GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.957
ANSWERED ON 28.07.2025

CURRENT CHALLENGES IN POWER SUPPLY AND GRID STABILITY

957 SHRI BABUBHAI JESANGBHAI DESAI:

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

(a) whether Government is aware of the recent instances of power shortages and load shedding in several States particularly in the State of Gujarat during peak summer months;

(b) the steps being taken to ensure uninterrupted power supply amid rising demand due to extreme weather events;

(c) whether Government is planning any capacity enhancement or reforms in power generation and transmission infrastructure in the State of Gujarat; and

(d) the status of integration of renewable energy with the national grid to ensure stable and sustainable power supply?

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a) : There is adequate availability of power in the country. Present installed generation capacity of the country is 484.819 GW. Government of India has addressed the critical issue of power deficiency by adding 260.784 GW of fresh generation capacity since April, 2014 transforming the country from power deficit to power sufficient.

The State-wise detail of Power Supply Position in the country, including the State of Gujarat, in terms of Energy during the summer months of current FY 2025-26 i.e., April, 2025 to June, 2025 are given at **Annexure.** These details indicate that there is a marginal gap between the Energy Requirement and Energy supplied across the country during this period. With respect to the State of Gujarat, the energy supplied is commensurate with the energy requirement during the said period, with NIL gap as reported by the State utilities.

However, due to grid disturbance in South Gujarat area on 12.03.2025, power supply was affected for some period.

(b): Electricity being a concurrent subject, the supply and distribution of electricity to the various categories of consumers/areas/districts in a State/UT is within the purview of the respective State Government/Power Utility. Making arrangement of appropriate quantum of power from various sources for providing adequate power to all consumers/areas/districts of the State, is the responsibility of the concerned distribution licensees.

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The following steps have been taken to ensure uninterrupted power supply amid rising demand:-

(i) Hydro based generation is being scheduled in a manner so as to conserve water for meeting demand during peak period.

(ii) Planned maintenance of generating units is minimized during period of high demand.

(iii) Steady supply of coal to all the thermal power plants is ensured to prevent fuel shortages

(iv) Gas-based power plants of NTPC as well as other generators are scheduled during high power demand period.

(v) 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.

(vi) A robust national grid has been established to facilitate the transfer of power from power surplus regions to power deficit regions. The capacity of National Grid is being expanded on a continuous basis commensurate with the growth in electricity generation and electricity demand.

(vii) Proactive monitoring of generation projects under construction to facilitate commensurate capacity addition.

(viii) The 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 (HP-DAM) in Power Exchanges. Also, DEEP Portal (Discovery of Efficient Electricity Price) for e-Bidding and e-Reverse for procurement of short-term power by DISCOMs was introduced.

(c) : In order to augment the power generation capacity and transmission system (220 kV and above voltage level), following initiatives have been undertaken in Gujarat:

(i) Ukai TPP (1x800 MW) is likely to be commissioned by FY 2029-30.

(ii) Around 328 GVA of additional transformation capacity comprising of 192 GVA under Inter-State Transmission and 136 GVA under Intra-State Transmission System is targeted to be completed by the year 2034-35.

(iii) Around 44,000 ckm additional transmission line comprising of 20,000 ckm under Inter-State Transmission System (ISTS) and 24,000 ckm under Intra-State Transmission System is planned to be completed by 2034-35.

(iv) 3 Nos. HVDC lines with total capacity of 14.5 GW are planned to be added under Inter-State Transmission System.

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(d): The Government has taken various measures for integration of RE sources into the National Grid to ensure reliability and stability: -

(i) Development of intra-state transmission network is being planned to keep pace with RE capacity addition. Strong inter connection of ISTS RE schemes with the intra-state network to ensure better reliability in terms of anchoring voltage stability, angular stability, losses reduction etc. is being done.

(ii) National Electricity Plan (Transmission) has been prepared for integration of over 500 GW RE capacity by the year 2030. The transmission schemes associated with RE generation projects are being taken up for implementation in a phased manner commensurate with the RE Capacity addition.

(iii) Central Financial Assistance (CFA) is being provided to the States for setting up Transmission infrastructure for RE integration within their State under the Green Energy Corridor Scheme.

(iv) Setting up of Regional Energy Management Centers (REMCs) for better forecasting of renewable power and to assist grid operators to manage variability and intermittency of renewable power.

(v) Innovative products like Solar-Wind Hybrid Projects, RE projects with energy storage systems and supply of RE power balanced with power from non-RE sources launched to reduce intermittency.

(vi) Implementation of Green Term Ahead Market (GTAM) and Green Day Ahead Market (GDAM) for sale of renewable energy.

(vii) Flexibilization of thermal generation is mandated to address the variability of RE generation.

