

GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.2549
ANSWERED ON 10.08.2026

PEAK POWER DEMAND AND SUPPLY

2549 SHRI PRAMOD TIWARI:

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

- (a) whether peak power demand is breaking records in current summer months with reports of power cuts continuing to surface;
- (b) if so, the details thereof including whether it surpassed what power grid projected;
- (c) percentage of peak power demand being met by thermal power plant;
- (d) whether meeting peak demand with fossil fuels is a long-term hassle;
- (e) if so, the steps taken to meet non-solar- hour consumption; and
- (f) the efforts being made to address systemic vulnerabilities related to heavy transmission losses, legacy infrastructure and under investment in grid modernization?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) & (b) : There is adequate availability of power in the country. Present installed generation capacity of the country is 548.86 GW (as on June, 2026). The country has addressed the critical issue of power deficiency by adding 324.7 GW of generation capacity since April, 2014 transforming the country from power deficit to power sufficient.

With development of El Nino conditions this year, the requirement of electricity has risen significantly. During April to June 2026, overall rise in electricity peak demand was around 12 % as compared to corresponding period last year. As on date, the all-time high All-India peak demand of 270.8 GW was successfully met in the month of May 2026. The month-wise 'Power Supply Position' of the country from January, 2026 to June, 2026 in terms of Energy is given at **Annexure-I**. The 'energy supplied' has been commensurate with the 'energy requirement' with only a marginal gap which is generally on account of constraints in the State transmission / distribution network.

At national level, Electric Power Survey (EPS) of the country is conducted every five years for estimating the electricity demand of the country, as obligated under Section 73(a) of the Electricity Act-2003. As per midterm review of 20th Electric Power Survey (EPS), the projected peak demand for FY 2026-27 at national level is 289 GW.

(c) & (d): The source-wise generation for the month of April, 2026 to June, 2026 including percentage of generation met by thermal generation is given at **Annexure-II**. The share of thermal generation is varied from 68.3% to 72.7%.

At present, there is no particular challenge in managing peak demand with fossil fuel resources supplemented by renewable resources. In the medium to long run, firming up renewable resources through integration of storage need to be scaled up at exponential rate.

(e) & (f): The Government has taken following measures to modernize the power grid, reduce transmission losses and to meet the growing power demand of the country including during non-solar hours:

I. Grid Modernization:

Advanced grid support technologies such as Static Synchronous Compensators (STATCOMs), Synchronous Condensers (SynCONs), and other Flexible AC Transmission System (FACTS) devices are being deployed to enhance voltage stability, improve system strength, and support reliable integration of renewable energy. Further, several measures have been taken to facilitate renewable energy integration, including establishment of Regional Energy Management Centres (REMCs) for renewable forecasting and real-time grid management, implementation of Automatic Generation Control (AGC) and Ancillary Services (SRAS/TRAS) for frequency regulation and balancing etc.

II. Transmission losses:

- (i) Network expansion and augmentation of existing system,
- (ii) Adoption of higher voltage system,
- (iii) Reactive power management and better operational practices to improve voltage profile and reduce losses,
- (iv) Modernizing transmission system.

III. Reliability of Power Supply:

1. Generation and Storage Planning:

- (i) As per National Electricity Plan (Generation), installed generation capacity in 2031-32 is likely to be 874 GW. With a view to ensure generation capacity remains ahead of projected 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.
- (ii) All the States were advised to initiate process for creating/ contracting generation capacities; from all generation sources, as per their Resource Adequacy Plans.
- (iii) In order to augment the power generation capacity, the Government of India has initiated following capacity addition programme:
 - a. Thermal Capacity Addition: The projected thermal (coal and lignite) capacity requirement by the year 2035–36 is estimated at approximately 3,15,000 MW as against the 2,11,855 MW installed capacity as on 31.03.2023. To meet this requirement, Ministry of Power has envisaged to set up an additional minimum 1,05,000 MW coal and lignite based thermal capacity.

