

GOVERNMENT OF INDIA
MINISTRY OF NEW AND RENEWABLE ENERGY
LOK SABHA
UNSTARRED QUESTION NO. 1840
ANSWERED ON 29.07.2026

CONTRIBUTION OF TAMIL NADU TO RENEWABLE ENERGY CAPACITY

1840. SHRI C N ANNADURAI:
DR. RANI SRIKUMAR

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

- (a) whether the Government has taken note of India's emergence as a global leader in renewable energy backed by a strong policy ecosystem and if so, the details thereof;
- (b) the details of contribution of Tamil Nadu to the country's renewable energy capacity particularly in wind and solar power generation;
- (c) whether any new projects, incentives or infrastructure initiatives have been sanctioned for Tamil Nadu under various renewable energy schemes and if so, the details thereof;
- (d) the details of steps taken by the Government to promote offshore wind energy, energy storage systems, green hydrogen and grid modernization in Tamil Nadu; and
- (e) the details of investments attracted, employment generated and renewable energy capacity added in Tamil Nadu during the last three years and the current year?

ANSWER

THE MINISTER OF STATE FOR NEW & RENEWABLE ENERGY AND POWER

(SHRI SHRIPAD YESSO NAIK)

- (a) As per the Renewable Capacity Statistics 2026 released by International Renewable Energy Agency (IRENA), India ranks third globally in installed Renewable Energy capacity. Further, India ranks third in installed solar energy capacity and fourth in installed wind energy capacity. Details of the major policy interventions in this regard is given at **Annexure-I**.
- (b) As on 30th June, 2026, a cumulative renewable energy capacity of 29,776.52 MW has been installed in the state of Tamil Nadu which includes 14,121.46 MW solar energy capacity and 12,273.69 MW wind energy capacity.
- (c) The details of initiatives, projects sanctioned and subsidy/incentives allocated for Tamil Nadu under various renewable energy schemes are given at **Annexure-II**.

(d) The details of steps taken by the Government to promote offshore wind energy, energy storage systems, green hydrogen and grid modernization in Tamil Nadu are given at **Annexure-III**.

(e) During last three years and current year i.e. from 2023-24 to 2026-27 (up to June, 2026), 9677.97 MW of renewable energy capacity has been added in the State of Tamil Nadu. This includes 7385.03 MW Solar Power, 2256.52 MW Wind Power, 11.42 MW Bio Energy, and 25 MW Hydro Power capacity. This capacity is estimated to have resulted in investment of over Rs. 45,000 crore and over 78,600 employment opportunities.

Annexure-I referred in Reply to Part (a) of the Lok Sabha Unstarred Question No. 1840 on “Contribution of Tamil Nadu to Renewable Energy Capacity” to be answered on 29.07.2026

Major policy interventions introduced by the Government in the renewable energy sector are given below:

- 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, New Solar Power Scheme (for Tribal and PVTG Habitations/Villages) under Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN) and Dharti Aabha Janjatiya Gram Utkarsh Abhiyan (DA JGUA), National Green Hydrogen Mission, Viability Gap Funding (VGF) Scheme for Offshore Wind Energy Projects and Small Hydro Power (SHP) Development Scheme have been launched.
- Scheme for setting up of Solar Parks and Ultra Mega Solar Power projects is being implemented to provide land and transmission to RE developers for installation of RE projects at large scale.
- National Repowering and Life Extension Policy for Wind Power Projects (2023) issued.
- 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.
- The Revised Guidelines for installation of prototype wind turbine models issued.
- Procedure for inclusion/updating Wind Turbine Model in the Revised List of Models and Manufacturers of Wind Turbines (RLMM) issued on 31st July 2025. The amendment renames RLMM as Approved List of Models and Manufacturers [ALMM (Wind)] and mandates usage of listed components such as Blade, Tower, Generator, Gearbox and Special Bearings (Main, Pitch and Yaw Bearing) along with mandatory relocation of data centres within India and prohibition of real-time data transfer outside India.
- The Standard Operating Procedure (SOP) for ALMM-Wind and ALMM – Wind Turbine Components (ALMM-WTC) issued on 29th October 2025, detailing the end-to-end process for application, verification, factory inspection, component evaluation and model enlistment.
- Standard Bidding Guidelines for tariff based competitive bidding process for procurement of Power from Grid Connected Solar, Wind, Wind-Solar Hybrid and Firm & Dispatchable Renewable Energy (FDRE) projects have been issued.
- National Green Hydrogen Mission (NGHM), with an objective to make India a global hub of production, usage and export of green hydrogen and its derivatives. Under

NGHM, India aims to establish green hydrogen production capacity of 5 Million Metric tonnes per annum by 2030.

