

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
UNSTARRED QUESTION NO. 481
ANSWERED ON 22.07.2026

SHARE OF RENEWABLE ENERGY IN ENERGY MIX

481. MS. S JOTHIMANI

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

- (a) the percentage increase in renewable energy generation excluding large hydro during the first half of the year 2025 and the current share of non-hydro renewables in the national electricity mix;
- (b) the details of roadmap of Government for scaling up Battery Energy Storage Systems (BESS) to support grid stability and enable integration of variable renewables;
- (c) the projected contribution of energy storage infrastructure in achieving the national target of 500GW of non-fossil fuel-based capacity by the year 2030 especially in high potential States like Tamil Nadu; and
- (d) whether the Government is upgrading grid infrastructure and streamlining Power Purchase Agreements (PPAs) to address risks and delays in renewable procurement and if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR NEW & RENEWABLE ENERGY AND POWER
(SHRI SHRIPAD YESSO NAIK)

- (a) As per the information received from Central Electricity Authority (CEA), details of source-wise renewable energy (RE) generation growth (excluding Large Hydro) during April 2025 - September 2025 as compared to April 2024 - September 2024 are given below:

Source	RE generation (MU) April 2025- September 2025	RE generation (MU) April 2024- September 2024	Percentage growth
Wind	72743.86	55888.29	30.16
Solar	81336.33	67929.19	19.74
Biomass	1947.52	1686.64	15.47
Bagasse	1997.24	1669.90	19.60
Small Hydro	7377.88	6640.59	11.10
Others	1460.19	1443.82	01.13
Total	166863.02	135258.43	23.37

During the current financial year 2026-27, for the months of April – May 2026, share of renewable energy (other than hydro) in terms of the overall electricity generation mix is 18.26%.

(b) & (c) The Central Electricity Authority (CEA), under the Base case scenario to achieve 500 GW of capacity from non-fossil fuel sources by 2030, has estimated a Battery Energy Storage Systems (BESS) requirement of 41.65 GW/208.25 GWh capacity. The Government has taken various steps for scaling up of BESS to support grid stability and enable integration of variable renewables in the country, including the State of Tamil Nadu. These, inter alia, include the following:

- ‘National Programme on Advanced Chemistry Cell (ACC) Battery Storage’ for implementation of giga-scale ACC manufacturing facilities in India, with an aim to establish a competitive domestic manufacturing ecosystem for 50 GWh with a total budgetary outlay of ₹18,100 crore. Out of 50 GWh capacity, 10 GWh has been earmarked for grid scale stationary storage applications.
- Ministry of Power is providing Viability Gap Funding (VGF) under different scheme for development of over 43 GWh capacity of BESS in the country including for the state of Tamil Nadu.
- A National Framework for Promotion of Energy Storage Systems was issued in September 2023, providing a comprehensive roadmap for deployment, market integration and regulatory facilitation of storage technologies.
- Waiver of Inter-State Transmission System (ISTS) charges has been provided for co-located BESS projects commissioned up to June 2028, to improve project viability.
- Electricity supplied from BESS has been allowed to participate in the High-Price Day-Ahead Market, enabling storage to respond to peak price signals.
- CEA issued an advisory on co-location of ESS with solar power projects, recommending storage capacity of at least 10% of installed solar capacity for a minimum duration of two hours, to improve dispatchability of solar power.

(d) For upgrading grid infrastructure following initiatives have been taken by the Government:

- i. Central Electricity Authority (CEA) had published a plan for Transmission System for Integration of over 500 GW RE Capacity by 2030 covering all RE rich States.
- ii. Ministry of New & Renewable Energy (MNRE) is implementing Green Energy Corridor Scheme (GEC) in 10 States viz. Andhra Pradesh, Tamil Nadu, Karnataka, Telangana, Maharashtra, Kerala, Gujarat, Rajasthan, Uttar Pradesh and Himachal Pradesh for evacuation of 44 GW of Renewable Energy (RE).
- iii. Comprehensive Regulations and Standards governing interconnection and operations of renewable plants such as CEA (Central Electricity Authority) connectivity standards, flexible thermal plant operations, and the Indian Electricity Grid Code 2023;
- iv. Establishment of Renewable Energy Management Centers (REMCs) for real-time forecasting, scheduling, and monitoring of RE generation across 12 RE- rich regions.
- v. Waiver of Inter State Transmission System Charges for Battery Energy Storage Systems
- vi. Issuance of Guidelines for Procurement and Utilization of Battery Energy Storage Systems.
- vii. Issuance of Guidelines for the development of Pumped Storage Projects.

Regarding streamlining the Power Purchase Agreements (PPAs), under section 63 of Electricity Act, the Government of India has issued standard bidding guidelines for tariff based competitive bidding process for procurement of power from grid-connected renewable power projects, which include solar, wind, wind-solar hybrid and FDRE (Firm & Dispatchable Renewable Energy). These guidelines provide a transparent, fair, standardized procurement frame work based on open competitive bidding with appropriate risk-sharing including payment security, between various stakeholders to enable procurement of power at competitive prices in consumer interest, improve bankability of projects and ensure reasonable returns to the investors. These guidelines also contain provisions for contract enforcement for timely setting up of renewable energy power projects.

