

**GOVERNMENT OF INDIA  
MINISTRY OF POWER**

**RAJYA SABHA  
STARRED QUESTION NO.32  
TO BE ANSWERED ON 27.04.2015**

**CO<sub>2</sub> EMISSIONS FROM THERMAL POWER PLANTS**

\*32. SHRI D. RAJA:

Will the Minister of **POWER**  
be pleased to state:

- (a) whether it is a fact that the Carbon dioxide (CO<sub>2</sub>) emission from thermal power plants in the country is 45 per cent higher than the global best and 14 per cent higher than the China's average and if so, the details thereof;
- (b) whether Government's attention has been drawn to a report published by the Center for Science and Environment (CSE) captioned "Heat on power-green rating of coal based thermal power plants" regarding the performance of the Indian thermal power plants; and
- (c) if so, the gist of the findings in the report and Government's reaction to the suggestions made therein?

**A N S W E R**

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER,  
COAL AND NEW & RENEWABLE ENERGY

( SHRI PIYUSH GOYAL )

**(a) to (c) :** A Statement is laid on the Table of the House.

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## STATEMENT

### STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) OF STARRED QUESTION NO. 32 TO BE ANSWERED IN THE RAJYA SABHA ON 27.04.2015 REGARDING CO<sub>2</sub> EMISSIONS FROM THERMAL POWER PLANTS.

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(a) : India has abundant coal reserves and coal based generation will continue to remain important for power generation in India. The Carbon Dioxide (CO<sub>2</sub>) emission from Thermal Power Plants in the country is comparatively higher than the global standards due to inferior quality of coal and higher ambient air temperature and cooling water temperature in India resulting in more consumption of coal.

(b) & (c) : The Centre for Science and Environment in its report “Green Rating of Coal-Based Thermal Power Plants” has given, inter-alia, the following suggestions to improve the performance of coal based power plants:

- I. Accelerating installation of supercritical/ultra supercritical (SC/USC) plants.
- II. Retirement of old and inefficient plants.
- III. Introduction of tighter air pollution norms.
- IV. Optimization of water and land use in coal based thermal power plants.

Government of India has already taken following initiatives to improve the efficiency of coal based power plants and to reduce carbon footprint of the power sector:

- I. A capacity of 27,485 MW based on supercritical technology has already been commissioned and 49,925 MW super critical capacity is under construction.
- II. All coal fired capacity additions shall be based on supercritical technology in the 13<sup>th</sup> Plan.
- III. Ultra Mega Power Projects (UMPPs) would be based on Super Critical technology.
- IV. An Advanced Ultra Super Critical Technology R&D Project has been approved by Government at a cost of Rs.1500 Crore involving BHEL, NTPC and Indira Gandhi Centre for Atomic Research (IGCAR) to achieve higher efficiency, reduce carbon-dioxide emissions and coal consumption for coal based power plants.

- V. Renovation, Modernization and Life Extension of old thermal power generating units and retirement of old and inefficient thermal generation units, in phased manner, has been undertaken. A total capacity of 3,115 MW has already been retired till date and 2667 MW capacity is to be retired by the end of the 12<sup>th</sup> Plan.
- VI. Government has decided that Letter of Assurance (LoA)/ linkage granted to the old plant shall be automatically transferred to the new plant of nearest supercritical capacity in public sector. If the capacity of the new supercritical plant is higher than the old plant, additional coal linkage would be accorded on priority subject to the availability of coal on best effort basis upto an additional capacity of 50% of old plant.
- VII. Coal cess has been doubled from Rs.100 per tonne to Rs.200 per tonne for funding projects under National Clean Energy Fund as announced in the Budget Speech of 2015-16.
- VIII. Increasing the share of renewable energy in the overall power generation in the country.
- IX. Government of India has introduced Perform, Achieve and Trade (PAT) scheme in which targets are assigned to existing thermal power plants for improving the efficiency.
- X. CEA has brought out reports on optimal land and consumptive water requirements for thermal power plants in September 2010 & January 2012 respectively which are being followed by the thermal power stations.
- XI. The utilization of Fly Ash has increased from 6.64 Million Tonnes (9.63%) in 1996-97 to level of 99.62 Million Tonnes (57.63%) in 2013-14.

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