नवीन एवं
नवीकरणीय ऊर्जा मंत्रालय
MINISTRY OF
NEW AND
RENEWABLE ENERGY
सत्यमेव जयते

MINISTRY OF NEW AND RENEWABLE ENERGY







ANNUAL REPORT 2025-26

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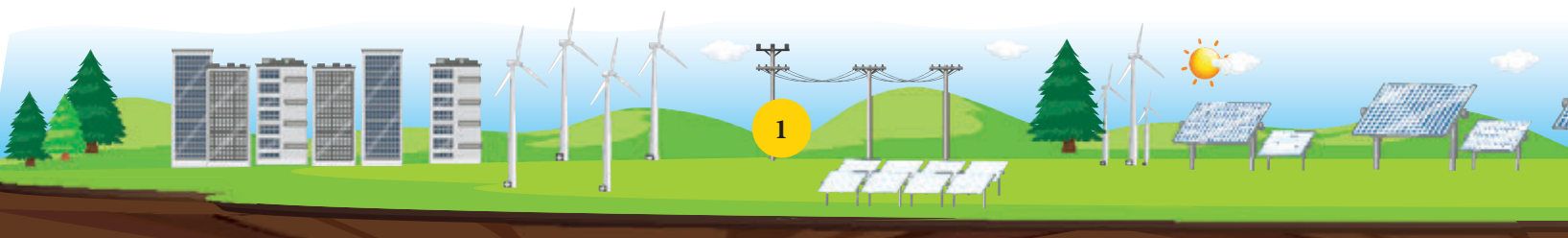
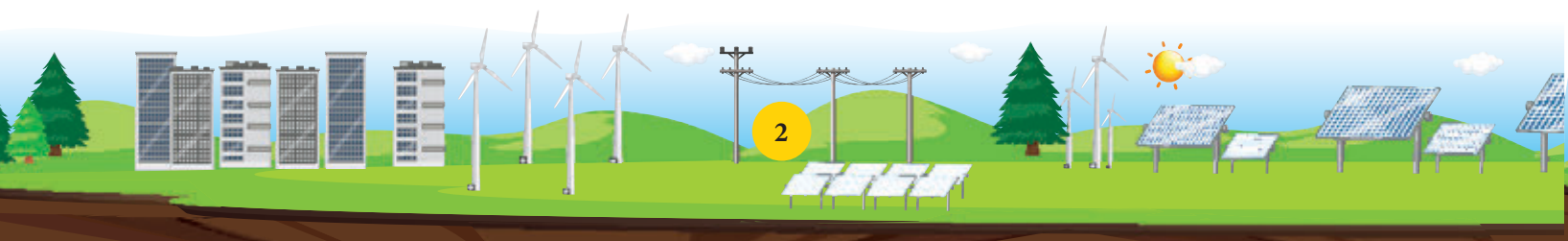




Overview – Summary

1.1 Commitments And Achievements

In line with the Prime Minister Shri Narendra Modi's vision articulated in the Panchamrit Goals, India continued its accelerated transition towards clean energy in 2025, recording its highest-ever annual expansion in renewable energy capacity and achieving multiple structural milestones well ahead of national and international timelines.

India achieved a landmark milestone in June 2025 by sourcing 50 per cent of its cumulative installed electricity capacity from non-fossil fuel sources, five years ahead of its 2030 Nationally Determined Contribution (NDC) commitment under the Paris Agreement. This momentum continued through the year, with India crossing the 250 GW non-fossil installed capacity milestone in August 2025.

As of December 2025, India's total renewable installed capacity stood at 258 GW, accounting for 50.2 per cent of the country's total electricity installed capacity of 513.7 GW. This is an increase of over 23 per cent compared to 209.4 GW in December 2024.

The year witnessed the highest-ever renewable energy capacity addition, with 48.6 GW added during 2025, nearly doubling the capacity addition during the corresponding period in 2024.

Table 1.1: Sector-wise Achievements (as on 31.12.2025)

Sector-wise Achievements (as on 31.12.2025)	
Sector	**Installed Capacity (GW)**
Solar Power	135.81
Wind Power	54.51
Bio Energy	11.61
Small Hydro Power	5.16
Sub-Total	207.09
Large Hydro Power	50.91
Total	258.00

On 29 July 2025, India recorded its highest-ever share of renewable energy in daily electricity generation, with renewables meeting 51.5 per cent of the country's total electricity demand of 203 GW on that day.

According to IRENA Renewable Energy Statistics 2026 (data as of 31.12.2025), India globally ranks 3rd in total renewable energy installed capacity, 3rd in solar power capacity and , 4th in wind power capacity, underscoring its growing global leadership in clean energy deployment.

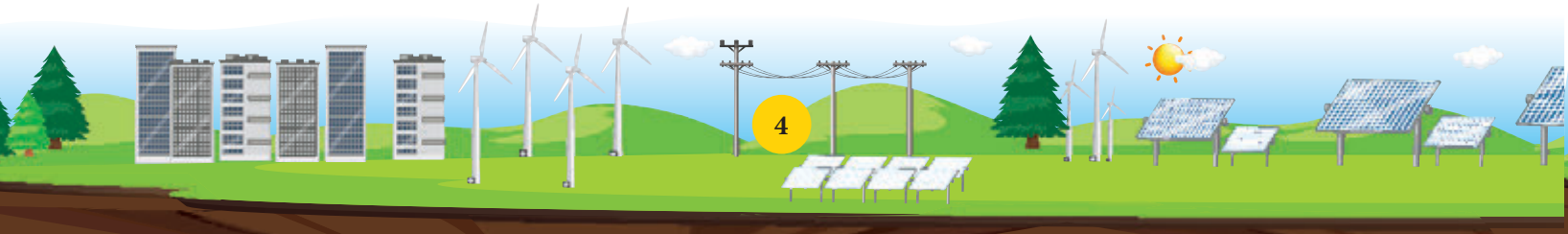
Solar energy emerged as the principal driver of growth in 2025. The country crossed the 100 GW solar milestone in January 2025, with Renewable Energy installed solar capacity reaching 135.81 GW in December 2025, an increase of over 38.8 per cent from 97.86 GW in 2024. Wind energy also recorded significant progress. Installed wind capacity crossed the 50 GW milestone in March 2025 and reached 54.51 GW in December 2025.

Citizen-centric energy transition remained a key focus in 2025. PM Surya Ghar: Muft Bijli Yojana continued as a cornerstone initiative to promote rooftop solar adoption. Flagship initiatives such as PM KUSUM continued to gather momentum, enabling the expansion of decentralised renewable energy in the agriculture sector and strengthening energy access at the grassroots level. These efforts reflected the Ministry's emphasis on inclusive growth, climate resilience and farmer-centric solutions as integral elements of India's broader energy transition.

India alone is expected to require around Rs 30 lakh crore by 2030, creating significant opportunities across renewable generation, battery storage, green hydrogen, transmission & infrastructure and Renewable Energy manufacturing. With stable policies and transparent markets, India continues to remain one of the most attractive destinations for clean energy investment.

The year also marked a decisive shift from planning to implementation under the National Green Hydrogen Mission. Progress during 2025 spanned pilot deployments across key industrial and mobility sectors, development of certification and standards frameworks, and strengthening of research, testing and skill-building ecosystems. Dedicated national and international platforms, including the 3rd International Conference on Green Hydrogen (ICGH 2025), were convened to foster dialogue among governments, industry, research institutions and startups, supporting the emergence of a globally competitive green hydrogen ecosystem.

India further reinforced its global leadership in clean energy through active international engagement and knowledge sharing. The Ministry strengthened bilateral and multilateral cooperation, participated in leading global forums such as the World Hydrogen Summit and European Hydrogen Week, and hosted the 8th International Solar Alliance Assembly, advancing collaborative initiatives including One Sun One World One Grid (OSOWOG) and support for Small Island Developing States (SIDS). Together, these engagements underscored India's role as a trusted partner and convenor in advancing a just, inclusive and sustainable global energy transition.



A tableau of the Ministry of New and Renewable Energy participated in the Republic Day Parade at Kartavya Path, New Delhi. The Vibrant display offered a glimpse into India's evolving energy landscape, highlighting its groundbreaking strides in renewable energy while celebrating the nation's deep cultural heritage. Eight hundred special invitees, comprising beneficiaries of PM Surya Ghar: Muft Bijli Yojana, PM KUSUM and RE technicians invited by the Ministry, were among the first to witness the unique portrayal of India's path to a sustainable and self-reliant future.

Fig. 1.1: Tableau of the Ministry of New and Renewable Energy participated in the Republic Day Parade 2025

The year 2025 stood out as a watershed moment in India's energy transition, defined not only by record capacity additions, but by structural shifts in generation mix, decentralised adoption, industrial decarbonisation, and global leadership. India's clean energy transition has firmly moved from ambition to irreversible momentum.

1.2 Various RE Sectors Schemes

The section outlines achievements under various schemes of the Ministry during the year.

1.2.1 Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM KUSUM) for Decentralised Solar Application in the Agricultural Sector

During the year 2025, concerted efforts were undertaken under the PM KUSUM Scheme to expedite implementation, enhance awareness, and strengthen capacity building, resulting in significant progress on both physical and financial fronts. As on 31.12.2025, a cumulative 720.91 MW of solar power capacity has been installed under Component-A; over 9.75 lakh standalone solar agricultural pumps have been installed under Component-B; and over 12.01 lakh grid-connected agricultural pumps have been solarized under Component-C.

During 2025 alone, Component-A recorded an installed capacity addition of around 323.93 MW. Under Components B and C, more than 14.48 lakh agricultural pumps were installed / solarized during the year, which is nearly three times the installation/solarization achieved in the previous year. Cumulatively, a total of 10,946 MW solar capacity has been installed under the scheme, of

which 7,261 MW (around 66%) was installed during 2025. During the Seva Parv period from 17-09-2025 to 02-10-2025, implementation was undertaken in mission mode, resulting in installation/solarization of more than 2 lakh pumps during that duration.

Financially, the expenditure under PM KUSUM during 2025 stood at ₹3,560 crore so far, which constitutes approximately 44% of the total funds released under the Scheme since its launch.

1.2.2 The Pradhan Mantri Surya Ghar: Muft Bijli Yojana (PMSG: MBY)

The PM Surya Ghar: Muft Bijli Yojana (PMSG: MBY) has been launched in February 2024 with the objective of achieving rooftop solar (RTS) installations in one crore residential households across the country by FY 2026–27, with a total outlay of ₹75,021 crore. The Scheme is demand-driven in nature and enables all residential consumers with grid-connected electricity connections of the local DISCOM to avail its benefits by applying through the National Portal of the Scheme.

Under the scheme, 55.62 lakh applications have been submitted on National Portal, and 26.05 lakh households have been benefited with installation of rooftop solar as on 31-12-2025. An amount of Rs. 14,771 Crores has been disbursed as CFA to 18.81 Lakh beneficiaries. The accelerated pace of installations reflects strong consumer response, streamlined digital processes, and enhanced coordination with States and DISCOMs, reinforcing the Scheme's role as a key driver of decentralized renewable energy adoption in the residential sector.

1.2.3 Central Public Sector Undertaking (CPSU) Scheme for Grid-Connected Solar Photovoltaic (PV) Power Projects:

As of 31.12.2025, around 8.2 GW of projects have been awarded under this scheme, with around 5.4 GW commissioned and balance is under implementation.

