

RAJYA SABHA
UNSTARRED QUESTION NO.150
ANSWERED ON 03.02.2025

POWER DEFICIT SITUATION IN THE COUNTRY

150 SHRI PARIMAL NATHWANI:

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

- (a) the details of power deficit situation in the country during the last five years, State-wise;
- (b) the details of the key issues leading to power deficit situation in the country; and
- (c) the details of steps taken or to be taken by Government to reduce/remove power deficit in the country?

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 4,62,065 MW. Government of India has addressed the critical issue of power deficiency by adding 2,30,050 MW of generation capacity since April, 2014 transforming the country from power deficit to power sufficient. The details of power supply position in the country during the last five years and current year (upto December, 2024) in terms of Energy are given at **Annexure-I**. The State/ UT-wise details of power supply position during the last five years and current year (upto December, 2024) are given at **Annexure-II**.

Energy Supplied has been by and large commensurate to the Energy Requirement. Marginal gap between Energy Requirement and Energy Supplied is generally on account of constraints in the State transmission/distribution network.

(c): Following steps have been taken by the Government to reduce the power deficit and to meet the increasing power demand in the country:

1. Generation Planning:

- (i) Installed generation capacity in 2031-32 is likely to be 900 GW. This includes capacity from conventional sources- Coal, Lignite etc., renewable sources- Solar, Wind, Hydro, Pump Storage project (PSP) and Battery Energy Storage System (BESS).
- (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 include power generation as well as power procurement planning.

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(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) Ministry of Power, in consultation with States, has envisaged a plan to add thermal capacity of a minimum 80,000 MW by 2031-32. Against this target, 28,020 MW Thermal Capacity is already under construction and contracts for 19,200 MW thermal capacity have been awarded in FY 2024-25. Further, 36,320 MW of coal and lignite based candidate capacity has been identified which is at various stages of planning in the country.

(b) 13,997.5 MW of Hydro Electric Projects and 8,000 MW Pumped Storage Projects (PSP) are under construction. 24,225.5 MW of hydro electric projects and 50,760 MW of PSP 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. 7,000 MW is under various stages of planning and approval.

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. **Distribution System Planning:**

(i) An expenditure of approx Rs. 1.85 lakh crore was incurred for strengthening the distribution system of the country through the schemes of Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS) and Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA). The Government of India has now launched "Revamped Distribution Sector Scheme (RDSS) on 20th 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 crore and a Gross Budgetary Support of Rs. 97,631 crore from Government of India over a period of five years from 2021-22 to FY 2025-26. Under RDSS, projects worth Rs. 2.78 lakh crore for distribution infrastructure works and smart metering works have been sanctioned at National level.

(ii) Realizing the importance of the requirement of Distribution infrastructure for meeting the projected demand up to 2030, Distribution Perspective Plan upto 2029-30 has been prepared by CEA and has been shared with the States/ UTs.

4. **Promotion of Renewable Energy Generation:**

(i) Ministry of New & Renewable Energy (MNRE) has issued Bidding Trajectory for issuance of RE power procurement bids of 50 GW/annum by Renewable Energy Implementing Agencies from FY 2023-24 to FY 2027-28.

(ii) Foreign Direct Investment (FDI) has been permitted up to 100 percent under the automatic route.

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- (iii) 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, for Green Hydrogen Projects till December 2030 and for offshore wind projects till December 2032.
- (iv) To boost 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 for non-compliance.
- (v) 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.
- (vi) 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, National Green Hydrogen Mission, Viability Gap Funding (VGF) Scheme for Offshore Wind Energy Projects have been launched.
- (vii) Scheme for setting up of Ultra Mega Renewable Energy Parks is being implemented to provide land and transmission to RE developers for installation of RE projects at large scale.
- (viii) Laying of new transmission lines and creating new sub-station capacity has been funded under the Green Energy Corridor Scheme for evacuation of renewable power.
- (ix) "Strategy for Establishments of Offshore Wind Energy Projects" has been issued indicating a bidding trajectory of 37 GW by 2030 and various business models for project development.
- (x) The Offshore Wind Energy Lease Rules, 2023 have been notified vide Ministry of External Affairs notification dated 19th December 2023, to regulate the grant of lease of offshore areas for development of offshore wind energy projects.
- (xi) To augment transmission infrastructure needed for steep RE trajectory, transmission plan has been prepared till 2030.
- (xii) Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022, has been notified on 06th June 2022 with objective of ensuring access to affordable, reliable, and sustainable green energy for all. Green Energy Open Access is allowed to any consumer with contract demand of 100 kW or above through single or multiple single connection aggregating Hundred kW or more located in same electricity division of a distribution licensee.
- (xiii) Green Term Ahead Market (GTAM) has been launched to facilitate sale of Renewable Energy Power through exchanges.
- (xiv) To achieve the objective of increased domestic production of Solar PV Modules, the Govt. of India is implementing the Production Linked Incentive (PLI) scheme for High Efficiency Solar PV Modules. This will enable manufacturing capacity of Giga Watt (GW) scale in High Efficiency Solar PV Module

