

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
UNSTARRED QUESTION NO.1643
ANSWERED ON 05.12.2024**

CENTRAL ELECTRICITY REGULATORY COMMISSION

1643. SHRI SELVAGANAPATHI T.M.:

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

- (a) whether it is a fact that the Central Electricity Regulatory Commission has appointed a single-member bench to look into aspects relating to the preparedness of power managers and other stakeholders to meet the challenges arising on account of the sudden surge in power demand and if so, the details thereof;
- (b) whether it is also a fact that the peak power demand is expected to be 232.2 GW and if so, the steps taken/being taken by the Government in this regard;
- (c) whether it is also true that there is an additional requirement of generating resources of about 12.60 GW with a reserve requirement of 3% to meet contingency and if so, the details thereof along with the steps taken by the Government;
- (d) whether it is also true that the said Commission directed the National Load Dispatch Centre, Regional Load Dispatch Centres (RLDCs), and State Load Dispatch Centres (SLDCs) to submit a report on the implementation of steps as per the provisions of the Grid Code; and
- (e) if so, the details thereof?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : Yes. Central Electricity Regulatory Commission (CERC) in Suo Motu Petition No. 9/SM/2024 has appointed a Single Member Bench on 07.10.2024 to look into aspects relating to the preparedness of system operators and other stakeholders to meet the challenges arising on account of the sudden surge in demand for power due to seasonal variations and give recommendations with regard to the remedial measures to be taken for the future.

(b) & (c) : As per the submission made by NLDC/Grid-India to CERC in the Petition No. 9/SM/2024, the peak power demand was forecasted to reach 232.2 GW in October 2024 with the additional generation requirement of about 12.60 GW (with 3% reserve).

The following major steps have been taken by Govt. of India for meeting the increasing electricity demand in the country: -

- (a) Directions under Section 11 of Electricity Act have been issued to imported coal based plants to operate and generate power to their full capacity.**
- (b) Gas based power plants of NTPC as well as gas-based generation procured through NVVN are being scheduled during high power demand period.**
- (c) Steady supply of coal to all the thermal power plants is being ensured to prevent fuel shortages.**
- (d) 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.**
- (e) Hydro based generation is being scheduled in a manner so as to conserve water for meeting demand during peak period.**
- (f) Planned maintenance of generating units is being minimized during period of high demand.**
- (g) To meet the growing electricity demand, new power generation capacity was monitored closely for timely addition.**
- (h) All the States/ plants were instructed to offer any surplus generation into the market for better availability for the deficit States.**

However, All India Maximum Demand in the month of October, 2024 was 219 GW which was met without any shortages.

(d) & (e): Yes. Under directions of CERC, the NLDC and RLDCs have submitted reports highlighting the activities in various time horizons as per detail at Annexure.

ANNEXURE REFERRED IN REPLY TO PARTS (d) & (e) OF UNSTARRED QUESTION NO. 1643 ANSWERED IN THE LOK SABHA ON 05.12.2024

Time Horizon	Activity
<p>Year ahead (2024-25)</p>	<p><u>Resource Adequacy (RA) Study</u> was conducted to assess India's generation resource adequacy amidst uncertainties such as load variations, renewable energy integration, and thermal unit outages.</p> <p><u>Generation Outage Planning</u> for maintaining adequate thermal generation capacity in respect of Annual Resource Adequacy exercise.</p> <p><u>Comprehensive Reserves Estimation</u> of all States for assessment of the reserves needed to maintain grid stability, manage peak demand periods, and accommodate the variability associated with renewable energy sources.</p> <p><u>Network Adequacy (TTC/ATC):</u> Assessment and publication of the Total Transfer Capability (TTC) and Available Transfer Capability (ATC) for inter-regional, Intra Regional and Cross border corridors, 11 months in advance in consultation/inputs with RLDC & NLDC.</p>
<p>Month ahead</p>	<p><u>Resource Adequacy (RA) Study</u> on Month ahead basis is also being carried out using same tool as being done for year ahead considering updated input.</p> <p><u>Transmission Outage Planning</u> for elements under NLDC purview to ensure adequate network capacity and grid security through monthly Operation Coordination Committee.</p> <p><u>Network Adequacy (TTC/ATC):</u> Review of the Total Transfer Capability (TTC) and Available Transfer Capability (ATC) for inter-regional, Intra Regional and Cross border corridors on month-on-month basis, if required.</p>
<p>Week Ahead</p>	<p><u>All India weekly demand forecast</u> is also being carried out by NLDC/RLDCs.</p> <p><u>Operational Planning:</u> Based on weekly demand forecast with anticipated generation and weather patterns, an analysis for upcoming week is being carried out, and operational planning advisories are being issued from NLDC to all RLDCs.</p>

Time Horizon	Activity
	<p><u>Transmission Outage Planning</u> to ensure adequate network capacity and grid security.</p>
Day ahead	<p><u>Exhaustive Resource Adequacy (RA)</u> exercise and report on errors in demand forecast are being done.</p> <p><u>Network Adequacy (TTC/ATC) and Transmission Outage:</u> Finalization of transmission outage in D-1 ensuring N-1 compliance and based upon this TTC/ATC are being revised, if required.</p> <p><u>Reserves Estimation & Procurement:</u> NLDC performs Secondary/Tertiary reserve assessment based on historical Area Control Error (ACE) on day-ahead basis. Market-based procurement of tertiary reserves is being effected on day-ahead basis through Day-ahead Market (DAM) and balance reserve through Real-Time Market (RTM).</p> <p><u>Security Constrain Unit Commitment (SCUC):</u> NLDC ensures adequate generation availability through running of day-ahead security constrained unit commitment (SCUC) module as per the CERC approved procedure.</p>
Intra day	<p><u>Intraday Resources Adequacy</u> is being monitored for operational planning in real time.</p> <p><u>Network Adequacy (TTC/ATC) and Transmission Outage:</u> In case of any emergency outage or tripping of element, network adequacy is being reassessed and TTC/ATC are being revised, if required to ensure the same.</p> <p><u>Reserves Procurement:</u> Intra-day tertiary reserve (balance required, if any) procurement is being done through Real-Time Market (RTM).</p> <p><u>Security Constrained Economic Despatch (SCED)</u> for National level generation optimization is being carried out for economic desptach to ensure minimum generation cost adhering to all system constraints.</p> <p><u>Real-time contingency analysis</u> through SCADA Energy Management System (EMS) is done.</p>