1.2.4 Development of Solar Parks and Ultra Mega Solar Power Projects As on 31-12-2025

Under this scheme, 55 Solar Parks of cumulative capacity 39,973 MW in 13 States have been approved, of which 18 solar parks with an aggregate capacity 10,856 MW have been fully developed and 8 Solar Parks of aggregate capacity 10,043 MW partially developed. Solar Projects of total capacity 15,293 MW have been commissioned in 26 parks.

1.2.5 PLI Scheme: 'National Programme on High-Efficiency Solar PV Modules'

Ministry of New and Renewable Energy, Government of India is implementing the Production Linked Incentive (PLI) Scheme for National Programme on High Efficiency Solar PV Modules, with an outlay of Rs. 24,000 crores. 48,337 MW fully/ partially integrated solar PV module manufacturing capacities have been awarded under the Scheme and are under implementation.

1.2.6 Green Energy Corridor

As on 31.12.2025, 9170 ckm of intra-state transmission lines have been constructed, and 22116 MVA intra-state substations have been charged, under Phase-I of the Intra State Transmission System (InSTS) Green Energy Corridor (GEC). Additionally, a central grant of Rs. 2839.104 crore has been disbursed to the States under this Phase.

Under Phase-II of the InSTS GEC, 75 out of 91 packages have been tendered as on 31.12.2025, of which 73 packages have been awarded, with Rs. 1056.116 crore disbursed to the States.

1.2.7 Human Resource Development Programme

Under the Human resource Development programme, a cumulative total of 66,351 no. Suryamitras (Solar PV Technicians) have been trained as of 31.12.2025 out of which 33,705 no. candidates have gained employment. Ministry's Jal-Urjamitra Skill Development Programme coordinated by IIT-Roorkee has trained 961 candidates as Jal-urjamitras and 66 trainers as of 31.12.2025. Under Vayu Mitra Skill Development Programme Phase-1, 281 trainers and 2160 participants were trained.

1.2.8 Renewable Energy Research and Technology Development (RE-RTD) Programme

In the area of advanced solar technologies, significant progress was achieved under MNRE-supported research initiatives. An MNRE-sponsored project at IIT Bombay developed a perovskite solar cell with the world's second-highest efficiency of 26% and achieved a power conversion efficiency of 30.2% for a four-terminal perovskite–silicon tandem solar cell, marking a major breakthrough in next-generation photovoltaic technologies.

Further strengthening India's technical capabilities, CSIR–National Physical Laboratory (CSIR-NPL) established the country's first National Primary Standard Facility for Solar Cell Calibration, achieving a world-leading measurement uncertainty of 0.35% (highest accuracy). This milestone significantly enhances precision, credibility, and self-reliance in solar metrology and testing infrastructure.

1.2.9 Solar-Wind Hybrid

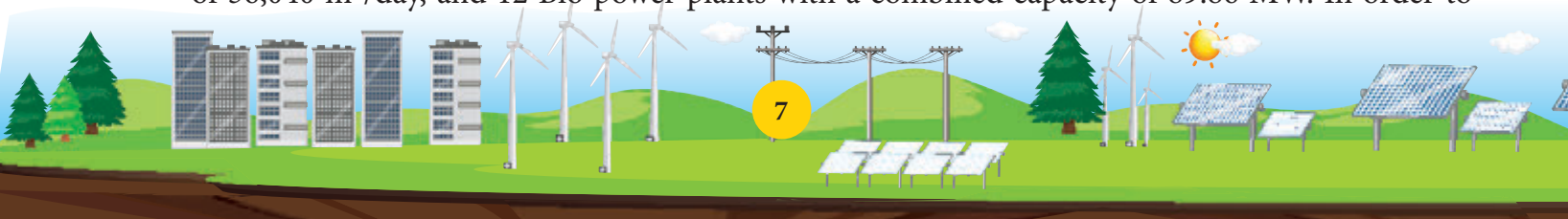
Revised 'Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Wind Solar Hybrid Projects' was issued on 21.08.2023 to promote renewable capacity additions and RPO fulfilment, facilitate a transparent and fair procurement of electricity through competitive means; provide for a standardized framework for an Intermediary Procurer as an Aggregator/Trader; and provide a risk-sharing framework between various stakeholders.

1.2.10 Wind Energy

India has the fourth highest wind installed capacity in the world. A capacity of 6.34 GW was added during the year 2025 compared to 3.2 GW during the same period in 2024. Wind energy installed capacity crossed 50 GW mark in March, 2025. The wind energy installed capacity has reached 54.51 GW in December, 2025 which is an increase of over 13.1% as compared to December, 2024, when the capacity was 48.16 GW.

1.2.11 Bioenergy

During 2025, the bioenergy sector registered steady progress with the commissioning of 59 Compressed Biogas (CBG) plants having a cumulative capacity of 684.33 TPD, 8 Biomass Pellet/ Briquette plants with a total capacity of 21.5 TPH, 4 Biogas plants with an aggregate capacity of 56,040 m^3/day, and 12 Bio power plants with a combined capacity of 89.86 MW. In order to



strengthen stakeholder engagement and promote sectoral growth, the Ministry conducted nine capacity-building and awareness workshops on "Organic Biomethanation and its Application" for banks, financial institutions, biogas/CBG plant developers, and other relevant stakeholders, in collaboration with UNIDO and TERI.

The Ministry also observed National Biofuel Day on 10 August in collaboration with the Indian Federation of Green Energy, and organised a workshop on "Unlocking Alternative Markets for Bagasse Utilisation" on 23.06.2025 in partnership with the India Sugar & Bioenergy Manufacturers Association. These initiatives contributed to enhancing awareness, expanding market linkages, and supporting sustainable growth of the bioenergy ecosystem.

1.2.12 National Green Hydrogen Mission

The Green Hydrogen Mission, was launched on 04.01.2023, with an outlay of INR 19,744 crore from 2023-24 to 2029-30, including an outlay of Rs. 17,490 crore for the Strategic Interventions for Green Hydrogen Transition (SIGHT) programme, Rs. 1,466 crore for pilot projects, Rs. 400 crore for R&D, and Rs. 388 crore towards other Mission components.

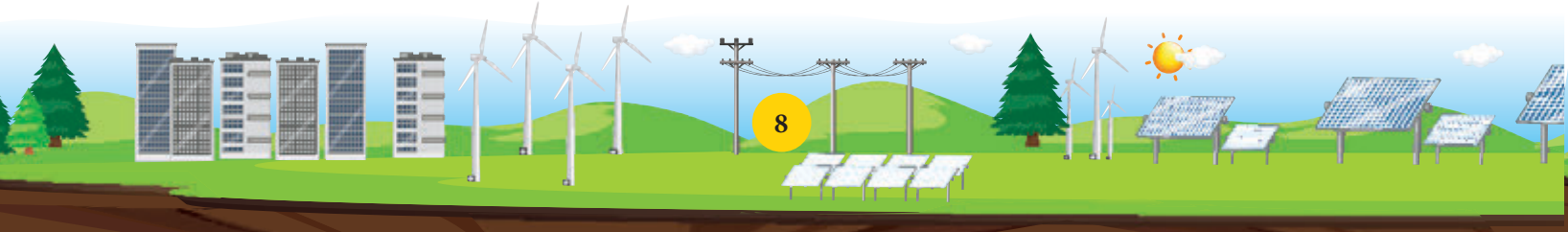
During 2025, the National Green Hydrogen Mission recorded significant progress in production, industrial adoption, and ecosystem development. Incentives were awarded for 4,50,000 TPA of Green Hydrogen production with a financial allocation of approximately ₹2,239 crore. SECI discovered prices for 7,24,000 TPA of Green Ammonia supply to fertilizer units with allocated support of about ₹1,534 crore, achieving one of the lowest globally discovered weighted average prices of ₹53.27 per kilogram. Projects were also awarded for supply of 20,000 MTPA of Green Hydrogen to IOCL, BPCL, and HPCL refineries.

In the steel sector, four pilot projects have been sanctioned with a total funding support of about ₹106 crore to promote hydrogen-based decarbonisation. In the mobility sector, a pilot project has been awarded for deployment of a hydrogen-fuelled vehicle along with a hydrogen refuelling station, with a fund sanction of approximately ₹17 crore. Further strengthening infrastructure, a project has been sanctioned for development of bunkering and refuelling facilities at V.O. Chidambaranar Port Authority, Tuticorin, with a financial support of ₹35 crore.

To build a robust innovation ecosystem, twenty-three R&D projects have been awarded under the Mission with total funding of about ₹115 crore. Five projects have been sanctioned for developing testing facilities across the Green Hydrogen value chain, with a fund allocation of approximately ₹114 crore. Four projects have been selected for development as Hydrogen Valley Innovation Clusters (HVICs), with sanctioned funding of around ₹170 crore.

1.3 New Initiatives

Apart from the progress achieved under the schemes outlined in Section 1.2, the Ministry introduced policy reforms and enablers to push progress in segments like green hydrogen, offshore wind, solar rooftop, decentralized renewables, and geothermal energy. Key examples are noted below:



1.3.1 Wind Turbine Testing & Certification Framework

To promote indigenous innovation and strengthen testing infrastructure, the Ministry issued the Revised Guidelines for installation of prototype wind turbine models on 12.06.2025. The guidelines facilitate installation of a limited number of prototype wind turbines to support testing, validation, and certification within the country. This measure is aimed at accelerating technology development and enhancing domestic capability in wind turbine design and performance evaluation.

1.3.2 ALMM–Wind and Component Manufacturing Reforms

On 31.07.2025, amendments were issued to the procedure for inclusion and updating of wind turbine models in the Revised List of Models and Manufacturers (RLMM), which has been renamed as the Approved List of Models and Manufacturers (ALMM–Wind). The revised framework mandates the use of listed critical components such as blades, towers, generators, gearboxes, and special bearings (main, pitch, and yaw bearings). It also introduces important data security provisions, including mandatory relocation of data centres within India and prohibition of real-time data transfer outside the country.

Further, the Standard Operating Procedure (SOP) for ALMM–Wind and ALMM–Wind Turbine Components (WTC) was issued on 29.10.2025, providing a detailed end-to-end process for application, verification, factory inspection, and model enlistment. These reforms collectively strengthen domestic manufacturing, ensure supply-chain integrity, and enhance quality assurance and cybersecurity in the wind energy sector.

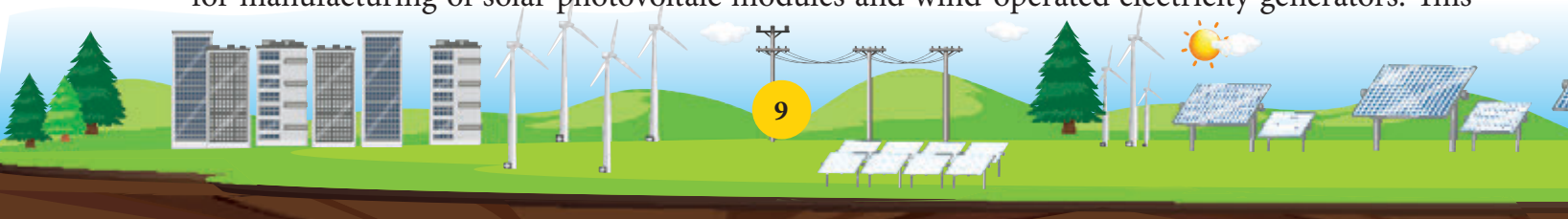
1.3.3 GST Rationalisation for Solar Energy Devices:

With effect from 22.09.2025, the Goods and Services Tax (GST) rate has been reduced from 12% to 5% on specified solar energy devices and their parts used for manufacture. The revised rate applies, inter alia, to solar power-based devices, solar power generators, solar lanterns/solar lamps, and photovoltaic cells (whether or not assembled in modules or made up into panels). This measure is expected to lower costs, enhance affordability, and further accelerate the adoption of solar energy systems across the country.