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 150 ANSWERED IN THE RAJYA SABHA ON 03.02.2025

Details of power supply position in the country during the last five years and current year (upto December, 2024) in terms of Energy:

| Year | Energy | | | |
|--------------------------------------|--------------------|-----------------|---------------------|-----|
| | Energy Requirement | Energy Supplied | Energy Not Supplied | |
| | (MU) | (MU) | (MU) | (%) |
| 2019-20 | 12,91,010 | 12,84,444 | 6,566 | 0.5 |
| 2020-21 | 12,75,534 | 12,70,663 | 4,871 | 0.4 |
| 2021-22 | 13,79,812 | 13,74,024 | 5,787 | 0.4 |
| 2022-23 | 15,13,497 | 15,05,914 | 7,583 | 0.5 |
| 2023-24 | 16,26,132 | 16,22,020 | 4,112 | 0.3 |
| 2024-25 (upto December, 2024) | 12,80,037 | 12,78,565 | 1,472 | 0.1 |

ANNEXURE REFERRED IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 150 ANSWERED IN THE RAJYA SABHA ON 03.02.2025

The State/ UT-wise details of power supply position during the last five years and current year (upto December, 2024)

| State/UT | April, 2019 -March, 2020 | | | | April, 2020 - March, 2021 | | | |
|----------------------|--------------------------|-----------------|---------------------|------|---------------------------|-----------------|---------------------|------|
| | Energy Requirement | Energy Supplied | Energy not Supplied | | Energy Requirement | Energy Supplied | Energy not Supplied | |
| | (MU) | (MU) | (MU) | (%) | (MU) | (MU) | (MU) | (%) |
| Chandigarh | 1,732 | 1,732 | 0 | 0 | 1,523 | 1,523 | 0 | 0 |
| Delhi | 33,086 | 33,077 | 9 | 0 | 29,560 | 29,555 | 4 | 0 |
| Haryana | 54,505 | 54,492 | 13 | 0 | 53,161 | 53,108 | 53 | 0.1 |
| Himachal Pradesh | 10,424 | 10,353 | 71 | 0.7 | 10,186 | 10,130 | 56 | 0.5 |
| Jammu & Kashmir | 20,025 | 16,259 | 3,767 | 18.8 | 19,773 | 17,222 | 2,551 | 12.9 |
| Punjab | 56,776 | 56,770 | 6 | 0 | 58,445 | 58,377 | 67 | 0.1 |
| Rajasthan | 81,281 | 81,222 | 58 | 0.1 | 85,311 | 85,205 | 106 | 0.1 |
| Uttar Pradesh | 1,22,549 | 1,21,004 | 1,545 | 1.3 | 1,24,367 | 1,23,383 | 984 | 0.8 |
