

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
UNSTARRED QUESTION NO.1059
TO BE ANSWERED ON 08.02.2018**

SHORTAGE OF WATER FOR POWER PLANTS

**1059. SHRI JYOTIRADITYA M. SCINDIA:
SHRI KAMAL NATH:**

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

- (a) whether thermal power plants in the country which rely on fresh water cooling are facing serious outages because of shortage of water;**
- (b) if so, the details thereof;**
- (c) whether the World Resources Institute (WRI) in its latest report has stated that many thermal utilities companies face shut downs due to water shortage;**
- (d) if so, the facts and details thereof; and**
- (e) the remedial measures taken or proposed to be taken by the Government to address the problem in an effective way?**

A N S W E R

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

(SHRI R. K. SINGH)

(a) to (d) : Thermal Power Stations relying on fresh water for cooling face outages sometimes due to constraints in water availability.

The World Resources Institute in one of its working papers published in Jan-2018, has stated that India's thermal power sector is dependent on water and has been suffering from water shortages.

According to data with Central Electricity Authority (CEA) total outage due to water shortage from 2015-16 to 2017-18 vary from 0.2% to 2% of the total outage losses incurred in the thermal stations in the country. Details of the total losses incurred in the thermal stations in the country are as follows:

Loss of Generation due to water shortage from 2015-16 to 2017-18

Year	Duration (Hours)	Loss due to Water shortage (MU)	Total Loss (MU)	Loss due to Water shortage as % of total loss
2015-16	2162.95	995.02	378814.97	0.26
2016-17	28595.77	9565.24	472544.53	2.02
2017-18	8247.25	2529.24	409930.17	0.62

(e) : The remedial measures being adopted to reduce consumption of water in Thermal Power Plants are as under:

- I. Ash water recirculation system- Water from ash pond is recovered and reused in the system.**
- II. 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.**
- III. 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.**
- IV. 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, coal dust suppression and gardening etc.**
- V. MOEF&CC has notified Environment (Protection) Amendment Rules, 2015 on 7th December 2015 related to water consumption limit for existing and future thermal power plants:**
 - (i) All plants with Once-Through-Cooling (OTC) shall install Cooling Tower(CT) and achieve specific water consumption upto Maximum of 3.5 m³/MWh within a period of two years from the date of publication of this notification.**
 - (ii) All existing Cooling Tower based plants to reduce specific water consumption up to maximum of 3.5m³/MWh within a period of two years from the date of publication of this notification.**
 - (iii) New plants to be installed after 1st January, 2017 shall have to meet specific water consumption upto Maximum of 2.5m³/MWh and achieve zero waste water discharged.**
- VI. The Tariff Policy, 2016 mandates use of treated sewage water from Sewage Treatment Plants (STP) of Municipality / local bodies by the Thermal Power Plants that are located within 50 km radius. All Thermal Power Plants have been advised to use STP water for cooling purpose, wherever possible.**