Accordingly, Thermal capacities of around 21,080 MW have been commissioned since April 2023 till 30.06.2026. In addition, 47,545 MW of thermal capacity (including 4,845 MW of stressed thermal power projects) is currently under construction. The contracts of 16,000 MW have been awarded and are due for construction.

b. Central Electricity Authority (CEA) has projected hydro power capacity addition of about 16,448 MW during the period 2026–27 to 2031–32. Of this, 400 MW has been commissioned as on 30.06.2026 and 12,973 MW are presently under construction.

c. Nuclear Capacity Addition: 8,000 MW of Nuclear Capacity is under construction and targeted to be completed by 2031-32. 5,600 MW of Nuclear Capacity is under various stages of planning and approval.

d. Renewables Capacity Addition: 1,47,720 MW Renewable Capacity including 119,580 MW of Solar (including Hybrid-Solar) and 27,720 MW of Wind (including Hybrid-wind) is under construction while 47,830 MW of Renewable Capacity including 44,440 MW of Solar is at various stages of planning and targeted to be completed by 2029-30.

e. Addition of Energy Storage Systems: As on 30.06.2026, 15,870 MW/95,220 MWh Pumped Storage Projects (PSPs) are under construction. Further, a total of 6,580 MW/39,480 MWh capacity of Pumped Storage Projects (PSPs) are concurred and yet to be taken up for construction. As on 30.06.2026, 15,754 MW / 42,530 MWh Battery Energy Storage System (BESS) capacity are under construction, 11,747 MW / 38,425 MWh has been awarded and 19,192 MW / 67,574 MWh BESS capacity are under tendering stage.

2. Promotion of Renewable Energy (RE) Generation:

- (i) 100% Inter State Transmission System (ISTS) charges have been waived for inter-state sale of solar and wind power for projects to be commissioned by 30th June 2025 (with waiver tapering off 25% annually till June 2028), for co-located BESS projects commissioned by June 2028, for Hydro PSP projects where construction work awarded by June 2028, for Green Hydrogen Projects commissioned till December 2030 and for offshore wind projects commissioned till December 2032.
- (ii) Standard Bidding Guidelines for tariff based competitive bidding process for procurement of Power from Grid Connected Solar, Wind, Wind-Solar Hybrid and Firm & Dispatchable RE (FDRE) projects have been issued.
- (iii) Renewable Energy Implementing Agencies (REIAs) are regularly inviting bids for procurement of RE power.
- (iv) Foreign Direct Investment (FDI) has been permitted up to 100 percent under the automatic route.
- (v) To augment transmission infrastructure needed for steep RE trajectory, transmission plan has been prepared till 2032.
- (vi) Laying of new intrastate transmission lines and creating new sub-station capacity has been supported under the Green Energy Corridor Scheme for evacuation of renewable power.
- (vii) Scheme for setting up of Solar Parks and Ultra Mega Solar Power projects is being implemented to provide land and transmission to RE developers for installation of RE projects at large scale.
- (viii) Schemes such as Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM), PM Surya Ghar Muft Bijli Yojana, National Programme on High Efficiency Solar PV Modules, New Solar Power Scheme (for Tribal and PVTG Habitations/Villages) under Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN) and Dharti Aabha Janjatiya Gram Utkarsh Abhiyan (DA JGUA), National Green Hydrogen Mission, Viability Gap Funding (VGF) Scheme for Offshore Wind Energy Projects have been launched.
- (ix) To encourage RE consumption, Renewable Purchase Obligation (RPO) followed by Renewable Consumption Obligation (RCO) trajectory has been notified till 2029-30. The RCO which is applicable to all designated consumers under the Energy Conservation Act, 2001 will attract penalties on non-compliance.
- (x) “Strategy for Establishment of Offshore Wind Energy Projects” has been issued.
- (xi) Green Term Ahead Market (GTAM) has been launched to facilitate sale of Renewable Energy Power through exchanges.

- (xii) Production Linked Incentive (PLI) scheme has been launched to achieve the objective of localization of supply chain for solar PV Modules.

3. Transmission:

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 (Transmission), about 1,91,474 ckm of transmission lines and 1,274 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.

In addition to the above, the Ministry of Power has issued guidelines dated 14.06.2024, 21.03.2025 and 15.12.2025 regarding the payment of compensation for Right of Way (RoW) for transmission lines, wherein the land rate has been linked to the prevailing market rate. These guidelines address the key challenges of RoW arising from landowners demanding higher compensation than the rates determined by the State Government

4. Distribution:

Government of India has supplemented the efforts of the States earlier through schemes like Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS), Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) and currently under Revamped Distribution Sector Scheme (RDSS), to help them achieve the objective of providing quality and reliable supply of power.

