

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.1904
ANSWERED ON 17.03.2025

PROJECTED POWER SHORTAGES DESPITE ADDITIONS OF NEW COAL PLANT

1904 SHRI BABUBHAI JESANGBHAI DESAI:

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

- (a) whether it is a fact that a recent research indicates that the country may experience increasing evening power shortages by 2027, even with the commissioning of all planned coal and thermal power plants;
- (b) if so, the factors contributing to these anticipated shortfalls, including the projected 15-20 GW deficit during peak evening hours; and
- (c) the strategies Government intends to implement to address these potential shortages and ensure a reliable power supply?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) to (c) : There is adequate availability of power in the country. Present installed generation capacity of the country is 466 GW. Government of India has addressed the critical issue of power deficiency by adding 234 GW of generation capacity since April, 2014 transforming the country from power deficit to power sufficient. Further, addition of 2,01,088 circuit kilometer (ckm) of Transmission lines, 7,78,017 MVA of Transformation capacity and 82,790 MW of Inter-Regional capacity has been done since 2014 with capability of transferring 1,18,740 MW from one corner of the country to another.

Country has successfully met All India Peak Demand of 250 GW in May, 2024. Peak shortage has been reduced from 4.5% in 2013-14 to 0.001% in 2024-25.

As per projections of Central Electricity Authority (CEA), the peak solar and non-solar demand in FY 2027 is expected to be around 289 GW and 265 GW respectively. The country is confident to meet this projected demand with optimal usage of existing and under construction capacities.

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The Government of India has proactively undertaken several measures along with existing initiatives to ensure the adequacy of generation and transmission resources. These, inter-alia, include the following:

1. **Generation Planning:**

(i) Installed generation capacity in 2026-27 is likely to be 553 GW. This includes capacity from conventional sources- Coal, Lignite etc. and renewable sources- Solar, Wind and Hydro etc.

(ii) With a view to ensure generation capacity remains ahead of projected peak demand, all the States, in consultation with CEA, have prepared their “Resource **Adequacy Plans (RAPs)**”, which are dynamic 10 year rolling plans and includes power generation as well as power procurement planning.

(iii) All the States were advised to initiate process for creation of generation capacities; from all generation sources, as per their Resource Adequacy Plans.

(iv) In order to augment the power generation capacity, the Government of India has initiated following capacity addition programme:

(A) Government of India has proposed in November 2023 for setting up of an additional minimum 80,000 MW coal-based capacity by 2031-32. Against this target, coal-based capacity of 9,350 MW has already been commissioned in 2023-24 & 2024-25. 29,900 MW Thermal Capacity is under construction and contracts for 22,640 MW thermal capacity have been awarded in FY 2024-25. Further, 33,580 MW of coal and lignite-based candidate capacity has been identified which is at various stages of planning in the country. A total of 15780 MW coal based capacity is likely to be added by 2026-27.

(B) 13,997.5 MW of Hydro Electric Projects are under construction, out of this, 6200 MW of Hydro-based capacity is likely to be added by 2026-27. Further, 24,225.5 MW of Hydro Electric Projects are under various stage of planning and targeted to be completed by 2031-32.

(C) 7,300 MW of Nuclear Capacity is under construction and targeted to be completed by 2029-30. Out of this, 4900 capacity is likely to be added by 2026-27. 7,000 MW of Nuclear Capacity is under various stages of planning and approval.

(D) 1,53,920 MW Renewable Capacity including 84,310 MW of Solar, 28,280 MW of Wind and 40,890 MW Hybrid power is under construction while 70,210 MW of Renewable Capacity including 46,670 MW of Solar, 600 MW of Wind and 22,940 MW Hybrid Power is at various stages of planning. Out of this, 63,755 MW RE capacity is likely to be added by 2026-27.

(E) In energy storage systems, 13,050 MW/78,300 MWh Pumped Storage Projects are under construction/concurred and 14,970 MW/54,803 MWh Battery Energy Storage System are currently under various stages of construction/bidding. Out of this, 13,888 MW/ 59,457 MWh of energy storage system (3,680 MW/22,080 MWh Pumped Storage Projects and 10,208 MW/ 37,377 MWh of Battery Energy Storage System) is likely to be added by 2026-27.

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2. Transmission Planning: Inter and Intra-State Transmission System has been planned and implementation of the same is taken up in matching time frame of generation capacity addition. As per the National Electricity Plan, about 1,91,474 ckm of transmission lines and 1274 GVA of transformation capacity is planned to be added (at 220 kV and above voltage level) during the ten-year period from 2022-23 to 2031-32

3. Further, Government of India has taken following measures to ensure uninterrupted and reliable power supply in the country:

- (i) All the GENCOs including IPPs and Central generating stations have been advised to generate and maintain full availability on daily basis excluding the period of planned maintenance or forced outage.
- (ii) Hydro based generation is being scheduled in a manner so as to conserve water for meeting demand during peak period.
- (iii) Planned maintenance of generating units is being minimized during period of high demand.
- (iv) New power generation capacity is being monitored closely for timely addition.
- (v) Steady supply of coal to all the thermal power plants is being ensured to prevent fuel shortages.
- (vi) Directions under Section 11 of Electricity Act have been issued to imported coal based plants to operate and generate power to their full capacity.
- (vii) Gas-based power plants of NTPC as well as other generators are being scheduled during high power demand period.
- (viii) Government has facilitated power trading through regulatory framework whereby states with surplus generation can sell power to states which are in deficit through three (3) power exchanges viz. Indian Energy Exchange (IEX), Power Exchange India Ltd (PXIL) and Hindustan Power Exchange Ltd.
- (ix) Electricity market has been reformed by adding the Real Time Market (RTM), Green Day Ahead Market (GDAM), Green Term Ahead Market (GTAM), High Price Day Ahead Market (HPDAM) in Power exchange. Also, there is DEEP portal (Discovery of Efficiency Electricity Price) for e-bidding and e-Reverse for procurement of short-Term power by DISCOMs.
