration in ambient air and heavy burden on consumer due to increase in electricity prices etc.

Besides, several studies conducted by research institutions such as CSIR-National Environmental Engineering Research Institute (CSIR-NEERI) [report titled as “*Analysis of Historical Ambient Air Quality Data along with Emission from coal-based Thermal Power Plants for Developing a Decision Support System*”], Indian Institute of Technology (IIT) Delhi [report titled as “*Study to survey ambient atmospheric SO₂ concentrations in different category of cities based on their vicinity to thermal power plants (TPPs)*”], National Institute of Advanced Studies (NIAS) [report titled as “*Economic, Environmental, and Climate Impacts of Flue Gas Desulphurisation (FGD) in Thermal Power Plants in India*”], regarding effectiveness and rationale behind these standards and its role in overall ambient air pollution of the region, were also considered to evaluate the need of universal applicability and enforcement of these standards. Apart from these studies, Central Pollution Control Board (CPCB) had also conducted a simulation modelling of emission from source of Thermal Power Plant for different scenarios/matrix through Indian Institute of Tropical Meteorology (IITM), Pune.

After detailed review of the matter, the Ministry has issued Notification vide G.S.R. 465 (E) dated 11.07.2025 regarding the applicability of SO₂ emission standards notified vide Notification dated 07.12.2015. Accordingly, the applicability and timelines for compliance of SO₂ emission standards by TPPs are as follows:

| Category | Applicability of SO ₂ emission standards | Time limit for compliance |
|--|--|---------------------------|
| Category A (Plants within 10 km radius of NCR or cities having million plus population) | Mandatory | 31.12.2027 |
| Category B (Plants within 10 km radius of non-attainment cities or critically polluted areas) | To be decided on a case to case basis by the Central Government based upon the recommendations of the Expert Appraisal Committee (Thermal Projects). In case any TPP is considered for non-applicability of SO ₂ emission standards, such TPP shall ensure meeting stack height as per Notification no. G.S.R. 742 (E) dated 30.08.1990. | 31.12.2028 |
| Category C (Other than those included in Category A and B) | Not applicable subject to condition of meeting stack height as per Notification no. G.S.R. 742 (E) dated 30.08.1990. | 31.12.2029 |

Out of 600 TPP units commissioned up to 30.11.2021 as per information available from Central Electricity Authority (CEA), 66 units are under Category ‘A’, 72 units are under Category ‘B’, and 462 units are under Category ‘C’. The TPP units are categorized by the task force constituted by CPCB comprising of representatives from MoEFCC, Ministry of Power, CPCB and CEA, in compliance with the MoEFCC Notification G.S.R. 243(E) dated 31.03.2021.

The category-wise applicability of SO₂ emission standards in TPPs has been decided based on detailed scientific studies and analysis of ambient SO₂ concentrations across the country, including areas near TPPs. The decision taken by the Central Government while issuing Notification dated 11.07.2025 is based on scientific approach, environmental sustainability and environmental benefits/loss in achieving SO₂ emission norms as well as techno-economic feasibility of implementing such control measures across all coal/lignite-based TPPs. This approach applies the precautionary principle for controlling and abating air pollution in densely populated and other air pollution-sensitive areas, while also considering to safeguard consumers from the heavy burden due to potential increases in electricity prices. This approach further demonstrates resource conservation by avoiding additional consumption of water, auxiliary power, and limestone; it also considers the increase in carbon footprint/CO₂ emissions resulting from the operation of deployed control measures, as well as the mining and transportation of limestone required for these measures.

TPPs are required to comply with the emission standards notified by MoEF&CC within the prescribed time limits, failing which environmental compensation shall be imposed on the non-compliant TPP units for operation beyond the prescribed time limit at prescribed rates. In all such cases where SO₂ emission standards are not being made applicable, TPPs shall ensure compliance of stack height criteria notified vide Notification number GSR 742 (E) dated the 30.08.1990 governing SO₂ emissions from TPPs to aid proper dispersion of pollutants and mitigate environmental impacts.
