

**GOVERNMENT OF INDIA
MINISTRY OF POWER**

**LOK SABHA
UNSTARRED QUESTION NO.4107
ANSWERED ON 19.12.2024**

POWER GENERATION CAPACITY

†4107. SHRI HARISH CHANDRA MEENA:

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

- (a) the details of the total power generation capacity in the country, year-wise;**
- (b) the steps being taken by the Government to increase power generation capacity;**
- (c) the details of the contribution of coal in total power generation capacity in the country during the last five years;**
- (d) whether the per unit cost of power generation has increased due to import of coal during the last few years and if so, the details thereof; and**
- (e) the steps taken by the Union Government to reduce per unit power cost of power generated in the States, particularly in Rajasthan and upgrade infrastructure for this purpose?**

A N S W E R

THE MINISTER OF STATE IN THE MINISTRY OF POWER

(SHRI SHRIPAD NAIK)

(a): The year wise details of total power generation capacity in the country from 2014-15 to 2024-25 (upto November 2024) are given at Annexure-I.

(b): Government of India has taken following steps to increase the power generation capacity in the country: -

(i) 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, 29,200 MW Thermal Capacity is already under construction while 51,520 MW is at various stages of planning & development.

(b) 13,997.5 MW of Hydro Electric Projects and 6,050 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 7,000 MW is under various stages of planning and approval.

(d) Present installed Renewable Energy (RE) capacity of the country is 2,03,215 MW. Further, 1,27,050 MW of RE is under construction and 89,690 MW is under various stages of tendering. India has committed to augment non fossil fuel based installed electricity generation capacity to over 5,00,000 MW by 2030

- (ii) 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.**
- (iii) Waiver of ISTS charges on transmission of electricity generated from Solar, Wind, Pumped Storage Plants and Battery Energy Storage Systems.**
- (iv) Renewable Purchase Obligations (RPOs) and Energy Storage obligations Trajectory till 2029-30.**
- (v) Construction of Green Energy Corridors and putting in place 13 Renewable Energy Management Centres.**
- (vi) Setting up of Ultra Mega Renewable Energy Parks to provide land and transmission to RE developers for installation of RE projects at large scale.**
- (vii) Introduction of SHAKTI policy for transparent allocation of coal to Thermal Power plants. This enabled efficient domestic coal allocation to Thermal Power Plants and also ensured revival of various stressed Thermal Power Projects.**
- (viii) Construction of the Inter-State transmission system ahead of the generation capacity.**

(c) : The details of the contribution of coal & lignite to the total power generation capacity in the country during the last five years and current year 2024-25 (Upto November) is given at Annexure-II.

(d) : The cost of generation of electricity from coal based power plant is dependent upon the price of coal and cost of freights and in case of blending also the price of the blended imported coal. The price of imported coal is linked with International Indices, source of origin and factors like ocean freight, insurance etc. which vary with international demand supply scenario. Further, every generating company consumes imported coal as per its requirement.

Average Power purchase cost has increased by 71 Paise only between FY 2021-22 and FY 2022-23. This is because of increase in various costs – including increase in Transmission cost.

(e) : Government of India have following steps to reduce the cost of power generation in the county :

- (i) Setting up of Power Exchanges to ensure fair, neutral, efficient and robust electricity price discovery.**
- (ii) Introduction of flexibility in utilization of domestic coal by State/Central Generation Companies (GENCOs).**

- (iii) **Rationalization of linkage sources of State/Central Generating Companies (GENCOs) and Independent Power Producers (IPPs) with a view to optimize transportation cost has been allowed.**
- (iv) **Issuance of guidelines for tariff based bidding process for procurement of electricity under Section 63 of Electricity Act, 2003 to promote competitive procurement of electricity by distribution licensees.**
- (v) **Reduction of Aggregate Technical & Commercial (AT&C) losses under RDSS will improve the finances of the utilities, which will enable them to better maintain the system and buy power as per requirements; benefitting the consumers.**
- (vi) **Operationalisation of National Merit Order Dispatch with the objective of lowering the cost of electricity to consumers.**

Further, the Government has taken following steps to upgrade the power infrastructure in the country including Rajasthan:

- 1. Under the SAUBHAGYA Scheme, a total of 2.86 crore households have been electrified across the country including 21,27,728 households in Rajasthan.**
- 2. Under DDUGJY Scheme, a total of 18,374 villages were electrified under the scheme including 427 villages in Rajasthan.**
- 3. Under RDSS, projects worth Rs. 2.77 lakh crore for distribution infrastructure works and smart metering works have been sanctioned at National level. In Rajasthan, distribution infrastructure and smart metering works of Rs. 27,142 crore (with Government Budgetary Support of Rs. 12,142 crore) have been sanctioned.**
- 4. Rajasthan Atomic Power Station (RAPS) in Rajasthan (Capacity : 1400 MW) is under construction. Further, Mahi Banswara Rajasthan Atomic Power Project in Rajasthan (Capacity: 2800 MW) is at planning and approval stage.**
- 5. The upgradation in the transmission infrastructure includes projects for addition of 35,603 ckm transmission line and 3,13,525 MVA transformation capacity targeted to be completed by 2026-27 & 2029-30 (For HVDC projects). This includes transformation capacity at several Substations with likely completion schedule of 2026-27 viz Fategarh-3 (5500 MVA), Bikaner (1500 MVA), Kotputli (500 MVA), Bikaner II (2500 MVA), Bikaner (PG) (1500 MVA), Fatehgarh-2 PS(500 MVA), Bhadla-2 PS (1500 MVA), KPS3 (GIS) (1500 MVA), Sikar -II (300 MVA), Bhadla III (8500 MVA), Ramgarh PS (4500 MVA), Dausa (300 MVA), Bikaner-III Pooling Station (11500 MVA), Sirohi (300 MVA), Barmer-I Pooling Station (5500 MVA), Bikaner-IV Pooling Station (1200 MVA), Beawar (300 MVA), Neemrana-II (600 MVA) and Fatehgarh-4 (1100 MVA).**
- 6. Under Power System Development Fund (PSDF), a total of 188 projects have been approved for improvement of State, Regional and National Power System. Under PSDF, two projects in Rajasthan pertaining to Renovation & Upgradation of Protection System and Installation of Bus Reactors have been completed. Further, seven projects are at various stages of implementation, the details of which are given at Annexure-III.**

ANNEXURE-I**ANNEXURE REFERRED IN REPLY TO PART (a) OF UNSTARRED QUESTION
NO. 4107 ANSWERED IN THE LOK SABHA ON 19.12.2024*************The year wise details of total power generation capacity from 2014-15 to 2024-25
(Upto November, 2024)**

Year	Generation Capacity (in MW)
2014-15	2,74,904
2015-16	3,05,162
2016-17	3,26,833
2017-18	3,44,002
2018-19	3,56,100
2019-20	3,70,106
2020-21	3,82,151
2021-22	3,99,497
2022-23	4,16,059
2023-24	4,41,970
2024-25 (up to November 24)	4,56,190

ANNEXURE-II**ANNEXURE REFERRED IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 4107 ANSWERED IN THE LOK SABHA ON 19.12.2024**

The details of the contribution of coal to the total power generation capacity in the country during the last five years and current year 2024-25 (Upto November 2024).

Year	Total Generation Capacity	Coal & Lignite Based Capacity	Share of Coal & Lignite Based Capacity in Total Generation Capacity
	(MW)	(MW)	(%)
31-3-2020	3,70,106	2,05,135	55.4
31-3-2021	3,82,151	2,09,295	54.8
31-3-2022	3,99,497	2,10,700	52.7
31-3-2023	4,16,059	2,11,855	45.9
31-3-2024	4,41,970	2,17,589	49.2
30-11-2024	4,56,190	2,17,650	47.7

ANNEXURE-III**ANNEXURE REFERRED IN REPLY TO PART (e) OF UNSTARRED QUESTION NO. 4107 ANSWERED IN THE LOK SABHA ON 19.12.2024**

Details of seven projects under implementation under PSDF:

Sl. No.	Name of proposal	Grant Sanctioned under PSDF (₹ Cr)
1	Communication Back - Smart Transmission Network & Asset Management System Part-B (136)	284.89
2	Renewable Energy Integration - Real Time data Acquisition System for Monitoring & Control of Transmission Grid under Smart Transmission Network and Asset Management System (Part-A1) in Rajasthan Power System. (153)	92.60
3	Installation of 1x25 MVAR, 220kV Bus Reactor each at 400kV GSS Akal, 220kV GSS Suratgarh & 220kV GSS Bikaner. (223)	15.82
4	Up-rating and refurbishment of existing 132kV lines using HTLS Conductor with associated works in Jaipur EHV Network. (176)	9.06
5	Renewable Energy Integration-Reactive Compensation Element/ Equipments for Reactive Power Management and Voltage Control for Transmission Grid under Smart Transmission Network and Asset Management System (Part-A2-Sec-1). (252)	57.34
6	Installation of 31 nos Bus protection schemes for installation on 220 kV SS of RRVPN (294)	11.56
7	Installation of 52 Nos. Nitrogen Injection Fire Prevention and Extinguishing at various Substations of RVPN. (316)	5.77