(viii) CEA (Technical Standards for Connectivity to the Grid) Regulations lay down the minimum technical requirements for the RE generating plants to ensure the safe, secure and reliable operation of the grid. The compliances to the said regulations by RE plants are verified jointly by Central Transmission Utility (CTUIL) and Grid-India/ Regional Load Despatch Centres (RLDCs) before granting connectivity/interconnection to the national grid. Robust compliances verification is done before interconnection of any new plant to the grid.

(ix) Indian Electricity Grid Code mandates that RE plants participate in the primary and secondary frequency control in case of contingencies. Hybrid RE power plants, Energy Storage Systems such as BESS (Battery Energy Storage System) and PSP (Pump Storage Project) are being promoted for mitigating variability in RE generation and provide adequate frequency support to the grid.

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ANNEXURE

ANNEXURE REFERRED IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 957 ANSWERED IN THE RAJYA SABHA ON 28.07.2025

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The State-wise detail of Power Supply Position in the country, including the State of Gujarat, in terms of Energy in April-2025

State /System /Region	Energy			
	April,2025			
	Energy Requirement	Energy Supplied	Energy not Supplied	
	(MU)	(MU)	(MU)	(%)
Chandigarh	150	150	0	0.0
Delhi	3,181	3,180	1	0.0
Haryana	5,224	5,210	14	0.3
Himachal Pradesh	1,022	1,019	3	0.3
UT of J&K and Ladakh	1,625	1,624	1	0.1
Punjab	5,247	5,227	20	0.4
Rajasthan	8,842	8,842	0	0.0
Uttar Pradesh	13,075	13,072	3	0.0
Uttarakhand	1,325	1,317	8	0.6
Northern Region (##)	**39,821**	**39,772**	**49**	**0.1**
Chhattisgarh	4,298	4,298	0	0.0
Gujarat	**14,834**	**14,834**	**0**	**0.0**
Madhya Pradesh	9,199	9,199	0	0.0
Maharashtra	19,769	19,769	0	0.0
Dadra & Nagar Haveli and Daman & Diu	963	963	0	0.0
Goa	534	534	0	0.0
Western Region (##)	**50,786**	**50,786**	**0**	**0.0**
Andhra Pradesh	7,134	7,134	0	0.0
Telangana	7,354	7,354	0	0.0
Karnataka	8,780	8,780	0	0.0
Kerala	2,848	2,848	0	0.0
Tamil Nadu	11,902	11,902	0	0.0
Puducherry	321	320	1	0.3
Lakshadweep (#)	7	7	0	0.0
Southern Region (##)	**38,342**	**38,341**	**1**	**0.0**
Bihar	3,644	3,644	0	0.0
DVC	2,111	2,111	0	0.0
Jharkhand	1,255	1,255	0	0.0
Odisha	3,773	3,773	0	0.0
West Bengal	6,630	6,630	0	0.0
Sikkim	46	46	0	0.0
Andaman- Nicobar (#)	37	36	1	2.7
Eastern Region (##)	**17,464**	**17,464**	**0**	**0.0**
Arunachal Pradesh	86	86	0	0.0
Assam	1,012	1,012	0	0.0
Manipur	88	86	2	2.3
Meghalaya	164	164	0	0.0
Mizoram	60	60	0	0.0
Nagaland	76	76	0	0.0
Tripura (*)	166	166	0	0.0
North-Eastern Region (##)	**1,653**	**1,651**	**2**	**0.1**
All India	**1,48,066**	**1,48,013**	**53**	**0.0**

(#) Lakshadweep and Andaman & Nicobar Islands are stand- alone systems, power supply position of these, does not form part of regional requirement and supply.

(*) Excludes the supply to Bangladesh.

Note:

1. Power Supply Position Report has been compiled based on the data furnished by State Utilities/ Electricity Departments. The MU & MW figures has been rounded off to nearest unit place.

2. (##) The Regional figures include data of other miscellaneous entities drawing power directly from ISTS.

The State-wise detail of Power Supply Position in the country, including the State of Gujarat, in terms of Energy in May-2025

