

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
STARRED QUESTION NO.171
ANSWERED ON 30.07.2026**

IMPACT OF RISING ELECTRICITY DEMAND IN PUNJAB

***171. DR. AMAR SINGH:**

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

(a) whether the Government has assessed the impact of the rising electricity demand in Punjab on the State's long-term energy security, particularly during the paddy transplantation season and if so, the details thereof;

(b) the assistance provided for strengthening transmission and distribution infrastructure, improving grid reliability and integrating renewable energy under various Government programmes;

(c) whether any policy has been formulated to promote solarisation of agricultural pump sets, energy-efficient irrigation systems and demand-side management to reduce agricultural power consumption and if so, the details thereof;

(d) whether any mechanism is in place to ensure reliable electricity supply during peak agricultural seasons while maintaining the financial sustainability of distribution utilities and if so, the details thereof; and

(e) the measures proposed to strengthen long-term power security, improve energy efficiency and reduce dependence on costly external power procurement?

A N S W E R

THE MINISTER OF POWER

(SHRI MANOHAR LAL)

(a) to (e) : A Statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (e) IN RESPECT OF LOK SABHA STARRED QUESTION NO. 171 FOR REPLY ON 30.07.2026 REGARDING IMPACT OF RISING ELECTRICITY DEMAND IN PUNJAB ASKED BY DR. AMAR SINGH

(a) : The Central Electricity Authority (CEA) assesses the country's electricity requirement and peak demand on a year-on-year basis at the national, regional, State, and Union Territory (UT) levels. The details of month-wise energy requirement and peak demand of the State of Punjab for the period April to September during the last five years and current year (upto June, 2026) is given at Annexure-I. The electricity demand of Punjab increases during paddy transplantation season of June to September months every year.

Further, with a view to ensure generation capacity remains ahead of projected peak demand, all the States including Punjab, 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. Accordingly, assessed energy requirement and peak demand of the Punjab from FY 2026-27 to 2031-32 is given at Annexure-II.

(b) : Government of India has taken the following measures for strengthening the transmission and distribution infrastructure, improving grid reliability & integrating renewable energy in the country including the state of Punjab:

- (i) Capacity addition from non-fossil Sources: Thrust is on capacity addition from non-fossil sources, which now exceeds 54% of the total installed electricity generation capacity. Further, Government has planned to achieve 500 GW of non-fossil fuel based installed generation capacity by 2030. As per the National Generation Adequacy Plan prepared by CEA in March 2026, the non-fossil fuel based installed capacity is likely to increase to 786 GW by 2035-36.**
- (ii) Capacity addition from Conventional Sources: It is projected to increase the installed capacity of coal-based plants to 315 GW by 2035-36. Keeping in view energy security, no new imported coal-based power plants have been planned.**
- (iii) Nuclear power has huge potential to ensure long term energy security and is vital for India's clean energy transition towards Net Zero by 2070. It is a clean and environment friendly source of base load power. The lifecycle emissions of nuclear power are comparable to those of renewables like hydro and wind. Government of India has set an ambitious target of 100 GW nuclear power capacity by 2047.**

- (iv) Energy Storage Systems are being encouraged. Roadmap to 100 GW of Hydro Pumped Storage Projects by 2035-36 has been prepared. As per the National Generation Adequacy Plan prepared by CEA in March 2026, the likely BESS installed capacity and PSP installed capacity in 2035-36 is 80 GW and 94 GW respectively.**
- (v) 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.**
- (vi) 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.**
- (vii) Significant expansion of the transmission network has been undertaken since 2014, resulting in the addition of 2,18,267 circuit kilometres (ckm) of transmission lines, 9,47,405 MVA of transformation capacity and 84,390 MW of inter-regional transmission capacity. Consequently, the total inter-regional transmission capacity has reached 1,20,340 MW as on 30.06.2026, enabling reliable power transfer across the country.**
- (viii) Government of India has been supplementing the efforts of States/ UTs to help them provide quality supply of power through schemes like Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS), Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA). Under these schemes, projects worth Rs. 1.85 lakh Cr. were executed for strengthening of power distribution infrastructure. These schemes stand closed as on 31.03.2022. A total of 18,374 villages were electrified under DDUGJY and a total 2.86 crore households during SAUBHAGYA. During SAUBHAGYA, 3,477 house hold of Punjab were electrified. Presently under the Revamped Distribution Sector Scheme (RDSS), launched by Government of India in July 2021 with the objective of making distribution utilities operationally efficient and financially viable, financial assistance is being provided to distribution utilities for upgradation of distribution infrastructure & smart metering works, Under the scheme, projects worth Rs. 1.53 lakh crore for loss reduction infrastructure and Rs. 1.31 lakh crore for smart metering works have been sanctioned across the country. This includes loss reduction works amounting to Rs. 3,873 crore and smart metering works amounting to Rs. 5,769 crore sanctioned for the State of Punjab.**
- (ix) 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. In order to augment transmission infrastructure needed for steep RE trajectory, transmission plan has been prepared till 2032.**

