

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
STARRED QUESTION NO.45
TO BE ANSWERED ON 13.12.2018**

WATER CONSUMPTION BY THERMAL POWER PLANTS

***45. SHRI VINCENT H. PALA:**

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

- (a) the details of the total water consumed by thermal power plants on per day basis across the country;**
- (b) whether the Government has taken steps/plans to take steps to mandate daily water withdrawal and consumption reporting by such plants; and**
- (c) if so, the details thereof and if not, the reasons therefor?**

A N S W E R

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

(SHRI R.K. SINGH)

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

STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) OF STARRED QUESTION NO.45 TO BE ANSWERED IN THE LOK SABHA ON 13.12.2018 REGARDING WATER CONSUMPTION BY THERMAL POWER PLANTS.

(a) : Total water consumed by thermal power plants on per day basis across the country is not monitored by Ministry of Power/Central Electricity Authority. However, daily water consumption in thermal power plants of DVC is 3.02 Lakh kl per day and NTPC's average daily water consumption in its thermal power plants for year 2017-18 is 15.37 Lakh kl per day.

(b) & (c) : Government of India, Ministry of Environment, Forest and Climate Change (MoEF&CC) notified the norms for water consumption for thermal power plants on 7th December, 2015. These were subsequently amended vide Notification on 28.06.2018. The amended norms provide as follows:

- i. All plants with Once Through Cooling (OTC) shall install Cooling Tower (CT) and achieve specific water consumption of 3.5 m³/MWh within 2 years of Notification dated 07.12.2015.
- ii. All existing CT based plants shall reduce specific water consumption up-to maximum of 3.5 m³/MWh within a period of 2 years of Notification.
- iii. New plants to be installed after 1st January, 2017 shall have to meet specific water consumption of 3.0 m³/MWh and achieve zero water discharge.

The aforesaid water consumption limit shall not be applicable for thermal power plants using sea water.

Further, following steps have been taken by Government to reduce water consumption in thermal power plants.

- i. As per the Tariff Policy 2016, the thermal power plants including the existing plants located within 50 km radius of sewage treatment plant of Municipality/local bodies shall in the order of their closeness to the sewage treatment plant, mandatorily use treated sewage water produced by these bodies and the associated cost on this account be allowed as a pass through in the tariff. This scheme mainly envisaged to explore the possibility of recycle/reuse of the treated waste water from STP's for non-potable use (cooling purpose) in TPPs within 50 km radius. Accordingly, the mapping of thermal power stations within the vicinity of 50 km from STPs across the country has been carried out. Presently 1179 MLD of STP water potential has been identified across the country, out of which 250 MLD of STP water is currently utilized in various TPPs across country.

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- ii. Ash water recirculation system- Water from ash pond is recovered and reused in the system.**
- iii. Dry fly Ash Handling System & High concentration slurry disposal system (HCSD) - These ash handling techniques reduce the ash handling water requirement thereby reducing the water consumption.**
- iv. Zero water discharge system – Treating the total waste water produced in the plant and recycling back in to the consumptive water system, reduces water consumption.**
- v. Operating cooling towers at higher Cycle of Concentration (COC)- This reduces the waste water generated by the plant. This waste water generated is used for low grade applications like ash handling, dust suppression system and gardening etc.**