| Uttarakhand | 14,472 | 14,376 | 96 | 0.7 | 13,827 | 13,818 | 8 | 0.1 |
| Chhattisgarh | 30,111 | 30,107 | 4 | 0 | 30,472 | 30,449 | 22 | 0.1 |
| Gujarat | 1,13,940 | 1,13,939 | 1 | 0 | 1,11,622 | 1,11,622 | 0 | 0 |
| Madhya Pradesh | 76,172 | 76,172 | 0 | 0 | 83,437 | 83,437 | 0 | 0 |
| Maharashtra | 1,55,167 | 1,55,166 | 0 | 0 | 1,50,679 | 1,50,663 | 16 | 0 |
| Daman & Diu | 2,574 | 2,574 | 0 | 0 | 2,223 | 2,223 | 0 | 0 |
| Dadra & Nagar Haveli | 6,528 | 6,528 | 0 | 0 | 5,497 | 5,497 | 0 | 0 |
| Goa | 4,350 | 4,350 | 0 | 0 | 4,083 | 4,083 | 0 | 0 |
| Andhra Pradesh | 65,452 | 65,414 | 38 | 0.1 | 62,080 | 62,076 | 4 | 0 |
| Telangana | 68,306 | 68,303 | 3 | 0 | 66,998 | 66,994 | 4 | 0 |
| Karnataka | 72,799 | 72,796 | 3 | 0 | 68,851 | 68,831 | 19 | 0 |
| Kerala | 26,315 | 26,265 | 50 | 0.2 | 25,118 | 25,102 | 16 | 0.1 |
| Tamil Nadu | 1,08,816 | 1,08,812 | 4 | 0 | 1,01,194 | 1,01,189 | 5 | 0 |
| Puducherry | 2,847 | 2,846 | 1 | 0 | 2,644 | 2,644 | 0 | 0 |
| Lakshadweep | 46 | 46 | 0 | 0 | 56 | 56 | 0 | 0 |
| Bihar | 31,627 | 31,533 | 94 | 0.3 | 34,171 | 34,018 | 153 | 0.4 |
| DVC | 22,429 | 22,427 | 2 | 0 | 21,368 | 21,368 | 0 | 0 |
| Jharkhand | 8,941 | 8,872 | 69 | 0.8 | 9,953 | 9,675 | 278 | 2.8 |
| Odisha | 29,692 | 29,692 | 0 | 0 | 29,848 | 29,848 | 0 | 0 |
| West Bengal | 52,948 | 52,824 | 124 | 0.2 | 51,644 | 51,543 | 100 | 0.2 |
| Sikkim | 554 | 554 | 0 | 0 | 546 | 546 | 0 | 0 |
| Andaman-Nicobar | 346 | 323 | 23 | 6.7 | 346 | 323 | 23 | 6.7 |
| Arunachal Pradesh | 753 | 749 | 4 | 0.5 | 719 | 714 | 5 | 0.7 |
| Assam | 9,804 | 9,288 | 516 | 5.3 | 10,192 | 9,815 | 377 | 3.7 |
| Manipur | 924 | 917 | 6 | 0.7 | 974 | 969 | 5 | 0.5 |
| Meghalaya | 2,112 | 2,064 | 48 | 2.3 | 2,031 | 2,005 | 26 | 1.3 |
| Mizoram | 647 | 643 | 4 | 0.7 | 728 | 723 | 4 | 0.6 |
| Nagaland | 814 | 809 | 5 | 0.7 | 826 | 822 | 4 | 0.5 |
| Tripura | 1,538 | 1,515 | 23 | 1.5 | 1,484 | 1,481 | 3 | 0.2 |
| All India | 12,91,010 | 12,84,444 | 6,566 | 0.5 | 12,75,534 | 12,70,663 | 4,871 | 0.4 |