1.3.4 Regulatory Strengthening and Import Monitoring:

In January 2025, the Ministry notified the Solar Systems, Devices and Components Goods Order, 2025, which revises and supersedes the earlier Solar Photovoltaic Systems, Devices and Components Goods (Requirements for Compulsory Registration) Order, 2017. The new Order expands and streamlines the regulatory framework and covers Solar PV modules, inverters used in Solar PV applications, and storage batteries, thereby strengthening quality assurance and compliance standards across the solar value chain.

Further, the Renewable Energy Equipment Import Monitoring System (REEIMS) portal was introduced pursuant to DGFT Notification No. 40/2025-56 dated 10.10.2025, effective from 01.11.2025. The REEIMS portal facilitates monitoring of specified items and components imported for manufacturing of solar photovoltaic modules and wind-operated electricity generators. This



initiative enhances data transparency, supports evidence-based policymaking, and strengthens domestic manufacturing planning and supply-chain visibility.

1.3.5 Expansion of Domestic Solar Manufacturing Capacity

India continued to witness robust growth in domestic solar manufacturing during 2025. Indigenous solar module manufacturing capacity under the Approved List of Models and Manufacturers (ALMM) for Solar Modules reached approximately 144 GW per annum, with about 81 GW added during calendar year 2025 alone. This reflects an impressive year-on-year growth of nearly 99% compared to the addition of around 41 GW in 2024, underscoring the rapid scale-up of domestic production capacity.

Further strengthening the upstream manufacturing ecosystem, MNRE issued the ALMM List-II (for Solar Cells) on 31.07.2025. As of now, approximately 24 GW of solar cell manufacturing capacity has been enlisted under ALMM List-II, marking a significant step toward enhancing self-reliance across the solar value chain.

1.3.6 New Solar Power Scheme (for Tribal and PVTG Habitations/Villages)

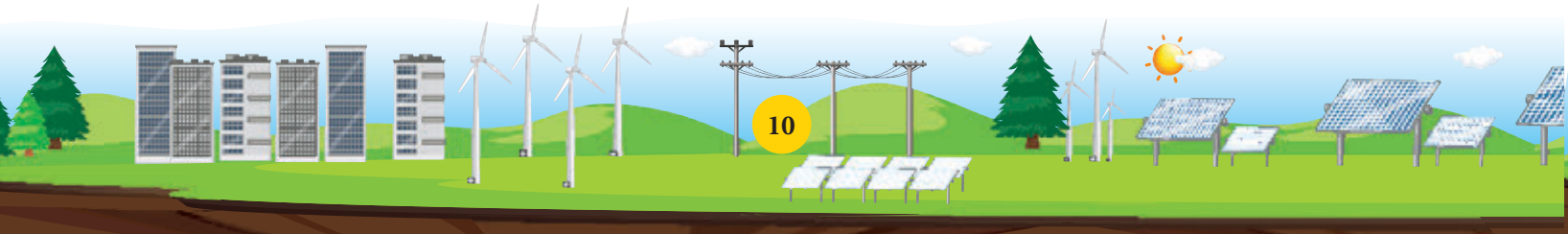
The New Solar Power Scheme (for PVTG Habitations/Villages) under Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN) was issued on 04.01.2024. On 18.10.2024, the scheme was revised to include other tribal habitations/villages and renamed as New Solar Power Scheme (for Tribal and PVTG Habitations/Villages) under Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN) and Dharti Aabha Janjatiya Gram Utkarsh Abhiyan (DA JGUA).

The scheme aims to cover electrification of One Lakh un-electrified households (HHs) in Tribal and PVTG areas identified by Ministry of Tribal Affairs (MoTA) by provision of off-grid solar systems. The scheme also includes a provision for providing off-grid solar lighting in 1500 Multi-Purpose Centres (MPCs) in PVTG areas under PM JANMAN and solarisation of 2000 Public Institutions through off-grid solar systems under DA JGUA. The off-grid solar systems are provided only where electricity supply through conventional grid is not techno-economically feasible.

Based on the proposals received from state implementing agencies the Scheme, Ministry has sanctioned electrification of total 12,922 nos. of (8823 under PM JANMAN Component + 4099 under DA JGUA Component) PVTG and Tribal households have been sanctioned till 31.12.2025, of which 6,897 households are reported electrified. Further, 8 nos. of Public Institution have been sanctioned in Assam for electrification under DA JGUA.

1.3.7 Green Hydrogen Certification Scheme

The Green Hydrogen Certification Scheme of India (GHCI) was launched in April 2025, and 128 standards (cumulative since the launch of the Mission) have been published or adopted across the Green Hydrogen value chain. In the area of skill development, 43 Qualification Packs have been



approved by the National Council for Vocational Education and Training (NCVET), and 6,541 trainees have been certified cumulatively since inception of the Mission.

Strategic partnerships and stakeholder engagement were further strengthened during the year. The National Institute of Solar Energy (NISE), Gurugram, signed a Memorandum of Understanding with Toyota Kirloskar Motor for a pilot project on hydrogen use in the mobility sector. A national workshop focusing on the role of Micro, Small and Medium Enterprises (MSMEs) in India's Green Hydrogen ecosystem was organised on 29.04.2025 in New Delhi to accelerate MSME participation. The Ministry also organised the inaugural Green Hydrogen R&D Conference 2025 on 11–12 September 2025 in New Delhi, during which a Call for Proposals was launched to support hydrogen-focused start-ups. A start-up expo featuring 25 DPIIT-registered start-ups showcasing cutting-edge innovations was held alongside the conference.

1.3.8 National Policy 2025 on Geothermal Energy

The MNRE after due consultation with relevant ministries & agencies including with Ministry of Petroleum & Natural Gas, DG Hydrocarbons, ONGC, Oil India Ltd., notified National Policy on Geothermal Energy (2025) on 15.09.2025 to accelerate clean energy transition, supporting India's Net Zero 2070 Commitment. This policy aims to harness untapped potential through Research, Innovation, Technology, Ecosystem Development, Capacity Development and Partnerships.

1.4 International Cooperation

The Ministry has been actively engaging with various countries through bilateral and multilateral engagements for promoting international cooperation in development & deployment of Renewable Energy in the country. In this process, a series of Joint Working Group meetings, Task Force engagements, and other bilateral and multilateral consultations were carried out with partner countries including Japan, the United Kingdom, Tajikistan, Egypt, Norway, Portugal, Australia, Germany, Sri Lanka, and Denmark to identify priority areas and formulate joint activities in Renewable Energy collaboration. Memorandums of Understanding and Joint Declarations of Intent were signed with Brazil, Japan, Bhutan, and Jordan, the Ministry which will further strengthen bilateral cooperation in Clean / Green Hydrogen, Green Ammonia, and Renewable Energy.

India also deepened its multilateral engagement through active participation in the 8th International Solar Alliance (ISA) Assembly held in New Delhi, which witnessed high-level participation from 137 countries and 36 organizations. Key milestones included the launch of important ISA knowledge products, operationalisation of the One Sun One World One Grid (OSOWOG) roadmap, adoption of the Global SIDS Initiative Declaration, and the launch of new initiatives such as the ISA Global Capability Center, the ISA Academy, and the SUNRISE Community of Practice. These engagements reinforced India's role as a leading convener and trusted partner in advancing Global Renewable Energy cooperation.

MNRE Snapshot

2.1 Introduction

In 1982, a separate Department of Non-Conventional Energy Sources (DNES) was created in the Ministry of Energy to look after all the aspects relating to New and Renewable Energy. The Department was upgraded into a separate Ministry of Non-Conventional Energy Sources (MNES) in 1992 and was renamed as Ministry of New and Renewable Energy (MNRE), in October 2006.

2.2 Allocation Of Business Rules

As per distribution of subjects among the Ministries/Departments under allocation of Business rules, following subjects have been allocated to the Ministry of New and Renewable Energy (Naveen aur Navikarniya Urja Mantralaya).

1. Research and development of bio-gas and programmes relating to bio-gas units.
2. Commission for Additional Sources of Energy (CASE).
3. Solar Energy - including photovoltaic devices and their development, production and applications.
4. All matters relating to small/mini/micro hydel projects of and below 25 MW capacity.
5. Programmes relating to improved chulhas and research and development thereof.
6. Indian Renewable Energy Development Agency.
7. Research and development of other non-conventional/renewable sources of energy and programmes relating thereto.
8. Tidal Energy.
9. Integrated Rural Energy Programme (IREP).
10. Geothermal Energy.

2.3 Structure Of The Ministry

Sh. Santosh Kumar Sarangi, IAS (Odisha:1994) is the Secretary of the Ministry of New & Renewable Energy with effect from 21.04.2025. The Ministry has One Additional Secretary, Three Joint Secretaries, One JS & FA, One Mission Director (National Green Hydrogen Mission), One Economic Advisor, One Deputy Director General as on 31.12.2025.

2.4 Institutions Under The Ministry

The Ministry is supported by three autonomous bodies i.e. National Institute of Solar Energy (NISE), National Institute of Wind Energy (NIWE) and Sardar Swaran Singh - National Institute of Bio Energy (SSS-NIBE) and two public sector undertakings i.e. Indian Renewable Energy Development Agency (IREDA) and Solar Energy Corporation of India (SECI). NISE is located at Gurugram, Haryana and serves as the technical focal point for research and development in solar energy sector. NIWE is located at Chennai, Tamil Nadu and serves as the technical focal point for research & development in wind energy sector. SSS-NIBE is located at Kapurthala, Punjab and is focusing on research & development in bio energy sector. IREDA, a Non-Banking Financial Institution under the administrative control of this Ministry, provides term-loans for renewable energy and energy efficiency projects. SECI functions as the implementing and executing arm of the Ministry for implementation of the National Solar Mission and Wind energy projects. In addition, the Department of Hydro and Renewable Energy (HRED) formerly known as the Alternate Hydro Energy Centre (AHEC), Indian Institute of Technology, Roorkee provides technical support for small hydro power development. However, HRED is not an institution under the control of the Ministry.

2.5 Public Grievances Redressal

Grievances are received in the Ministry through President's Secretariat, Prime Minister's Office, Department of Administrative Reforms and Public Grievances (DARPG), other Ministries/ Departments and from the individuals concerned on MNRE's Window of CPGRAMS portal of DARPG. With a view to deliver expeditious redressal of grievances in a responsible and effective manner, the following measures have been put in place in the MNRE: -

i. Sh. Pankaj Gupta, Deputy Secretary has been designated as Liaison Officer for SC/ST/OBC for implementation of scheme of reservation for persons of Schedule Caste (SC)/ Scheduled Tribe (ST)/ Other Backward Class (OBC) categories.

ii. A committee has been constituted to enquire into the complaints of sexual harassment for any of the women working in this Ministry.

iii. DARPG has undertaken a comprehensive reform for the Centralized Public Grievance Redress and Monitoring System (CPGRAMS) to make it more responsive to the need of the citizens. In this regard, DARPG has introduced several measures for strengthening CPGRAM, viz. monitoring dashboards for stakeholders' facilities deeper analysis of grievance, universalization of CPGRAMS version 7.0 for auto-routing of grievances to last mile etc.

iv. Time Frame for Redressal of the Grievance/petition is within a maximum period of 21 days.