State /System /Region	Energy			
	May,2025			
	Energy Requirement	Energy Supplied	Energy not Supplied	
	(MU)	(MU)	(MU)	(%)
Chandigarh	191	191	0	0.0
Delhi	3,880	3,878	2	0.1
Haryana	6,229	6,215	14	0.2
Himachal Pradesh	1,161	1,156	5	0.4
UT of J&K and Ladakh	1,557	1,556	1	0.1
Punjab	6,540	6,535	5	0.1
Rajasthan	9,716	9,716	0	0.0
Uttar Pradesh	16,117	16,117	0	0.0
Uttarakhand	1,531	1,530	1	0.1
Northern Region (##)	**47,061**	**47,034**	**27**	**0.1**
Chhattisgarh	3,624	3,624	0	0.0
Gujarat	**13,828**	**13,828**	**0**	**0.0**
Madhya Pradesh	8,525	8,523	2	0.0
Maharashtra	17,029	17,027	2	0.0
Dadra & Nagar Haveli and Daman & Diu	948	948	0	0.0
Goa	502	502	0	0.0
Western Region (##)	**45,515**	**45,512**	**3**	**0.0**
Andhra Pradesh	6,671	6,671	0	0.0
Telangana	6,042	6,042	0	0.0
Karnataka	7,343	7,343	0	0.0
Kerala	2,758	2,758	0	0.0
Tamil Nadu	11,383	11,383	0	0.0
Puducherry	316	316	0	0.0
Lakshadweep (#)	7	7	0	0.0
Southern Region (##)	**34,516**	**34,516**	**0**	**0.0**
Bihar	4,415	4,412	3	0.1
DVC	2,178	2,177	1	0.0
Jharkhand	1,350	1,349	1	0.1
Odisha	4,114	4,112	2	0.0
West Bengal	6,940	6,922	18	0.3
Sikkim	41	41	0	0.0
Andaman- Nicobar (#)	37	36	1	2.7
Eastern Region (##)	**19,046**	**19,020**	**26**	**0.1**
Arunachal Pradesh	97	97	0	0.0
Assam	1,136	1,136	0	0.0
Manipur	97	97	0	0.0
Meghalaya	168	168	0	0.0
Mizoram	60	60	0	0.0
Nagaland	82	82	0	0.0
Tripura (*)	169	169	0	0.0
North-Eastern Region (##)	**1,810**	**1,810**	**0**	**0.0**
All India	**1,47,948**	**1,47,892**	**56**	**0.0**

(#) Lakshadweep and Andaman & Nicobar Islands are stand- alone systems, power supply position of these, does not form part of regional requirement and supply.

(*) Excludes the supply to Bangladesh.

Note:

1. Power Supply Position Report has been compiled based on the data furnished by State Utilities/ Electricity Departments. The MU & MW figures has been rounded off to nearest unit place.

2. (##) The Regional figures include data of other miscellaneous entities drawing power directly from ISTS.

The State-wise detail of Power Supply Position in the country, including the State of Gujarat, in terms of Energy in June-2025

State /System /Region	Energy			
	June,2025			
	Energy Requirement	Energy Supplied	Energy not Supplied	
	(MU)	(MU)	(MU)	(%)
Chandigarh	214	214	0	0.0
Delhi	4,242	4,241	1	0.0
Haryana	7,364	7,331	33	0.4
Himachal Pradesh	1,204	1,201	3	0.2
UT of J&K and Ladakh	1,671	1,667	4	0.2
Punjab	9,097	9,097	0	0.0
Rajasthan	9,479	9,479	0	0.0
Uttar Pradesh	16,837	16,833	4	0.0
Uttarakhand	1,571	1,570	1	0.1
Northern Region (##)	**51,816**	**51,770**	**46**	**0.1**
Chhattisgarh	3,552	3,550	2	0.1
Gujarat	**13,091**	**13,091**	**0**	**0.0**
Madhya Pradesh	7,444	7,444	0	0.0
Maharashtra	15,597	15,597	0	0.0
Dadra & Nagar Haveli and Daman & Diu	934	934	0	0.0
Goa	450	450	0	0.0
Western Region (##)	**42,170**	**42,168**	**2**	**0.0**
Andhra Pradesh	6,667	6,667	0	0.0
Telangana	6,295	6,295	0	0.0
Karnataka	6,823	6,823	0	0.0
Kerala	2,409	2,409	0	0.0
Tamil Nadu	11,532	11,532	0	0.0
Puducherry	311	311	0	0.0
Lakshadweep (#)	6	6	0	0.0
Southern Region (##)	**34,041**	**34,041**	**0**	**0.0**
Bihar	4,657	4,657	0	0.0
DVC	2,079	2,079	0	0.0
Jharkhand	1,326	1,326	0	0.0
Odisha	3,942	3,942	0	0.0
West Bengal	7,075	7,075	0	0.0
Sikkim	42	42	0	0.0
Andaman- Nicobar (#)	34	33	1	3.0
Eastern Region (##)	**19,127**	**19,127**	**0**	**0.0**
Arunachal Pradesh	99	99	0	0.0
Assam	1,358	1,358	0	0.0
Manipur	89	88	1	1.1
Meghalaya	162	162	0	0.0
Mizoram	57	57	0	0.0
Nagaland	86	86	0	0.0
Tripura (*)	177	177	0	0.0
North-Eastern Region (##)	**2,029**	**2,029**	**0**	**0.0**
All India	**1,49,183**	**1,49,135**	**48**	**0.0**

(#) Lakshadweep and Andaman & Nicobar Islands are stand- alone systems, power supply position of these, does not form part of regional requirement and supply.

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