The details of State / UT wise Energy Requirement and Energy Supplied in the country from FY 2021-22 and FY 2022-23:

| State/UT | April, 2021 - March, 2022 | | | | April, 2022 - March, 2023 | | | |
|--------------------------------------|---------------------------|----------------------|--------------------------|-------------------------|---------------------------|----------------------|--------------------------|-------------------------|
| | Energy Requirement (MU) | Energy Supplied (MU) | Energy not Supplied (MU) | Energy not Supplied (%) | Energy Requirement (MU) | Energy Supplied (MU) | Energy not Supplied (MU) | Energy not Supplied (%) |
| Chandigarh | 1,606 | 1,606 | 0 | 0 | 1,788 | 1,788 | 0 | 0 |
| Delhi | 31,128 | 31,122 | 6 | 0 | 35,143 | 35,133 | 10 | 0 |
| Haryana | 55,499 | 55,209 | 290 | 0.5 | 61,451 | 60,945 | 506 | 0.8 |
| Himachal Pradesh | 12,115 | 12,088 | 27 | 0.2 | 12,649 | 12,542 | 107 | 0.8 |
| Jammu & Kashmir | 19,957 | 18,434 | 1,524 | 7.6 | 19,639 | 19,322 | 317 | 1.6 |
| Punjab | 62,846 | 62,411 | 436 | 0.7 | 69,522 | 69,220 | 302 | 0.4 |
| Rajasthan | 89,814 | 89,310 | 504 | 0.6 | 1,01,801 | 1,00,057 | 1,745 | 1.7 |
| Uttar Pradesh | 1,29,448 | 1,28,310 | 1,138 | 0.9 | 1,44,251 | 1,43,050 | 1,201 | 0.8 |
| Uttarakhand | 15,521 | 15,426 | 94 | 0.6 | 15,647 | 15,386 | 261 | 1.7 |
| Chhattisgarh | 31,908 | 31,872 | 35 | 0.1 | 37,446 | 37,374 | 72 | 0.2 |
| Gujarat | 1,23,953 | 1,23,666 | 287 | 0.2 | 1,39,043 | 1,38,999 | 44 | 0 |
| Madhya Pradesh | 86,501 | 86,455 | 46 | 0.1 | 92,683 | 92,325 | 358 | 0.4 |
| Maharashtra | 1,72,823 | 1,72,809 | 14 | 0 | 1,87,309 | 1,87,197 | 111 | 0.1 |
| Dadra & Nagar Haveli and Daman & Diu | 9,433 | 9,433 | 0 | 0 | 10,018 | 10,018 | 0 | 0 |
| Goa | 4,448 | 4,448 | 0 | 0 | 4,669 | 4,669 | 0 | 0 |
| Andhra Pradesh | 68,413 | 68,219 | 194 | 0.3 | 72,302 | 71,893 | 410 | 0.6 |
| Telangana | 70,539 | 70,523 | 16 | 0 | 77,832 | 77,799 | 34 | 0 |
| Karnataka | 72,437 | 72,417 | 20 | 0 | 75,688 | 75,663 | 26 | 0 |
| Kerala | 26,579 | 26,570 | 9 | 0 | 27,747 | 27,726 | 21 | 0.1 |
| Tamil Nadu | 1,09,816 | 1,09,798 | 18 | 0 | 1,14,798 | 1,14,722 | 77 | 0.1 |
| Puducherry | 2,894 | 2,893 | 1 | 0 | 3,051 | 3,050 | 1 | 0 |
| Lakshadweep | 56 | 56 | 0 | 0 | 64 | 64 | 0 | 0 |
| Bihar | 36,216 | 35,761 | 455 | 1.3 | 39,545 | 38,762 | 783 | 2 |
| DVC | 23,741 | 23,736 | 4 | 0 | 26,339 | 26,330 | 9 | 0 |
| Jharkhand | 11,148 | 10,590 | 558 | 5 | 13,278 | 12,288 | 990 | 7.5 |
| Odisha | 38,339 | 38,332 | 7 | 0 | 42,631 | 42,584 | 47 | 0.1 |
| West Bengal | 54,001 | 53,945 | 57 | 0.1 | 60,348 | 60,274 | 74 | 0.1 |
| Sikkim | 610 | 609 | 0 | 0 | 587 | 587 | 0 | 0 |
| Andaman-Nicobar | 335 | 327 | 8 | 2.29199 | 348 | 348 | 0 | 0.1 |
| Arunachal Pradesh | 875 | 874 | 1 | 0.1 | 915 | 892 | 24 | 2.6 |
| Assam | 10,844 | 10,825 | 19 | 0.2 | 11,465 | 11,465 | 0 | 0 |
| Manipur | 1,019 | 1,018 | 1 | 0.1 | 1,014 | 1,014 | 0 | 0 |
| Meghalaya | 2,256 | 2,243 | 13 | 0.6 | 2,237 | 2,237 | 0 | 0 |
| Mizoram | 656 | 644 | 12 | 1.8 | 645 | 645 | 0 | 0 |
| Nagaland | 852 | 851 | 1 | 0.1 | 926 | 873 | 54 | 5.8 |
| Tripura | 1,578 | 1,578 | 0 | 0 | 1,547 | 1,547 | 0 | 0 |
| All India | 13,79,812 | 13,74,024 | 5,787 | 0.4 | 15,13,497 | 15,05,914 | 7,583 | 0.5 |

The details of State / UT wise Energy Requirement and Energy Supplied in the country from FY 2023-24 and current year (upto December, 2024)

