

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

RAJYA SABHA
UNSTARRED QUESTION NO. 1346
TO BE ANSWERED ON 30.07.2026

Mitigation of sulphur dioxide emissions

1346. SHRI PRAMOD TIWARI:

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

- (a) whether country could prevent a significant number of deaths by fully mitigating sulphur dioxide emissions from coal-fired power plants;
- (b) if so, the salient features of the study conducted by researchers from IIT Delhi in this regard and published in the Nature journal recently;
- (c) whether emissions have increased significantly on account of socio-economic changes and excessive dependency on coal; and
- (d) if so, the steps on the anvil for stronger implementation of sulphur dioxide emission norms and prioritisation of hotspot regions?

ANSWER

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

(a) to (d): Based on the report of the Central Pollution Control Board (CPCB) which examined the studies/reports of CSIR-National Environmental Engineering Research Institute (NEERI), Indian Institute of Technology (IIT), Delhi, National Institute of Advanced Studies (NIAS), various reports and publications on Thermal Power Plants (TPPs) including studies on health impact, if any, and database on emissions from TPPs and its impact on the ambient air quality, the Ministry of Environment, Forest and Climate Change issued notification vide G.S.R. 465 (E) dated 11.07.2025 regarding applicability of Sulphur Dioxide emission norms in TPPs. These norms are mandatorily applicable, as per specified timelines, in the case of all Category A TPPs located within 10 km of NCR or million plus cities, whereas, its applicability is to be decided on a case by case basis for Category B plants and exemption has been provided for only Category C plants. In all such cases where SO₂ emission standards are not being made applicable, TPPs have been mandated to 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.

The thermal power plants are also regulated through grant of Consent to Establish and/or Consent to Operate under the Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 by concerned SPCBs. The Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 also includes provisions for monitoring of compliance and provisions for enforcement of environmental standards. The thermal

power plants are further mandated to install Online Continuous Emission Monitoring System (OCEMS) for emission and effluent monitoring.

It would be relevant to mention here that Socio-economic changes do not directly determine emissions from coal-based thermal power plants. Emissions are primarily linked to the level of power generation. Further, disease or death is caused by a number of factors which include food habits, occupational habits, socio-economic status, medical history, immunity, heredity, etc., of the individuals, apart from the environment.

As per information received from Indian Institute of Technology, Delhi, a study titled “*Air quality and health benefits achievable by mitigating Indian coal-fired power plant SO₂ emissions*” was published in May 2026 in “npj Clean Air” scientific journal. The study was conducted by researchers, including those from the Indian Institute of Technology, Delhi. This is a study conducted for only one particular year (2021), with a computer model, simulating atmospheric gas and particle chemistry and transport. The computer model simulations and the subsequent analysis in this study involve multiple sources of uncertainties inherent in the estimated deaths or health impacts. Several limitations of the study have been discussed in detail in the published research article.