India's Solar Journey

3.1 PM Surya Ghar: Muft Bijli Yojana (PMSG: MBY)

3.1.1 About PMSG: MBY

The Ministry of New and Renewable Energy (MNRE) is implementing PM Surya Ghar Muft Bijli Yojana (PMSG: MBY) since February 2024 with an aim to achieve rooftop solar (RTS) installations in one crore households in the residential sector by FY 2026-27.

The PMSG: MBY is a demand-driven scheme wherein all residential consumers in the country, having a grid-connected electricity connection with the local DISCOM, can avail the benefits of the scheme, for installation of RTS systems by applying on the National Portal of the scheme (https://pmsuryaghar.gov.in).

3.1.2 Aim and Objectives of PMSG: MBY:

i. To achieve 1 crore rooftop solar (RTS) installations in residential sector.

ii. To help provide free/low-cost electricity to 1 crore households up to 300 units of electricity per month by installation of RTS.

iii. To produce renewable electricity of 1 lakh crore units through the solar capacity installed under the scheme, which will result in reduction of 72 crore ton of CO2eq emission during the 25 years of lifetime for RTS projects.

iv. To develop the required enabling ecosystem for RTS projects, including regulatory support, manufacturing facilities, supply chain, vendor network, operation & maintenance facilities, etc., in the country.

v. To boost local economy and employment generation along with enhanced energy security.

vi. To aid in achievement of India's commitment for green climate through its NDCs (Nationally Determined Contributions) at UNFCCC by installation of 30 GW of solar capacity through RTS by 2026-27.

3.1.3 The Financial Outlay for the scheme includes the following components: -

Sr. No.	Scheme Component	Outlay
1.	CFA to Residential Consumers	₹ 65,700 crore
2.	Incentives for Discoms	₹ 4,950 crore

3.	Model Solar Villages in each district	₹ 800 crore
4.	Incentives for Local Bodies	₹ 1000 crore
5.	Payment Security Mechanism	₹ 100 crore
6.	Innovative Projects	₹ 500 crore
7.	Capacity Building (1% of CFA)	₹ 657 crore
8.	Awareness & Outreach (1% of CFA)	₹ 657 crore
9.	Service Charge (1% of CFA)	₹ 657 crore
	Total	₹ 75,021 crore

3.1.4 REC limited has been designated as the National Programme Implementing Agency (NPIA) and DISCOMs/Electricity Departments, as the case may be, will be the State Implementation Agencies (SIA).

3.1.5 Scheme Components

a. **CFA to Residential Consumers:** The scheme provides central financial assistance (CFA) for RTS capacity upto 3 kW per household as per details given below:

Sr. No.	Type of Residential Segment	CFA	CFA (Special Category States)*
1.	Residential Sector (first 2 kWp)	Rs 30,000/kWp	Rs 33,000/kWp
2.	Residential Sector (additional 1 kWp)	Rs 18,000/kWp	Rs 19,800/kWp
3.	Residential Sector (above 3 kWp)	No additional CFA	No additional CFA
4.	GHS/RWA etc, for common facilities for up to 500 kWp (@3 kWp per house)	Rs 18,000/kWp	Rs 19,800/kWp

*The benchmark cost is 10% higher for Special category States/UTs (Uttarakhand, Himachal Pradesh, J&K, Ladakh, States in the North East including Sikkim, UTs of A&N and Lakshadweep).

To avail CFA, it is mandatory to install solar modules manufactured in the country using domestically manufactured solar cells. Further, Ministry has approved list of modules and manufacturers (ALMM) and it is mandatory to procure solar modules only that are approved under the ALMM.

b. **Incentive to DISCOMs:** The objective of incentivising DISCOMs is to motivate towards installation of RTS. These incentives will help DISCOMs in carrying out activities to promote installation of RTS including regulatory and administrative mechanisms. The total financial outlay for incentives to DISCOM component is Rs. 4,950 crores. The incentives will be 5% of applicable benchmark cost for capacity achieved above 10% and less than 15% of the installed base capacity and 10% of the applicable benchmark cost for capacity achieved beyond 15% of the installed base capacity.

c. **Model Solar Village:** The objective is to solarize one village per district and promote uptake of solar rooftops in India. The scheme would promote green and clean energy access to electricity in the villages. An amount of ₹ 800 crore has been allocated for this component with a provision of central financial assistance of ₹ 1 crore per model village.

d. **Incentive to Local Bodies:** The objective is to incentivize Urban Local Bodies (ULBs) & Panchayat Raj Institutions (PRIs) and push the deployment of residential RTS and undertake local mobilization efforts. Rs 1000 crore is allocated for this component. Every installation in residential segment in the jurisdiction of ULB or PRI, for which CFA has been transferred to consumer will be considered for calculating the incentive @ ₹1,000 per installation.

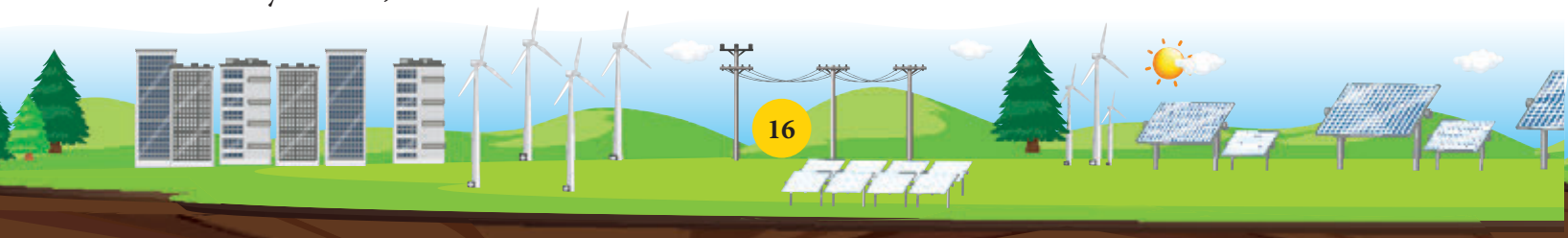
e. **Payment Security Mechanism (PSM):** Provision of Rs 100 crores to set up suitable PSM for upscaling RESCO model. The payment security fund will insulate RESCO players from delays in settlement of payments from the DISCOMs/contracting party.

f. **Support for Innovative Projects:** Allocation of Rs 500 Cr has been provisioned to implement pilots for innovations such as Block chain-based peer to peer RTS, Digital solutions for RTS, Smart building materials, RTS with EVs, Grid responsive RTS with battery storage solutions, DISCOM IT systems for RTS management, and promote new & innovative business models, (Behind the Meter Storage, Rent-A-Roof Models, Peer to Peer Sale of electricity etc.)

g. **Capacity Building:** The objective is to create more than 3 lakh skilled manpower, through fresh skilling, and up-skilling, out of which at least 1 lakh will be Solar PV Technicians. An outlay of 1% of CFA for residential consumers i.e., Rs 657 crore is allocated for Capacity Building. The National Programme Implementing Agency (NPIA) and State Implementation Agencies (SIA) which will formulate a Skilling and Capacity Building Action Plan with the approval of MNRE. Training agencies for capacity building include National Institute of Solar Energy (NISE), MSDE identified Agencies, National Power Training Institute (NPTI), Tata Power Skills Development Institute, TERI and State Institutions.

h. **Awareness and Outreach:** The objective is to create awareness among electricity consumers with focus on residential sector and to encourage residential consumers to participate in rooftop PV system installation while educating them about the process. The Financial Outlay for the scheme includes a component on Awareness and outreach with a financial budget of Rs 657 crore. NPIA and SIA are responsible to implement this component at National and State level respectively.

i. **Service Charges:** Provision of Rs. 657 Cr as service charges to national/state implementing agencies for activities including, Demand aggregation activities; Operation of IT System; Creation of working RTS cell/PMUs/PMCs in DISCOMs, SECI and MNRE; Registration process management; Availability and streamlining the process of net-metering /billing; Inspection, monitoring, development of online portal; 3rd party verification of the projects by MNRE, etc.



3.1.6 Key Elements: PM Surya Ghar: Muft Bijli Yojana

a. **National Portal:** The scheme is being implemented through the National Portal (https://www.pmsuryaghar.gov.in) where all consumers can apply, select vendors, mutually decide rate of installation and after due approvals and inspection of system, are eligible for the subsidy claim as per the installed capacity of the RTS system.

b. **Vendor Registration and Empanelment:** Vendors has to register with the beneficiaries' Distribution Utility (DISCOM) by submitting an application with a declaration and a Performance Bank Guarantee (PBG) of ₹2.5 lakh. The vendor is responsible to:

- Conduct a physical survey to assess the RTS capacity.
- Guide beneficiaries on the technical and financial aspects.
- Assist in obtaining necessary approvals and installing net-meters.
- Ensure compliance with technical standards and provide maintenance for five years.

DISCOMs can take action against vendors providing misleading information or failing to meet the conditions, including blacklisting and forfeiture of the PBG.

REC Limited is the Registering Authority for National Registration and multi-state registration at the National level. The vendors have to submit a bank guarantee of Rs 25 Lakh for the National registration and a bank guarantee equivalent of Rs 2.5 lakh per State/UT under which registration is being sought for multi-state registration.

c. **Vendor rating Programme:** To enhance consumer confidence and ensure high-quality installations, the PM Surya Ghar: Muft Bijli Yojana includes a comprehensive Vendor Rating Programme. The rating system will help consumers make informed choices and encourage vendors to adhere to industry best practices.

The scheme also include provision of Third Party Assessment (TPA). The National Programme Implementing Agency (NPIA) shall establish adequate mechanism to ensure independent third party assessment of RTS installations of at least 1% of installed systems on a pan-India basis which corresponds to inspection of 1 lakh installations through Third party Assessment.

The NPIA has already empanelled agencies for third-party assessment for conducting field quality installations of rooftop solar (RTS) installations on random basis and inspections are already underway. As of December 2025, a total of 3,327 inspections have been completed by Third Party Agencies (TPAs).

d. **Saturation of Government Buildings:** Objective is to saturate all the feasible government buildings with rooftop solar. No Central Financial Assistance to be provided under the Scheme for buildings in the Government sector. The Ministry is coordinating with all Central Ministries/State/UT Governments to undertake saturation of Government buildings with Rooftop Solar. Central Public Sector Enterprises (CPSEs) have been allocated to assist all Ministries and States/UTs in undertaking RTS installations on their assets in a mission mode.

e. **Financing by Banks:** The scheme also provides for easy, collateral free loans from public sector banks at 5.75 % rate of interest, at present, that can be accessed seamlessly through the Jan Samarth portal under the Department of Financial Services which has been integrated with National Portal.