| State / UT | April, 2023 - March, 2024 | | | | April, 2024 - December, 2024 | | | |
|--------------------------------------|---------------------------|-----------------|---------------------|------|------------------------------|-----------------|---------------------|------|
| | Energy Requirement | Energy Supplied | Energy not Supplied | | Energy Requirement | Energy Supplied | Energy not Supplied | |
| | (MU) | (MU) | (MU) | (%) | (MU) | (MU) | (MU) | (%) |
| Chandigarh | 1,789 | 1,789 | 0 | 0 | 1,597 | 1,597 | 0 | 0.0 |
| Delhi | 35,501 | 35,496 | 5 | 0 | 31,308 | 31,297 | 11 | 0.0 |
| Haryana | 63,983 | 63,636 | 348 | 0.5 | 56,486 | 56,457 | 29 | 0.1 |
| Himachal Pradesh | 12,805 | 12,767 | 38 | 0.3 | 10,254 | 10,219 | 34 | 0.3 |
| UT of J&K and Ladakh | 20,040 | 19,763 | 277 | 1.4 | 14,717 | 14,636 | 81 | 0.6 |
| Punjab | 69,533 | 69,528 | 5 | 0 | 63,536 | 63,536 | 0 | 0.0 |
| Rajasthan | 1,07,422 | 1,06,806 | 616 | 0.6 | 84,779 | 84,476 | 304 | 0.4 |
| Uttar Pradesh | 1,48,791 | 1,48,287 | 504 | 0.3 | 1,32,357 | 1,32,058 | 299 | 0.2 |
| Uttarakhand | 15,644 | 15,532 | 112 | 0.7 | 13,016 | 12,974 | 42 | 0.3 |
| Chhattisgarh | 39,930 | 39,872 | 58 | 0.1 | 31,494 | 31,478 | 17 | 0.1 |
| Gujarat | 1,45,768 | 1,45,740 | 28 | 0 | 1,13,697 | 1,13,697 | 0 | 0.0 |
| Madhya Pradesh | 99,301 | 99,150 | 151 | 0.2 | 75,449 | 75,354 | 95 | 0.1 |
| Maharashtra | 2,07,108 | 2,06,931 | 176 | 0.1 | 1,47,892 | 1,47,834 | 58 | 0.0 |
| Dadra & Nagar Haveli and Daman & Diu | 10,164 | 10,164 | 0 | 0 | 8,153 | 8,153 | 0 | 0.0 |
| Goa | 5,111 | 5,111 | 0 | 0 | 4,035 | 4,035 | 0 | 0.0 |
| Andhra Pradesh | 80,209 | 80,151 | 57 | 0.1 | 58,558 | 58,555 | 3 | 0.0 |
| Telangana | 84,623 | 84,613 | 9 | 0 | 61,859 | 61,855 | 3 | 0.0 |
| Karnataka | 94,088 | 93,934 | 154 | 0.2 | 64,447 | 64,443 | 4 | 0.0 |
| Kerala | 30,943 | 30,938 | 5 | 0 | 23,478 | 23,470 | 8 | 0.0 |
| Tamil Nadu | 1,26,163 | 1,26,151 | 12 | 0 | 98,577 | 98,572 | 5 | 0.0 |
| Puducherry | 3,456 | 3,455 | 1 | 0 | 2,735 | 2,735 | 0 | 0.0 |
| Lakshadweep | 64 | 64 | 0 | 0 | 50 | 50 | 0 | 0.0 |
| Bihar | 41,514 | 40,918 | 596 | 1.4 | 35,400 | 35,246 | 154 | 0.4 |
| DVC | 26,560 | 26,552 | 8 | 0 | 19,606 | 19,603 | 3 | 0.0 |
| Jharkhand | 14,408 | 13,858 | 550 | 3.8 | 11,647 | 11,573 | 74 | 0.6 |
| Odisha | 41,358 | 41,333 | 25 | 0.1 | 33,046 | 33,023 | 24 | 0.1 |
| West Bengal | 67,576 | 67,490 | 86 | 0.1 | 55,769 | 55,681 | 88 | 0.2 |
| Sikkim | 544 | 543 | 0 | 0 | 401 | 401 | 0 | 0.0 |
| Andaman-Nicobar | 386 | 374 | 12 | 3.2 | 316 | 307 | 9 | 3.0 |
| Arunachal Pradesh | 1,014 | 1,014 | 0 | 0 | 767 | 767 | 0 | 0.0 |
| Assam | 12,445 | 12,341 | 104 | 0.8 | 10,250 | 10,244 | 6 | 0.1 |
| Manipur | 1,023 | 1,008 | 15 | 1.5 | 771 | 770 | 0 | 0.0 |
| Meghalaya | 2,236 | 2,066 | 170 | 7.6 | 1,514 | 1,514 | 0 | 0.0 |
| Mizoram | 684 | 684 | 0 | 0 | 516 | 516 | 0 | 0.0 |
| Nagaland | 921 | 921 | 0 | 0 | 721 | 721 | 0 | 0.0 |
| Tripura | 1,691 | 1,691 | 0 | 0 | 1,527 | 1,527 | 0 | 0.0 |
| All India | 16,26,132 | 16,22,020 | 4,112 | 0.3 | 12,80,037 | 12,78,565 | 1,472 | 0.1 |
