GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4378
ANSWERED ON 27.03.2025

FLUE GAS DESULFURIZATION SYSTEMS IN THERMAL POWER PLANTS

4378. DR. PRASHANT YADAORAO PADOLE:

Will the Minister of POWER
be pleased to state:

(a) the current status of the installation of Flue Gas Desulfurization (FGD) systems in thermal power plants across the country including the number of plants with completed installations;

(b) the timeline set for the completion of FGD installations to ensure compliance with emission control standards mandated by the environmental regulations;

(c) the details of the challenges faced in the installation process, such as financial constraints, technical issues or delays along with the measures being taken by the Government to address these challenges; and

(d) the steps taken/being taken by the Government to enforce the mandatory adherence to FGD installation deadlines to meet India's emission reduction commitments?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : Total 537 Units [2,04,160 Mega Watt (MW)] have been identified for installation of Flue Gas Desulphurization (FGDs) in Thermal Power Plants (TPPs). Out of these, FGD installation has been completed in 49 Units (25,590 MW), contracts awarded / under implementation in 211 Units (91,880 MW), 180 Units (58,997 MW) are under various stages of tendering process and 97 Units (27,693 MW) are under pre-tendering process.

(b) to (d) : Ministry of Environment Forest & Climate Change (MoEF&CC) vide its revised notification dated 30.12.2024 has prescribed the following timelines for TPPs to comply with the SO_2 emission norms:

Sl. No.	Category	Location/Area	Timelines for Compliance (Non-retiring units)	Last date for retirement of units for exemption from compliance
1	Category A	Within 10 km radius of National Capital Region or cities having million plus population	Up to 31st December, 2027	Up to 31st December, 2030
2	Category B	Within 10 km radius of Critically Polluted Areas or Non-attainment cities	Up to 31st December, 2028	
3	Category C	Other than those included in category A and B	Up to 31st December, 2029	

In case of non-compliance beyond the specified timelines, MoEF&CC has prescribed the following Environment Compensation on the non-retiring TPPs:

Non-Compliant operation beyond the Timeline	Environmental Compensation (Rs. Per unit electricity generated)
0-180 days	0.20
181-365 days	0.30
366 days and beyond	0.40

Major issues/challenges being faced by TPPs during the implementation of FGD system in thermal power plants are as below:

(i) FGD technology being new to our country, there are at present limited vendors with limited capacity to supply and install FGD components. Vendor capacity for FGD installation is about 16-20 GW per annum (33 to 39 units) in the country and installation time is about 36 to 40 months which has led to mismatch in demand and supply of FGD equipment, causing rising costs and delays.

(ii) India had manufacturing capability of 70% FGD components which has now increased to 80% with the passage of time. However, it still depends on the imports from other countries for technology, critical equipment and skilled manpower.

(iii) The installation of FGD systems is more like a Renovation and Modernization (R&M) project which has distinguished difficulties in terms of conceptualization and design challenges. Standardization could not be done as different sites have different requirements like space constraints, lay-out and orientation etc.

To address the above issues, vendors have been encouraged to enhance their capacity and to maximize the indigenous production of all FGD parts in order to reduce import dependence.

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