Parameter	Details
Loan amount	Maximum Loan Amount: 2.00 lakh
Eligibility	All Individuals with roof rights & sufficient roof area; No Electricity Bill overdues.
Interest Rate and Tenor	REPO + 50 bps = 5.75% for 10 years
Security	Collateral free, no processing fees
Moratorium	6 Months (for installation) from the date of disbursement

f. **Additional subsidies by States/UTs**

S. No	State/UT	Subsidy
1.	Uttar Pradesh	Rs 15,000/kW up to 2 kW
2.	Haryana	Up to Rs 25,000/kW up to 2 kW (only for poor families)
3.	Goa	50% till 10 kW, 10% till 30 kW
4.	DNH & DD	Rs.10,000/kW up to 3 kW
5.	Ladakh	Rs. 20,000 /kWp upto 2 kWp; Rs. 10,000/kWp for additional 1kW
6.	Delhi	Rs. 10,000 /kWp with a ceiling limit of Rs. 30,000/- (3 kW solar plants)
7.	Assam	Rs. 15,000/kW up to 3kW; capped at Rs. 45,000
8.	Odisha	Rs 25,000/kW for upto 2kW and 10,000 for extra 1 kW i.e 60,000 upto 3kW
9.	J&K	Rs 3,000/kW upto 3kW
10.	Lakshadweep	Rs 45,000/kW upto 2kW, Rs 27000 for next 1kW
11.	A & N Islands	Rs 45,000/kW upto 2kW, Rs 27000 for next 1kW
12.	Mizoram	Within AMC Area: Rs 12,000/kW, up to 100 KM: Rs 14,000/kW, up to 200 KM: Rs 16,000/kW, Beyond 200 KM, Rs 18,000/KW. Subsidy up to 10 kW for all cases.
13.	Rajasthan	Rs 17,000 per system upto 5 kW
14.	Nagaland	Rs 50000/- upto 3 KW
15.	Chhattisgarh	Rs 15000/- for 1 KW, Rs 30000/- for 2 KW

g. **Governance Framework:** The scheme's implementation framework includes the constitution of Group of Ministers to provide overall direction and coordination for the scheme, a Steering Committee chaired by Cabinet Secretary, a State Level Coordination Committee headed by the Chief Secretary of State/Advisor to Administrator of UTs and a District Level Committee headed by the District Magistrate/District Collector. The scheme is being implemented through a Mission Directorate and REC Limited has been named as the National Programme Implementing Agency (NPIA) for the Scheme and the respective DISCOMs are designated as State Implementing Agencies (SIAs) in their respective operational areas.

3.1.7 Measures taken by the Ministry to accelerate adoption of Rooftop Solar

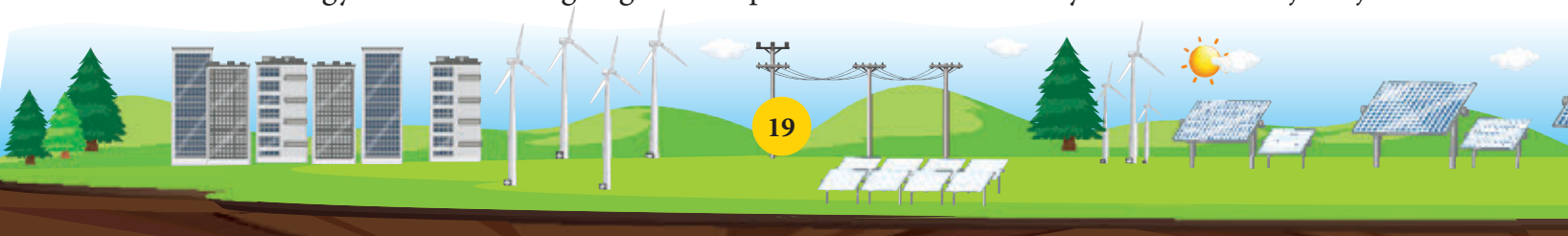
Further, the Government of India has taken following measures to achieve target of benefiting one crore households with rooftop solar installations by 2026-27 under the scheme:

- Online process from application to disbursal of subsidy directly into the bank account of the residential consumer through National Portal.
- Availability of collateral free loan from nationalized banks at concessional interest rate of repo-rate plus 50 bps i.e. 5.75% per annum for the present with tenure of 10 years.
- Simplified the regulatory approval process by waiving technical feasibility requirement and introducing auto load enhancement up to 10 kW.
- Net metering agreement has been made part of application in the National Portal eliminating need for waiver of agreement.
- Included RESCO/ Utility led Aggregation (ULA) Models.
- Simplified process for registration of vendors to ensure sufficient and qualified vendors are available.
- Capacity building and training programmes being conducted for creating skilled manpower.
- Creating awareness about the scheme, through awareness and outreach program such as print advertising in leading newspapers, TV commercials campaigns, Radio campaigns across FM stations including regional channels, etc., in the country.
- Regular monitoring of the progress of the scheme at different levels including with states/ DISCOMs.
- Established grievance redressal mechanism for timely resolution of grievances. A Call Centre with telephone number 15555 is operational in 12 languages.
- Convergence with Ministry of Cooperation, Ministry of Panchayati Raj, Ministry of Housing & Urban Affairs and Ministry of Rural Development for increasing awareness on the ground level.

3.1.8 Making Rooftop Solar Affordable Through GST Reform

In line with the vision of Hon'ble Prime Minister Shri Narendra Modi to make GST a truly "Good and Simple Tax" that strengthens every sector of the economy, the renewable energy sector has received a major impetus under the latest GST reforms approved by the GST Council in its 56th meeting held on 03.09.2025. The rationalization of GST rates across the renewable energy value chain from 12% to 5% will bring down the cost of clean energy projects, making electricity more affordable and directly benefiting households, farmers, industries, and developers.

The reform will make rooftop solar systems more affordable for households. A typical 3 kW rooftop system will now be cheaper by about ₹9,000–10,500, making it easier for lakhs of families to adopt solar energy and accelerating large-scale uptake under the PM Surya Ghar: Muft Bijli Yojana.



3.1.9 Progress of the scheme:

i. **Physical Progress:** Under the scheme, 55.62 lakh applications have been submitted on National Portal, and 26.05 lakh households have been benefited with installation of rooftop solar as on 31.12.2025. An amount of Rs. 14,771 Crores has been disbursed as CFA to 18.81 Lakh beneficiaries.

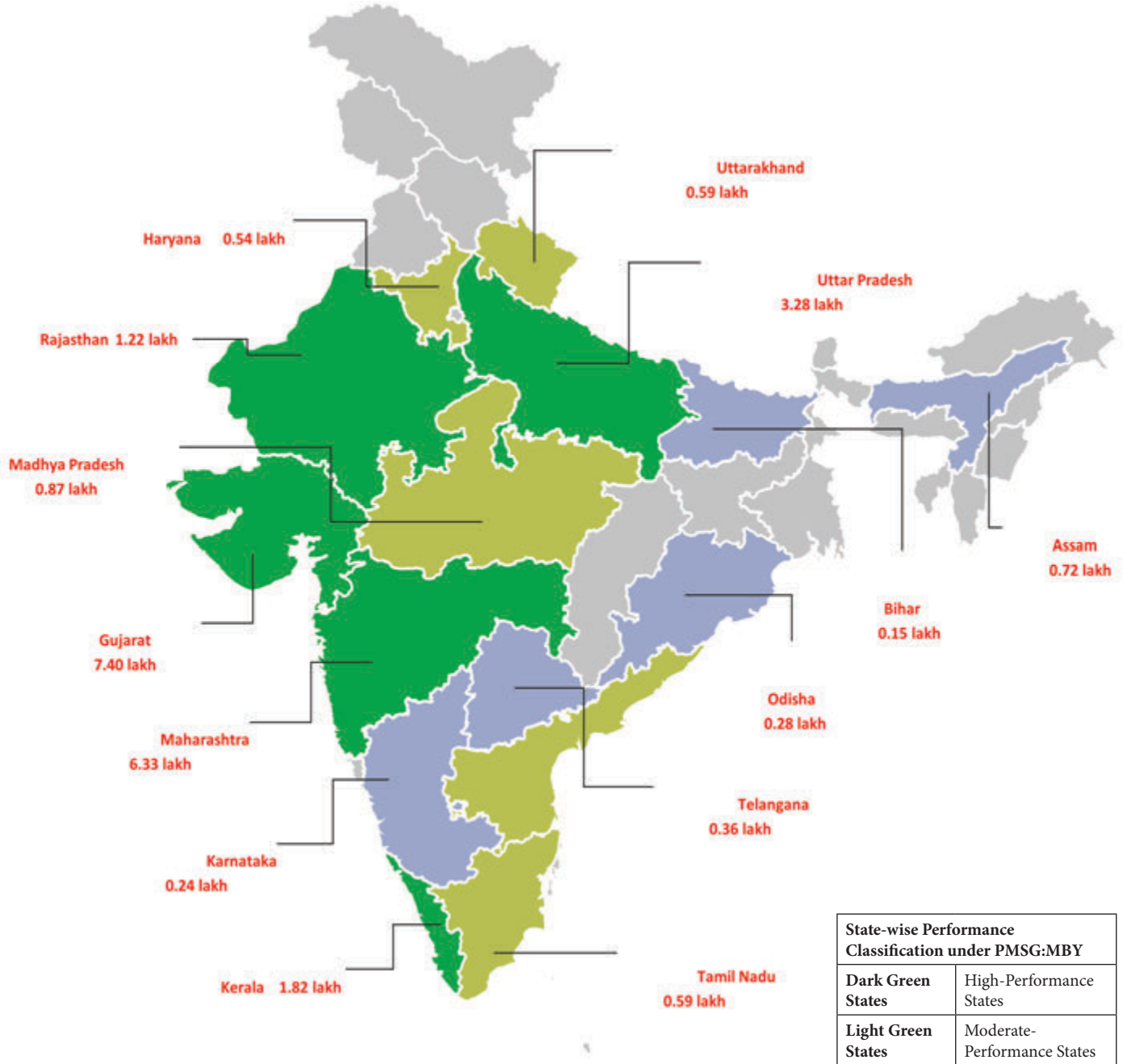


Figure 3.1: RTS households under PMSG:MBY

State-wise Performance Classification under PMSG:MBY	
Dark Green States	High-Performance States
Light Green States	Moderate-Performance States
Light Blue States	Emerging States
Grey States	Early-Stage / Low-Adoption States

