

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
RAJYA SABHA
STARRED QUESTION NO. 937
ANSWERED ON 11/02/2025

POTENTIAL OF WIND ENERGY

937. SHRI MASTHAN RAO YADAV BEEDHA

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

- (a) whether it is a fact that the commercially exploitable potential of wind energy in the country is estimated to be more than 200 GW;
- (b) whether it is also a fact that the total installed capacity of wind power is 41 GW, which is only about 20% of the commercially exploitable potential;
- (c) the reasons for the gap and whether Government has any plans to redress this gap and develop wind energy in the country more fruitfully;
- (d) if so, the details thereof and if not, the reasons therefor; and
- (e) the plans for enhancing capacity of wind power in Andhra Pradesh?

ANSWER

THE MINISTER OF STATE FOR NEW & RENEWABLE ENERGY AND POWER

(SHRI SHRIPAD YESSO NAIK)

(a) to (e) The wind resource assessment conducted by the National Institute of Wind Energy indicates an estimated wind power potential of about 1164 GW at 150 meter above ground level in the country. The total installed capacity of onshore wind energy in the country is about 48.36 GW, as on 31.01.2025.

Wind power projects in the country are set up mostly by private sector developers based on techno economic viability of the project at high wind potential sites. The Government of India has taken several steps and initiatives as given in **Annexure** to promote and accelerate renewable energy capacity, including wind energy, in the country, including in Andhra Pradesh, to realize the commitment of 500 GW non-fossil energy capacity by 2030.

Further, Government of Andhra Pradesh has notified the Andhra Pradesh Integrated Clean Energy Policy, 2024 vide G.O.Ms. No.37 dated 30.10.2024 to promote Clean Energy Projects, including wind power projects, in the state.

Annexure referred to in reply to part (a) to (e) of Rajya Sabha Unstarred Question No. 937 to be answered on 11.02.2025

The Government of India has taken several steps and initiatives to promote and accelerate renewable energy capacity, including wind energy, in the country to realize the commitment of 500 GW non-fossil energy capacity by 2030. These include, inter-alia, the following:

- Notification of trajectory for RE power bids of 50 GW/annum to be issued by Renewable Energy Implementation Agencies [REIAs: Solar Energy Corporation of India Limited (SECI), NTPC Limited, NHPC Limited, SJVN Limited] from FY 2023-24 to FY 2027-28.
- Foreign Direct Investment (FDI) has been permitted up to 100 percent under the automatic route.
- 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.
- 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 on non-compliance. RCO also includes specified quantum of consumption from Decentralized Renewable Energy sources.
- 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.
- 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, have been launched.
- 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.
- 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.
- Electricity (Rights of Consumers) Rules, 2020 has been issued for net-metering up to five hundred Kilowatt or up to the electrical sanctioned load, whichever is lower.
- Uniform Renewable Energy Tariff (URET) has been introduced through which a uniform tariff will be provided to the consumer by averaging tariffs of individual RE projects of similar type awarded via tariff based competitive bidding process. Implementation of URET for "Solar Power Central Pool" and "Solar-Wind Hybrid Central Pool" from 15th February 2024 has been notified.

- Standard & Labelling (S&L) programs for Solar Photovoltaic modules and Grid-connected Solar Inverters have been launched.
- To augment transmission infrastructure needed for steep RE trajectory, transmission plan has been prepared till 2030.
- The Electricity (Late Payment Surcharge and related matters) Rules (LPS rules) have been notified.
- 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.
- Green Term Ahead Market (GTAM) has been launched to facilitate sale of Renewable Energy Power through exchanges.
- Government has issued orders that power shall be dispatched against Letter of Credit (LC) or advance payment to ensure timely payment by distribution licensees to RE generators.

In addition to the above, the following steps have, inter alia, been taken specifically for promoting wind energy:

- Declaration of trajectory for Wind Renewable Consumption Obligation (RCO) up to the year 2030.
- Concessional custom duty exemption on certain components required for manufacturing of wind electric generators.
- Generation Based Incentive (GBI) is being provided to the wind projects commissioned on or before 31 March 2017.
- “National Repowering and Life Extension Policy for Wind Power Projects, 2023” has been issued.
- “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.
- 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.
- Technical support including wind resource assessment and identification of potential sites through the National Institute of Wind Energy, Chennai.
- Viability Gap Funding (VGF) scheme for offshore wind energy projects.