- (x) Development of intra-state transmission network is being planned to keep pace with RE capacity addition. Strong inter connection of Inter-State Transmission System (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.**
- (xi) The Ministry of Heavy Industries has launched the PLI scheme namely “National Programme on Advanced Chemistry Cell (ACC) Battery Storage,” approved in May 2021 with a total outlay of ₹18,100 crore to establish 50 GWh of domestic Advanced Chemistry Cell manufacturing capacity, out of which 10 GWh is earmarked for Grid Scale Stationary Storage (GSSS) applications.**
- (xii) MoP in March, 2022 notified the Guidelines for Procurement and Utilization of Battery Energy Storage Systems as part of Generation, Transmission and Distribution assets, along with Ancillary Services.**
- (xiii) MoP has notified Guidelines to promote development of Pumped Storage Projects in the country on 10th April, 2023.**
- (xiv) Government of India, in September 2023, approved a Viability Gap Funding (VGF) scheme for development of Battery Energy Storage Systems (BESS). BESS capacity of 13.22 GWh is under implementation with a budgetary allocation of Rs 3,760 Cr. under this scheme. Considering the increasing demand of BESS, Ministry of Power, in June 2025, has approved another VGF scheme for development of 30 GWh BESS capacity with financial support of Rs 5,400 Cr from Power System Development Fund (PSDF) including 500 MWh for Punjab with financial support of 90 Cr.**
- (xv) Tariff Based Competitive Bidding (TBCB) guidelines have been issued for procurement of power from Pumped Storage Projects.**
- (xvi) Central Electricity Authority (CEA) issued an advisory on 18.02.2025 recommending the co-location of Energy Storage Systems (ESS) with solar power projects to enhance grid stability and cost efficiency.**
- (xvii) CEA (Measures Relating to Safety and Electric Supply) (First Amendment) Regulations, 2025 has been notified on 30.03.2026, which includes the safety requirements for BESS.**
- (c) & (d): The Ministry of New and Renewable Energy launched the Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) scheme on 8th March 2019 with the objective of promoting the solarisation of agricultural pump sets, including standalone solar pumps. Under Component-C of the scheme, solarisation of 35 lakh existing grid-connected agricultural pumps is supported, including Feeder Level Solarization (FLS), along with the promotion of energy-efficient irrigation systems. The scheme is being implemented across all States and Union Territories, including Punjab.**

In Punjab, 186 Individual Pump Solarisation (IPS) systems have been sanctioned, and 17,928 off-grid solar pumps have been installed under the PM-KUSUM scheme.

Further, Government of India has been laying emphasis on segregation of mixed load feeders having more than 30% agricultural load, with the objective of efficient load management and enabling solarisation of agriculture feeders. In the State of Punjab, out of 6,932 feeders feasible for segregation, 6,705 feeders have already been segregated under earlier schemes of the Central and State Governments. Under the ongoing RDSS, feeder segregation works amounting to Rs. 39,795 crores have been sanctioned for 31,109 feasible feeders across the country, including 227 feeders in Punjab with a sanctioned cost of Rs. 383 crores.