Government of India launched RDSS in July 2021 with the objective of improving the quality and reliability of power supply to consumers through a financially sustainable and operationally efficient distribution Sector. The scheme has an outlay of Rs. 3,03,758 Cr. and estimated Gross Budgetary Support (GBS) from Central Government of Rs. 97,631 Cr. Under the scheme, financial assistance is being provided to the Distribution Utilities (excluding Private Sector Utilities) for loss reduction infrastructure works and smart metering works. Projects worth Rs. 1.53 lakh crore for loss reduction infrastructure and Rs. 1.31 lakh crore for smart metering works have been sanctioned under the scheme which would help improve the reliability and quality of power supply in the country.

In addition to above, to support the power distribution utilities to improve their Aggregate Technical and Commercial (AT&C) losses some of the key initiatives taken, in addition to RDSS, are as under:

- (i) Additional Borrowing consent of 0.5% of Gross State Domestic Product (GSDP) to State Governments, which is conditional on them undertaking specific reforms in the power sector.
- (ii) Additional Prudential Norms for sanctioning of loans to State owned power utilities contingent on the performance of power distribution utilities against prescribed conditions.
- (iii) Rules for implementation of Fuel and Power Purchase Cost Adjustment (FPPCA) and cost reflective tariff so as to ensure that all prudent cost for supply of electricity is passed through.
- (iv) Rules and Standard Operating Procedure issued for proper subsidy accounting and their timely payment.

With the concerted efforts of Central and State Government, the average hours of supply in rural areas have increased from 12.5 hours in FY 14 to 22.6 hours in FY 26 and in urban areas the same has increased from 22.1 hours in FY 14 to 23.4 hours in FY 26.

ANNEXURE-I**ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 2549 ANSWERED IN THE RAJYA SABHA ON 10.08.2026***********

The month-wise details of 'Power Supply Position' of the country from January, 2026 to June, 2026 in terms of Energy:

Month	Energy Requirement	Energy Supplied	Energy not Supplied	
	(MU)	(MU)	(MU)	(%)
January, 2026	1,41,522	1,41,455	67	0.0
February, 2026	1,31,911	1,31,883	28	0.0
March, 2026	1,48,147	1,48,093	54	0.0
April, 2026	1,52,956	1,52,743	213	0.1
May, 2026	1,63,861	1,63,561	300	0.2
June, 2026*	1,66,300	1,66,131	169	0.1

* June, 2026 month data is provisional

ANNEXURE-II

ANNEXURE REFERRED IN REPLY TO PARTS (c) & (d) OF UNSTARRED QUESTION NO. 2549 ANSWERED IN THE RAJYA SABHA ON 10.08.2026

The source-wise generation details for the month of April, 2026 to June, 2026:

FUEL		April, 2026		May'26		June'26	
		Generation	% of Total Gen	Generation	% of Total Gen	Generation	% of Total Gen
THERMAL	COAL	1,16,047.22	69.75%	1,19,051.43	67.05%	1,17,790.23	65.76%
	DIESEL	42.78	0.03%	42.81	0.02%	37.85	0.02%
	LIGNITE	2,164.68	1.30%	2,832.07	1.59%	2,412.05	1.35%
	NATURAL GAS	2,722.92	1.64%	2,181.21	1.23%	2,253.65	1.26%
THERMAL Total		1,20,977.60	72.71%	1,24,107.52	69.90%	1,22,493.78	68.39%
NUCLEAR		5,148.30	3.09%	5,714.39	3.22%	5,564.10	3.11%
TOTAL [Conventional]		1,26,125.90	75.81%	1,29,821.91	73.11%	1,28,057.88	71.49%
RES (excluding Large Hydro)	WIND	6,848.65	4.12%	11,458.18	6.45%	15,256.01	8.52%
	SOLAR	20,899.61	12.56%	21,583.99	12.16%	20,307.54	11.34%
	BIOMASS	356.41	0.21%	383.27	0.22%	358.56	0.20%
	BAGASSE	403.71	0.24%	256.39	0.14%	167.80	0.09%
	SMALL HYDRO	588.49	0.35%	620.92	0.35%	636.87	0.36%
	OTHERS	281.04	0.17%	262.42	0.15%	264.61	0.15%
Large Hydro		10,764.25	6.47%	12,752.34	7.18%	13,362.39	7.46%
TOTAL [Renewable]		40,142.16	24.13%	47,317.51	26.65%	50,353.78	28.11%
Import from Bhutan		111.17	0.07%	421.82	0.24%	705.35	0.39%
GRAND TOTAL		1,66,379.23	100.00%	1,77,561.24	100.00%	1,79,117.01	100.00%