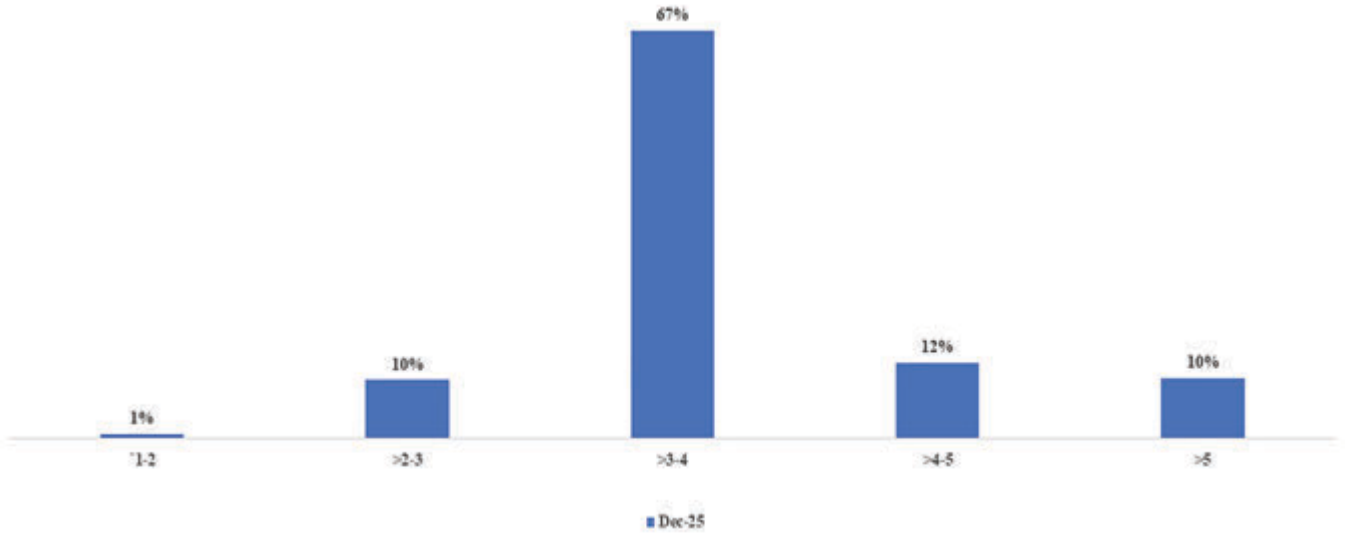


Figure 3.2: Distribution of Installations

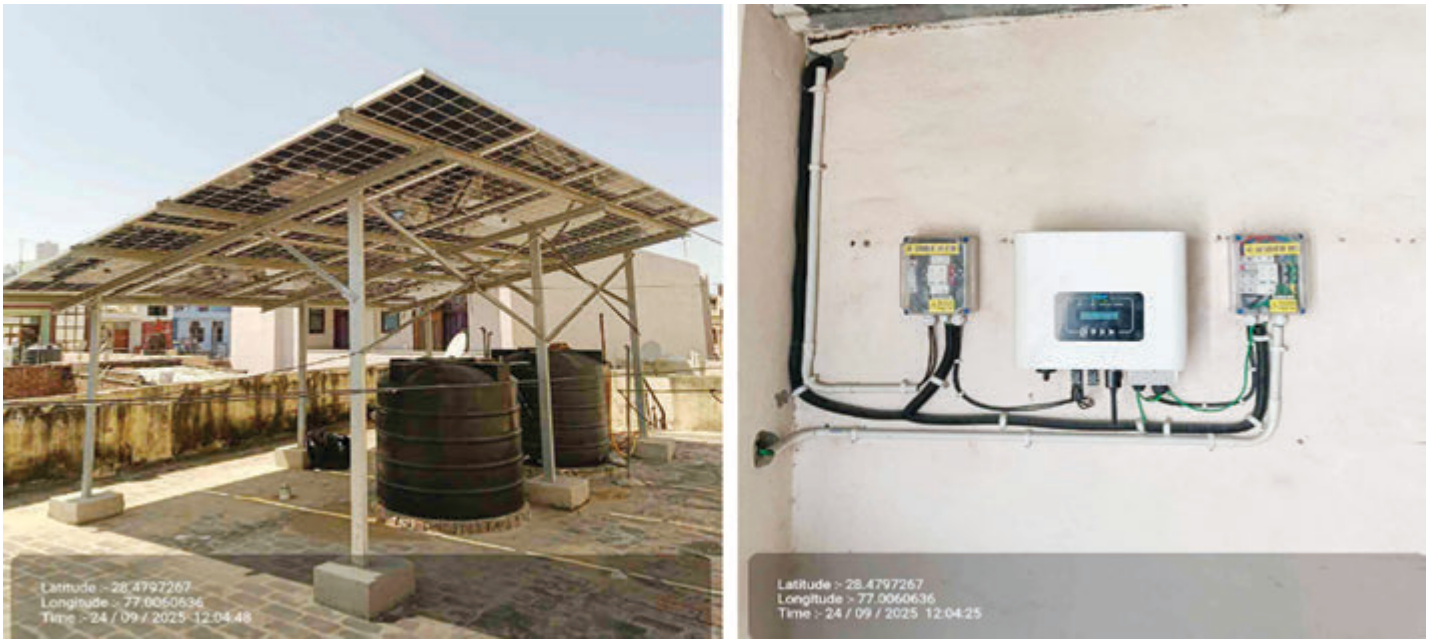


Figure 3.3: Rooftop Solar (RTS) Plant at Gurugram, Haryana –
Installed Capacity: 3.96 kWp | Inverter Capacity: 5 kVA

ii. **Financial Progress:** A Budget Estimate (BE) of ₹20,000 crores has been allocated to the PM Surya Ghar Muft Bijli Yojana for FY 2025-26. As of 31.12.2025, an expenditure of approx Rs. 12,052.57 crores has been incurred.

iii. **Loan applications:** as on 31.12.2025, 17.35 Lakh loan applications have been received under the scheme, of which 8.66 Lakh applications have been sanctioned, out of which 7.70 Lakh have been disbursed.

Figure 3.4: Promotion of scheme by Banks

iv. **Registered vendors:** 21,689 vendors have been registered under the scheme as on December 2025. This number has increased significantly (from ~4000) at the launch of the scheme, creating several jobs in the supply chain and rooftop solar ecosystem.

v. **State-Level Targets:** Several states have set targets for themselves for PMSG installations, totaling to 1.10 crore. 33 States/UTs have signed MoU under PMSG: MBY.

vi. **Simplified provisions notified by DISCOMs:** The Ministry of Power has notified amendments to Electricity (Rights of Consumers) Rules with several RTS friendly provisions such as deemed technical feasibility for small RTS systems, time-bound inspection of RTS installations etc.

   a. All DISCOMs in 36 States/UTs have adopted deemed technical feasibility provision upto 10 KW, substantially reducing time delays for consumers.

   b. Further, all DISCOMs have also approved auto load enhancement upto 10 KW.

   c. Several states (Rajasthan, Andhra Pradesh, Gujarat, Uttar Pradesh etc.) have also adopted other progressive measures such as waiver of all fees/charges, removal of requirement of signing of net metering agreement, digital net meter agreement signing etc.

vii. **Incentive to DISCOMs:** An amount of Rs 2,220.67 crore has been disbursed to various DISCOMs of states/UTs as incentive for facilitating solar rooftop in their jurisdiction.

viii. **Grievance management:** An online grievance raising tool has been developed as part of National Portal, which allows consumers to submit their grievances. Upon submission of the grievance, a unique ticket number is generated for tracking purpose. Further, a call centre has also been made operational for answering queries of the interested consumers.

(Call Centre Number: 15555). Queries are being handled by Call Centre in 12 Languages (English, Hindi, Tamil, Assamese, Bengali, Gujarati, Kannada, Malayalam, Marathi, Odia, Punjabi, Telugu). A total of 2,57,516 grievance tickets have been raised, out of which 2,51,441 tickets have been closed.

ix. **Capacity Building:** 88,291 Solar installers/Engineers/Technicians have been trained by DGT and 4,104 by NISE. Out of all trainees, 77,861 have also completed OJT. 1218 individuals have gone through refresher training conducted by DGT, 21,632 training for entrepreneurs as vendors has been conducted by NISEBUD, 23,944 DISCOM officials have been trained by NPTI and 1,279 by TPSDI. Also, 424 individuals have been trained as trainers by NPTI.

Figure 3.5: Discom Officials Training, Uttar Pradesh

Figure 3.6: Solar Installer Training Program, Rajasthan

Figure 3.7: Vendor Training Program, Uttar Pradesh

Figure 3.8: Solar Installer Training Program (Women), Bihar

Figure 3.9: Solar Helpers Training Program, Madhya Pradesh

x. **Awareness and Outreach:** The awareness and outreach program for PMSG: MBY has been carried out in the entire country. Consumer awareness has been carried out through various channels such as Print advertising in leading newspapers. TV commercials campaigns in TV channels, radio campaigns across FM stations including regional channels. Outdoor hoardings have been installed at prominent locations across the country.

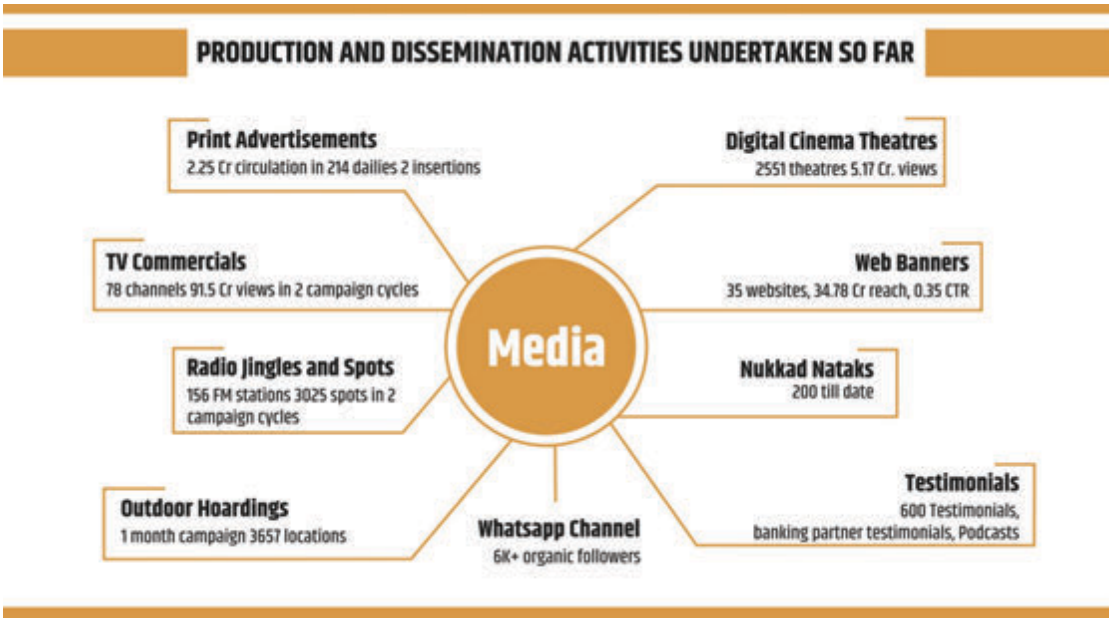


Figure 3.10: Awareness and Outreach Activities

Figure 3.11: Dissemination of IEC Material (Hindi & English)

Figure 3.12: Snapshot of IEC Activities for PMSG:MBY

xi. Utility Led Models: The Ministry of New and Renewable Energy (MNRE) has issued Operational Guidelines for implementation of the "Payment Security Mechanism" Component and the "Central Financial Assistance (CFA)" Component for RESCO Models / Utility Led Aggregation (ULA) Models under the PM Surya Ghar: Muft Bijli Yojana (PMSG: MBY)

on 28.12.2024. The objective of CFA component for RESCO Models / ULA Models is to enable DISCOMs/ State Governments/ State Designated entities to support rooftop solar development under RESCO and ULA models, primarily for low-income households/ families. Several states have proposed utility led aggregation models to install rooftop solar for low-income households. Under the ULA model of the PMSG: MBY, the MNRE has issued the final sanction to 7 States/UTs i.e. Andhra Pradesh, Odisha Jammu & Kashmir, Andaman & Nicobar Islands, Ladakh, DNH & DD and Telangana for around 8.08 lakh RTS installations.

xii. **Model Solar Village:** Operational guidelines for the Model Solar Village (MSV) component of the scheme have been issued. 594 districts have set up District-Level Coordination (DLC) Committees to oversee the implementation of Model Solar Village. A total of 521 districts has already initiated the challenge for selection of village to be developed as MSV, out of which challenge period has been concluded for 423 districts. MSV has been selected in 199 districts.

xiii. **Solarization of Government Buildings:** Under PMSG: MBY, solarization of Government buildings by installation of rooftop solar is one of the components of the scheme. A total of 619.78 MW rooftop solar capacity has been installed on 13,525 no. of government buildings of various Central Ministries/Departments. Notably, Chandigarh and Daman & Diu have reported the achievement of 100% solarization of their government buildings.

Figure 3.13: 525 kW solar plant installed at Sardar Vallabhbhai Patel National Police Academy, Hyderabad

Madhya Pradesh Government Introduces Payment Security Mechanism Payments for Statewide Solarization of Government Buildings by FY 2025–26

The Government of Madhya Pradesh has mandated the solarization of all government buildings across the state by FY 2025–26 in mission mode, aligning with national renewable energy goals. Rooftop solar systems will primarily be implemented through the RESCO model, with Capex projects requiring State-Level Committee approval. MP Urja Vikas Nigam Limited (MPUVN) will act as the nodal agency for both models, while implementation and monitoring will be overseen by State and District Committees under the PM Surya Ghar scheme.