In addition to RDSS, Government of India has taken the following measures for improving and maintaining the financial sustainability of DISCOMs:

- (i) Additional Borrowing space 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 which would be contingent to 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 are passed through.**
- (iv) Rules and Standard Operating Procedure issued for proper Subsidy Accounting and their timely payment.**
- (v) Advisory to SERCs (State Electricity Regulatory Commission) & JERCs (Joint Electricity Regulatory Commission) for timely issuance of tariff and true up orders.**

To ensure the reliable supply during peak agriculture season, Punjab state also uses seasonal variability of demand by entering into Banking/ swapping arrangement with other utilities having complimentary demand profile.

(e): As per Section 7 of Electricity Act, 2003 setting up of a power plant is a de-licensed activity in the country. Any generating company may establish, operate and maintain a generating station without requiring a license under Electricity Act, 2003 if it complies with the technical standards relating to connectivity with the grid.

As per the Resource Adequacy (RA) study, the total projected contracted capacity requirement for Punjab for the year 2035–36 is estimated at approximately 42,263 MW. This includes 12,043 MW from coal, 137 MW from gas, 197 MW from nuclear, 234 MW from biomass, 3,684 MW from hydro, 4,950 MW from wind, 16,807 MW from solar, and 3,211 MW from Distributed Renewable Energy (DRE) sources, along with 2,812 MW / 13,082 MWh of energy storage capacity. In addition, around 8,000 MW of power procurement through Medium-Term Open Access (MTOA) and Short-Term Open Access (STOA) is projected to be required to reliably meet the demand.

As on 30.06.2026, a total of 13,808 MW operational capacity is available with Punjab State. This comprises of 3,829 MW from the state sector, 6,989 MW from the private sector, and 2,991 MW allocated from Central Generating Stations (CGS). Further, Power Purchase Agreement (PPAS) / Power Supply Agreements (PSAs) of 2,960 MW of renewable energy capacity is executed by Punjab State Power Corporation Ltd. (PSPCL).

ANNEXURE-I

**ANNEXURE REFERRED TO IN PART (a) OF THE STATEMENT LAID IN REPLY TO
STARRED QUESTION NO. 171 ANSWERED IN THE LOK SABHA ON 30.07.2026
REGARDING IMPACT OF RISING ELECTRICITY DEMAND IN PUNJAB**

The details of month-wise energy requirement and peak demand of the State of Punjab for the period April to September during the past five years and current year (upto June, 2026):

A. Energy Requirement in [Million Units (MU)]

Year	April (MU)	May (MU)	June (MU)	July (MU)	August (MU)	September (MU)
2020	2,287	4,032	6,676	7,390	7,527	7,264
2021	3,718	4,639	7,043	8,319	8,269	6,518
2022	4,981	6,312	7,482	8,131	8,906	7,617
2023	4,197	5,220	7,019	8,242	9,560	8,006
2024	4,553	7,207	8,716	10,287	9,165	8,460
2025	5,247	6,540	9,097	9,501	8,280	7,450
2026	5,249	7,134	9,123*	-	-	-

B. Peak Demand [in Mega Watt (MW)]

Year	April (MW)	May (MW)	June (MW)	July (MW)	August (MW)	September (MW)
2020	5,113	8,201	12,683	13,148	12,815	12,433
2021	6,860	8,195	13,359	13,556	13,215	12,002
2022	9,889	10,887	14,311	14,069	14,298	14,187
2023	8,187	11,725	15,293	14,665	15,132	14,964
2024	9,914	14,366	16,058	16,006	15,307	15,310
2025	10,919	13,969	16,428	16,670	16,310	14,440
2026	11,863	14,268	17,004*	-	--	

* *Data for the month of June, 2026 is provisional*

ANNEXURE-II**ANNEXURE REFERRED TO IN PART (a) OF THE STATEMENT LAID IN REPLY TO
STARRED QUESTION NO. 171 ANSWERED IN THE LOK SABHA ON 30.07.2026
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The details of assessed Energy Requirement and Peak Demand of Punjab:

Year	Energy Requirement	Peak Demand
	(MU)	(MW)
2026-27	86,228	17,873
2027-28	90,838	18,767
2028-29	95,726	19,705
2029-30	1,00,909	20,690
2030-31	1,04,561	21,570
2031-32	1,08,352	22,486