- 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
- 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.
- Foreign Direct Investment (FDI) has been permitted up to 100 percent under the automatic route.
- Inter State Transmission System (ISTS) charges were waived for inter-state sale of solar and wind power for projects commissioned by 30th June 2025, for Green Hydrogen Projects till December 2030 and for offshore wind projects till December 2032.
- 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.
- 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, 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.
- The Electricity (Promotion of Generation of Electricity from Must-Run Power Plant) Rules, 2021, issued in October 2021 ensure that must-run power plants, including RE and hydro plants during water spillage, cannot be curtailed for merit order dispatch or for other commercial factors. Curtailment is only allowed for technical constraints or grid security issues.
- The Electricity Rules were amended in December 2022 to explicitly recognize Energy Storage Systems (ESS) as an integral part of the power system, enabling their participation across generation, transmission and distribution functions.

- The Green Term Ahead Market (GTAM) followed by the Green Day Ahead Market (G-DAM) were launched to facilitate sale of Renewable Power through exchanges.
- Pilot Scheme on Contract for Difference for renewable energy projects has been launched to provide an alternative renewable power procurement instrument.
- Quality Control Orders for Solar Photovoltaic products (i.e., Solar PV Modules, Solar PV Inverters & Storage Battery) and Solar Water Heating systems notified.
- Standard & Labelling (S&L) programs for Solar Photovoltaic modules and Grid-connected Solar Inverters have been launched.

Annexure-II referred in Reply to Part (c) of the Lok Sabha Unstarred Question No. 1840 on “Contribution of Tamil Nadu to Renewable Energy Capacity” to be answered on 29.07.2026

Details of initiatives, projects sanctioned and subsidy/ incentives allocated under various Schemes are as given below:

- Under PM Surya Ghar: Muft Bijli Yojana, as of 10.07.2026, total 81,744 nos. of rooftop solar systems have been installed in Tamil Nadu and subsidy of Rs. 561.62 crore has been released.
- Under PM-KUSUM Scheme:
 - Under Component A, 3 MW solar capacity allocated and installed.
 - Under Component B, out of allocated 5187 solar pumps, 5186 pumps installed.
- Under GEC Phase-I Scheme, Transmission Corporation of Tamil Nadu Limited (TANTRANSCO) has implemented commissioning of 1068 ckm transmission lines and 2250 MVA capacity substations, for evacuation of approx. 1300 MW of RE within the State. Total funds of Rs.529.282 crore have been disbursed to TANTRANSCO under the Scheme.
- Under GEC Phase-II Scheme, Tamil Nadu has been sanctioned setting up of 624 ckm of transmission lines and 2200 MVA capacity substations for evacuation of approx. 4000 MW RE in the State. The estimated project cost for Tamil Nadu is Rs. 719.76 crore and the central grant @33% of the project cost is Rs. 237.52 crore.
- Pilot projects for development of bunkering and refueling facility of 750 m³ capacity for green methanol at Tuticorin port with Government support of ₹35 crore has been sanctioned under the National Green Hydrogen Mission.

Annexure-III referred in Reply to Part (d) of the Lok Sabha Unstarred Question No. 1840 on “Contribution of Tamil Nadu to Renewable Energy Capacity” to be answered on 29.07.2026

Details of steps taken by the Government to promote offshore wind energy, energy storage systems, green hydrogen and grid modernization in Tamil Nadu are given below:

i. Offshore Wind Energy:

- Notification of ‘Offshore Wind Energy Policy’ in October 2015 to provide framework for the development of offshore wind energy in the country.
- The Offshore Wind Energy Lease Rules, 2023 have been notified to regulate the grant of lease of offshore areas for development of offshore wind energy projects.
- For initial phase of developments, 08 potential offshore wind zones off the coast Tamil Nadu have been identified through meso-scale study.
- Central Transmission Utility (CTU) has completed the transmission planning.
- Government has launched the 'Viability Gap Funding (VGF) scheme for offshore wind energy projects'.
- Offshore Wind has been included in the list of activities to be considered for trading of Carbon Credits under bilateral/co-operative approaches as per Article 6.2 Mechanism of Paris Agreement.
- Waiver of Inter-State Transmission (ISTS) Charges along with waiver of additional surcharges for open access consumers for offshore wind power projects commissioned on or before 31.12.2032.
- NIWE has carried out Geotechnical study at three bore hole locations off Tamil Nadu coast. In addition, 4 LiDARs off Tamil Nadu coast installed for wind resource measurement. Offshore met-ocean field studies and Geophysical & Geotechnical investigation for a 500 MW capacity site off Tamil Nadu coast has also been completed.

ii. Energy Storage Systems

- The Government is implementing two Viability Gap Funding (VGF) schemes to support development of approximately 43 GWh of Battery Energy Storage Systems, launched in March 2024 and June 2025, to accelerate early-stage deployment.
- The Ministry of Heavy Industries is implementing a Production-Linked Incentive (PLI) Scheme with an outlay of ₹18,100 crore for establishing 50 GWh of Advanced Chemistry Cell manufacturing capacity, of which 10 GWh is earmarked for grid-scale storage.
- 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.

- Tariff-Based Competitive Bidding (TBCB) Guidelines for procurement of BESS by distribution licensees were notified in March 2022, creating a transparent mechanism for large-scale storage procurement.
- In February 2025, 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.
- In June 2023, the Government issued Guidelines for Preparation of Resource Adequacy Plans by State utilities, under which energy storage has been incorporated as a key planning resource for meeting peak demand and ensuring system reliability.
- 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.
- To enhance safety and reliability of BESS installations and standardise design and construction practices, Draft CEA (Measures Relating to Safety and Electric Supply) (First Amendment) Regulations, 2025 and Draft Technical Standards for Construction of BESS Regulations, 2025 have been issued.

iii. Grid Modernization:

- Under GEC Phase-I Scheme, Transmission Corporation of Tamil Nadu Limited (TANTRANSCO) has implemented commissioning of 1068 ckm transmission lines and 2250 MVA capacity substations, for evacuation of approx. 1300 MW of RE within the State. Total funds of Rs.529.282 crore have been disbursed to TANTRANSCO under the Scheme.
- Under GEC Phase-II Scheme, Tamil Nadu has been sanctioned setting up of 624 ckm of transmission lines and 2200 MVA capacity substations for evacuation of approx. 4000 MW RE in the State. The estimated project cost for Tamil Nadu is Rs. 719.76 crore and the central grant @33% of the project cost is Rs. 237.52 crore.

iv. Green Hydrogen:

The details of projects being implemented in Tamil Nadu, under the National Green Hydrogen Mission (NGHM) are as follows:

S. No.	Project	Location	Implementing Agency
1	Pilot Bunkering and refueling facility for Green Methanol at V.O. Chidambaranar Port	V.O. Chidambaranar Port (Tuticorin, Tamil Nadu)	V.O. Chidambaranar Port Authority
2	Development and Demonstration of Hydrogen fueled Internal Combustion Engine for Agricultural tractor	Chennai, Tamil Nadu	Mahindra and Mahindra Ltd

3	Green Hydrogen Generation via Direct seawater electrolysis: A systematic bottom-up approach using selective electrocatalyst and electrochemical cell designs	Karaikudi, Tamil Nadu	CSIR-Central Electrochemical Research Institute, Karaikudi
4	A Supramolecular Approach to Improve the Stability and Efficiency of Alkaline Electrolyzer Membranes	Chennai, Tamil Nadu	SRM Institute of Science & Technology, Chennai
5	Clean Hydrogen: Enhancing Hydrogen Purity through Advanced Adsorption Purification	Karaikudi, Tamil Nadu	CSIR-Central Electrochemical Research Institute, Karaikudi
6	Fabrication of 200 kW Alkaline Water Electrolyser	Karaikudi, Tamil Nadu	CSIR-Central ElectroChemical Research Institute
7	Advanced Materials for 700-bar Hydrogen Storage	Madurai, Tamil Nadu	Gudlyf Mobility Pvt. Ltd.