Departments will manage tenders based on building eligibility and location, ensure sanctioned load enhancements, and clear any pending electricity dues. Payments to RESCO developers are to be made within 30 days, with a dedicated budget head and revolving fund mechanism enabling MPUVN to release payments if departments delay. This arrangement also functions as a payment security mechanism for RESCO developers, ensuring financial stability and timely compensation.

3.1.10 IEC campaigns for outreach of PMSG: MBY across India

i. **National Level:** The Ministry has undertaken a multipronged approach to popularize the PM Surya Ghar Muft Bijli Yojana, utilizing all communication media like print, digital, outdoor, television, radio, etc., to maximize reach and awareness.

ii. **State Level:** Additionally, all States/UTs in India have been provided a budget to undertake awareness and outreach plans in their respective regions. Promotional activities such as hoardings/banners, print ads, radio jingles, melas, Surya Rath, etc. have been used by various State Nodal Agencies/DISCOMs to create widespread awareness of PMSG:MBY.

States and UTs are encouraged to design additional activities tailored to their specific state- or district-level needs.

iii. **Activities undertaken under the "Sewa Parv":** Several activities and outreach drives were undertaken for mass rooftop solar deployment during Sewa Parv, observed from September 17 to 02.10.2025. These initiatives resulted in receipt of 1.21 lakh applications, of which 71,257 installations were completed, and Central Financial Assistance (CFA) amounting to Rs. 820.6 crore was released to 1.03 lakh beneficiaries across India during Sewa Parv. Snapshots of the activities taken up by State Nodal Agencies/DISCOMs during the Sewa Parv are provided below:

Figure 3.14: Activities such as Bank Mela, Awareness Campaigns during Sewa Parv

3.1.11 Number of consumers who have achieved Zero Bill under the PMSG:MBY

Number of consumers who have achieved Zero Bill under the PMSG:MBY

As reported by 64 Discoms, over 12.47 lakh consumers have reported zero energy charges in their electricity bills following rooftop solar installation under the PMSG: MBY as on December 2025. While electricity bill of the remaining consumers has been drastically reduced.

3.1.12 Feedback from consumers post installation under PM Surya Ghar: Muft Bijli Yojana

Shri Pushkar Singh

My name is Pushkar Singh, and I reside in Ashok Nagar, Sarkanda. I have installed a 3.3-kilowatt solar panel system at my home under the PM Surya Ghar Muft Bijli Yojana. The total cost of the installation was approximately Rs. 1,85,000. I received a subsidy of Rs. 78,000 from the Central Government and am in the process of receiving an additional Rs. 30,000 subsidy from the Chhattisgarh Government. It has been almost three months since the installation, and I am happy to report that I am receiving zero electricity bills. I would like to express my gratitude to our honorable Prime Minister, Shri Narendra Modi, and our respected Chief Minister, Shri Vishnu Deo Sai, for their support in making this initiative a reality. I encourage the people of Chhattisgarh to take full advantage of this wonderful scheme.

Shri Sharif

My name is Sharif, and I live in Kollam district. Under the PM Surya Ghar Yojana, I have installed a 3 kW solar power plant. I received a subsidy of ₹78,000 for this project. Earlier, my monthly electricity bill used to be around ₹4,000, but now my electricity bill has reduced to ₹0. I would like to thank the PM Surya Ghar Yojana, the Government of India, KSEB, and everyone involved for their support.

Dr. Saeeda Wafer

I'm Dr. Saeeda Wafer from Goa, a scientist at the National Institute of Oceanography. For the past few days, we had been thinking about installing a solar energy system for our house. When we finally decided to do it, we spent about 5 lakh rupees on the installation. We received around a 60% subsidy from the government. Every month, our electricity bill is adjusted based on the solar power we generate, and we pay only the remaining amount. Overall, we are very happy with the results.

3.2 Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyaan (PM KUSUM) Scheme

3.2.1 PM KUSUM (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan) is the flagship scheme of MNRE launched by the Government in March, 2019 to support the installation of standalone solar pumps, Solarisation of Grid-connected Agriculture Pumps including Feeder Level Solarisation, and installation of solar power plants on farmer's land. The Scheme consists of three components: -

Sunita Devi

Village Tero, Bero Block, Ranchi District (Jharkhand)

I am Sunita Devi, a resident of Village Tero, Bero Block, Ranchi District (Jharkhand). Earlier, irrigation through a diesel pump was expensive and difficult, due to which I was limited to cultivating only one or two crops. I came to know about the PM Kusum Solar Pump Scheme through newspapers and the block office, after which I applied online for a 3HP submersible solar pump which was installed by JREDA within a year. After solar pump installation, farming has not only become easier but the expenses have also reduced significantly. Now I am growing several crops and vegetables such as potato, peas, onion, chilli, wheat, and paddy. Through this scheme, both my agricultural production and income have increased.

Component	Target	RE Capacity targeted (in GW)
Component-A	Setting up of 10000 MW of Decentralized Ground/ Stilt Mounted Grid Connected Solar or other Renewable Energy based Power Plants	10
Component-B	Installation of 14 lakh Standalone Solar Powered Agriculture Pumps	7
Component-C	Solarisation of 35 lakh existing individual Grid-connected Agriculture Pumps including Feeder Level Solarisation	17.8

3.2.2 The total central financial support for the scheme is Rs. 34,422 crore including service charges of 2% on eligible CFA to implementing agencies.

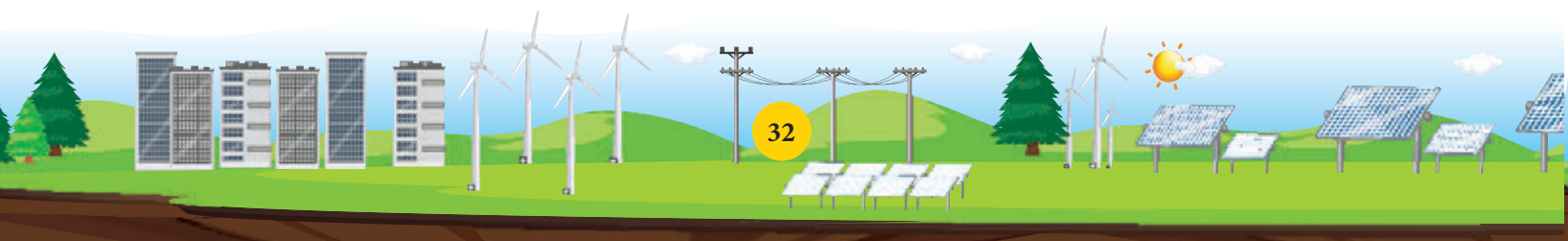
Component A aims at setting up of 10,000 MW of Decentralized Ground/ Stilt Mounted Grid Connected Solar or other Renewable Energy based Power Plants of capacity of 500 kW to 2 MW by the farmers on his own land either directly by himself or in partnership with group of farmers/ cooperatives/ panchayats/Farmer Producer Organisations (FPO)/ Water User associations (WUA), or through a developer by leasing their land. The solar power generated shall be purchased by DISCOMs at a feed-in-tariff (FiT) determined by the respective State Electricity Regulatory Commission (SERC) within the contract capacity. DISCOM would be eligible to get PBI @ Rs. 0.40 per unit purchased or Rs. 6.6 lakh per MW of capacity installed, whichever is less, for a period of five years from the Commercial Operation Date (COD).

Component B aims to install standalone Solar Agriculture Pumps or replace existing diesel Agriculture Pumps/irrigation systems in off-grid areas by Individual Farmers, Water User Associations (WUAs), Farmer Producer Organizations (FPOs), Primary Agriculture Credit Societies (PACS), or cluster-based irrigation systems. The Central Government provides financial assistance of 30% (or 50% for North Eastern Region/Hilly Regions/ Islands) of the Benchmark Cost or the Tender Cost, whichever is lower.

Component C : Individual Pump Solarisation (IPS), aims at solarization of grid-connected agricultural pumps by Individual farmers/ Water User Associations (WUA)/Farmer Producer Organizations (FPO)/Primary Agriculture Credit Societies (PACS) or cluster-based irrigation systems. Solar PV capacity up to two times of pump capacity in kW is allowed under the scheme. The farmer will be able to use the generated solar power to meet the irrigation needs and the surplus solar power will be sold to DISCOMs. In this case CFA of 30% is also provided.

3.2.3 Component C: Feeder Level Solarisation (FLS) aims to solarise grid-connected agriculture pumps through feeder-level solarisation. The Central Financial Assistance (CFA) CFA of 30% (50% in case of NE States, hilly states/UTs and Island UTs), based on Benchmark Cost is provided by central Government

- Solar plants of capacity that can cater to the requirement of the agriculture load of the selected feeder can be installed through CAPEX/RESCO mode for a project period of 25 years.
- A dedicated online portal can be developed by the States/SIAs/DISCOM which will serve as a centralized portal for land aggregation.



- CFA of 30% on the cost of installation of solar power plant (up to Rs. 1.05 Cr/MW) will be provided. However, in the North Eastern States, Sikkim, Jammu & Kashmir, Himachal Pradesh and Uttarakhand, Lakshadweep, and A&N Islands 50% (up to Rs. 1.75 Cr/MW) subsidy is available.

3.2.4 Steps taken in Year 2025 for expediting implementation of PM KUSUM Scheme:

- Meeting organized with lead banks/financial institutions to mobilize the financial support to the farmer.
- Screening Committee headed by Secretary, MNRE reviewed the implementation progress from time to time and accordingly, redistributed the capacities among performing States/ UTs.
- A joint meeting of State Implementing Agencies (SIAs) and vendors was conducted to address and resolve the issues related to implementation of Component-B of PM KUSUM Scheme.
- SIAs have been given timeline of 31.12.2025 for completing the signing of PPAs for solar power plants under Component-A and Component-C(FLS)/ issuing of Wos/ NTP under Component-B and Component-C(IPS).
- Progress review meetings were held with State Addl. Chief Secretaries/ Principal Secretaries/ Secretaries in charge Renewable Energy under Chairmanship of Hon'ble Minister of New and Renewable Energy.
- Progress review meetings were held with SIAs on regular basis.

3.2.5 The following workshops were organized to sensitize states and banks on financing and implementation of PM KUSUM are:

- Regional Workshops on RE in Mumbai – January 2025.
- Regional meet on RE in Jaipur – January 2025
- Bankers' Conclave in Mumbai – February 2025
- Regional meet on RE in Vishakhapatnam – June 2025
- Awareness and capacity-building workshops held across 15 states, reaching over 1,800 participants including farmers, solar manufacturers, vendors, DISCOMs, and financial institutions. These sessions provided a platform for training, demonstrations, and stakeholder interaction – September 2025.
- Regional Workshops on RE during October 2025 (Guwahati).
- Workshop on National and State portal under PM KUSUM Scheme during Nov, 2025.
- As on date all the targeted capacities has been llocated to States/ UTs. The State/UT-wise physical progress under PM KUSUM Scheme as of 31.12.2025 is given in Table 3.1.

