

GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
RAJYA SABHA
UNSTARRED QUESTION NO. 2299
TO BE ANSWERED ON: 07.08.2026

ENVIRONMENTAL IMPACT OF DATA CENTRES

2299. SMT. JEBI MATHER HISHAM:

Will the Minister of ELECTRONICS AND INFORMATION TECHNOLOGY be pleased to state:

- (a) number, capacity and location of operational and under-construction data centres, State/UT-wise and public/private sector-wise;
- (b) whether Government assessed environmental impact of data centres, including carbon/water footprint, direct/indirect water consumption and location-specific strain on local resources, if so, details thereof, if not, whether mandated;
- (c) whether Government estimated electricity demand of data centres and percentage share in national consumption, if so, details thereof;
- (d) whether mandatory standards, including power usage effectiveness, are prescribed for data centres, if so, details thereof;
- (e) whether captive power generation has been permitted for data centres, if so, details thereof for private sector; and
- (f) whether specific guidelines have been issued to promote green data centres, if so, details thereof?

ANSWER

MINISTER OF STATE FOR ELECTRONICS AND INFORMATION
TECHNOLOGY
(SHRI JITIN PRASADA)

(a) to (f): In line with Hon'ble Prime Minister Shri Narendra Modi's vision, the Government is democratising the development and usage of technology.

Data centres are an important & integral component of the overall Digital India Infrastructure ecosystem. The Data Centre industry in India has been growing at a steady pace. The rapid growth of AI and high-performance computing is driving increasing demand for data centre capacity in the country.

Data centres are located across the country majorly in areas such as Mumbai, Navi Mumbai, Chennai, Hyderabad, Bengaluru, Delhi NCR and Jamnagar. The installed capacity has grown from 375 MW in 2020 to current capacity of about 1575 MW.

The Data Centre industry is now further expanding in States like Andhra Pradesh, Madhya Pradesh, Chhattisgarh & West Bengal which are coming up as new investment destinations.

The current data centres capacity across the country is less than 1% of the current installed power capacity. As per Central Electricity Authority (CEA), Ministry of Power (MoP), the power demand of data centres is estimated to be about 17 GW up to 2031-32.

Energy Efficiency & Water Conservation

- The Government of India is promoting renewable energy through measures such as Green Energy Open Access Rules, Green Energy Corridor Scheme, Green Term Ahead Market (GTAM), National Green Hydrogen Mission, National Programme on High Efficiency Solar PV Modules, Offshore Wind VGF Scheme and Solar Park Scheme.
- Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Act, has been enacted to strengthen reliable clean power for emerging sectors such as AI and data centres, including future deployment of Small Modular and Micro Nuclear Reactors.
- Bureau of Indian Standards (BIS), through technical committee LITD 31 (Cloud Computing, IT & Data Centres), has published a series of Indian Standards on Power Usage Effectiveness, Carbon Usage Effectiveness (CUE), Cooling Efficiency Ratio (CER), Water Usage Effectiveness (WUE) related to data centres.
- The Bureau of Energy Efficiency (BEE) has notified Energy Conservation Building Code (ECBC 2017) and Energy Conservation & Sustainable Building Code (ECSBC 2024) prescribing energy efficiency and water conservation norms for buildings, including provisions relevant to data centres.
- The water requirement of data centres depends on the type of cooling technologies deployed. Regulation and control of groundwater extraction, including for industrial purposes, is governed by the guidelines issued by the Ministry of Jal Shakti. With the advancement of AI infrastructure, data centre cooling systems are also adopting advanced technologies such as direct-to-chip liquid cooling, adiabatic cooling, immersion cooling and closed-loop liquid cooling systems.

Industry is also deploying high density racks to efficiently support high-performance computing & AI workloads for further reduction of power and water consumption.

These initiatives collectively provide a framework for electricity consumption and energy efficiency, renewable energy use, energy reuse, cooling efficiency, carbon emissions and water usage.