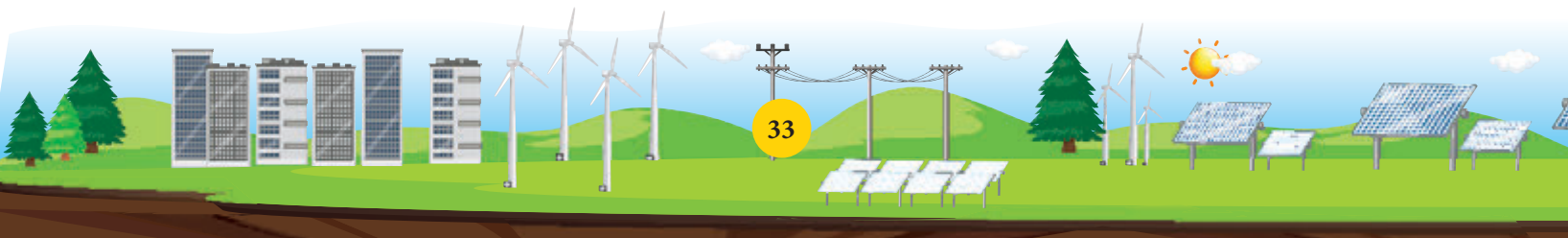


Table 3.1: State-wise Sanctioned Capacities under the Components of PM KUSUM Scheme

As of 31.12.2025

S. No	State/ UT Name	Component-A (In MW)		Component-B (No. of pumps)		Component-C (No. of pumps)		
		Sanctioned	Installed	Sanctioned	Installed	Sanctioned (IPS)	Sanctioned (FLS)	Total Solarized
1	A & N Islands	0.00	0.00	0	0	0	0	0
2	Andhra Pradesh	0.00	0.00	0	0	0	2,00,000	0
3	Arunachal Pradesh	0.00	0.00	700	682	0	0	0
4	Assam	2.00	0.00	4,000	151	0	0	0
5	Bihar	0.00	0.00	0	0	0	1,40,300	0
6	Chhattisgarh	366.00	7.00	0	0	0	10,000	0
7	Goa	24.00	4.00	900	157	0	11,000	700
8	Gujarat	300.00	0.00	22,792	12,700	0	4,67,114	2,25,000
9	Haryana	158.00	28.61	1,97,655	1,83,717	0	2,899	0
10	Himachal Pradesh	100.00	100.00	1,270	1,053	0	0	0
11	Jammu & Kashmir	0.00	0.00	5,000	3,867	0	0	0
12	Jharkhand	0.00	0.00	86,985	46,636	0	0	0
13	Karnataka	0.00	0.00	26,365	2,718	0	7,78,588	65,476
14	Kerala	0.00	0.00	8	8	9,448	22,368	13,553
15	Ladakh	1.00	0.00	1,400	102	0	0	0
16	Madhya Pradesh	1,790.00	60.80	59,400	7,325	0	3,45,000	38,656
17	Maharashtra	260.00	4.00	5,75,000	4,83,616	0	7,75,000	7,11,492
18	Manipur	0.00	0.00	450	150	0	0	0
19	Meghalaya	0.00	0.00	2,735	98	0	0	0
20	Mizoram	0.00	0.00	1,700	40	0	0	0
21	Nagaland	0.00	0.00	265	149	0	0	0
22	Odisha	90.00	0.00	18,441	12,042	0	5,223	0
23	Puducherry	0.00	0.00	72	0	0	0	0

24	Punjab	0.00	0.00	18,048	17,841	186	0	0
25	Rajasthan	5,250.00	512.50	1,44,752	1,21,940	2,138	4,00,000	1,39,637
26	Tamil Nadu	3.00	3.00	5,187	5,070	0	0	0
27	Telangana	1,650.00	0.00	20,000	0	28,000	0	0
28	Tripura	5.00	0.00	11,114	6,810	3,600	0	788
29	Uttar Pradesh	1.00	1.00	1,07,266	66,568	12,000	3,70,000	6,246
30	Uttarakhand	0.00	0.00	3,685	1,787	0	0	0
31	West Bengal	0.00	0.00	0	0	20	0	4
	Total	**10,000.00**	**720.91**	**13,15,190**	**9,75,227**	**55,392**	**35,27,492**	**12,01,552**

IPS: Individual Pump Solarization, FLS: Feeder Level SolarizationNote: No demand received or allocated capacity surrendered/ cancelled for low progress for States/ UTs not shown above

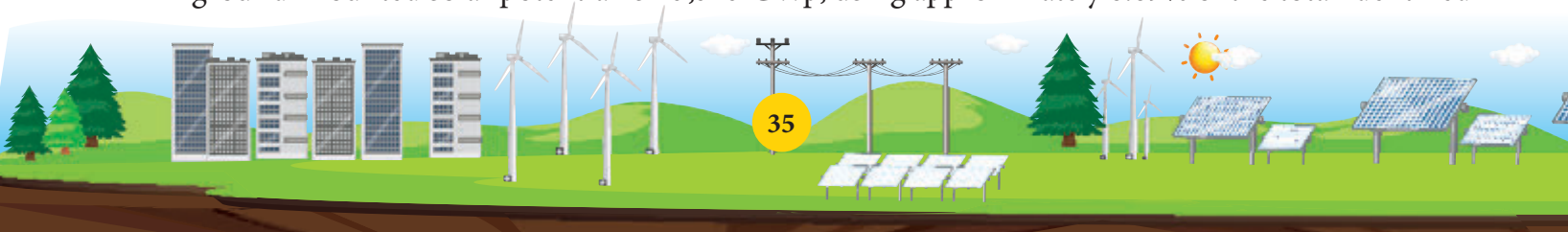
3.3 Grid Connected Solar Projects

The Government had set a target of 100 GW of installed solar power capacity in the country by 2022 under the National Solar Mission (NSM). Further, as per the target announced in the COP26, 500 GW of non-fossil-based capacity is proposed to be achieved by 2030. The Optimal Generation Mix 2030 Report of Central Electricity Authority estimates addition of around 292 GW solar capacity by 2029-30. The target is planned to achieve through various policy decisions and schemes such as Scheme for Development of Solar Parks and Ultra-Mega Solar Power Projects, Central Public Sector Undertaking (CPSU) Scheme Phase-II (Government Producer Scheme), Production Linked Incentive scheme for 'National Programme on High Efficiency Solar PV Modules', Pradhan Mantri Kisan Urja Suraksha and Utthaan Mahaabhiyan (PM KUSUM), PM Surya Ghar Muft Bijli Yojana etc.

3.3.1 Achievements

As on 31.12.2025, a cumulative solar power capacity of 132.85 GW has been installed in the country. This includes 100.80 GW from ground-mounted solar, 23.16 GW from rooftop solar, 3.34 GW from solar component of hybrid projects & 5.55 GW from off-grid solar. In addition to this, a capacity of around 128.36 GW is under implementation and 46.93 GW of solar/hybrid/RTC/ FDRE projects are under tendering stage. It is expected that the solar power projects of capacity around 34 GW will be commissioned during this Financial Year 2025-26 including capacity from the Off-grid & Rooftop Solar.

Based on the "Solar PV Potential Assessment of India (Ground-Mounted)" report of National Institute of Solar Energy (NISE), which was released by Shri. Pralhad Joshi, Hon'ble Minister of Consumer Affairs, Food and Public Distribution and New and Renewable Energy, the feasible ground-mounted solar potential is ~3,343 GWp, using approximately 6.69% of the total identified



feasible wasteland. State-wise details of estimated solar energy potential in the country are given in Table-3.2.

Table-3.2 State-wise estimated Solar Energy Potential in the Country

Sr. No	States	Potential (GW_p)
1	Andaman & Nicobar Islands	0.59
2	Andhra Pradesh	299.31
3	Arunachal Pradesh	0.47
4	Assam	19.17
5	Bihar	32.99
6	Chandigarh	0.02
7	Chhattisgarh	126.48
8	DNHDD	0.50
9	Delhi	0.55
10	Goa	6.75
11	Gujarat	243.22
12	Haryana	6.47
13	Himachal Pradesh	21.50
14	Jammu and Kashmir	8.59
15	Jharkhand	51.83
16	Karnataka	223.28
17	Kerala	12.40
18	Ladakh	8.56
19	Madhya Pradesh	318.97
20	Maharashtra	486.68
21	Manipur	2.29
22	Meghalaya	14.67
23	Mizoram	0.61
24	Nagaland	0.19
25	Odisha	139.47
26	Puducherry	0.20
27	Punjab	9.21
28	Rajasthan	828.78

29	Sikkim	0.25
30	Tamil Nadu	204.77
31	Telangana	140.45
32	Tripura	9.11
33	Uttar Pradesh	97.84
34	Uttarakhand	4.44
35	West Bengal	22.74
	Total	**3,343.37**

The new report builds on the earlier 2014 estimate of 749 GWp and incorporates cutting-edge methodologies, including high-resolution GIS, satellite-derived datasets, and refined land-use models.

Key methodological features:

- High-resolution geospatial analysis to identify feasible solar sites.
- Integration of infrastructure and technical design factors, such as inter-row spacing, shading, proximity to substations and road networks.

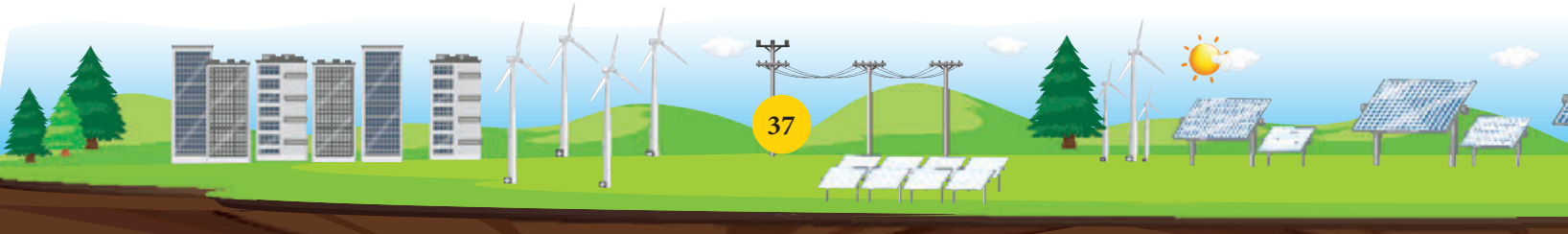
3.4 Scheme for Development of Solar Parks and Ultra Mega Solar Power Projects:

The Scheme for "Development of Solar Parks and Ultra Mega Solar Power Projects" was rolled out on 12-12-2014 with aggregate capacity 20,000 MW. Further, the capacity of the Solar Park Scheme was enhanced from 20,000 MW to 40,000 MW on 21-03-2017 to set up at least 50 Solar Parks. The timeline of the scheme is up to 2028-29

Solar Park is a large chunk of land developed with all necessary infrastructures and clearances for setting up of solar projects. The capacity of the Solar Parks is generally 500 MW and above. However, smaller parks (up to 20 MW) are also considered in States/UTs where there is shortage of non-agricultural land.

Under the scheme, the Ministry provides Central Financial Assistance (CFA) of up to Rs. 25 lakh per Solar Park for preparation of Detailed Project Report (DPR). Beside this, CFA of up to Rs. 20.00 lakh per MW or 30% of the project cost, including grid-connectivity cost, whichever is lower, is also provided on achieving the milestones prescribed in the scheme. The total Central Grants approved under the Scheme is Rs. 8100.00 crore (Rupees Eight Thousand and One Hundred Crore).

Solar Energy Corporation of India (SECI) & Indian Renewable Energy Development Agency (IREDA) implement the scheme and handle the fund being made available under the scheme on behalf of Government of India.



3.4.1 Selection of Solar Power Park Developers

The Solar Parks are developed in collaboration with the State Governments & their agencies, CPSUs and private entrepreneurs. The Solar Park implementing agency is termed as Solar Power Park Developer (SPPD) and are selected in any of the eight modes as per the Solar Park Scheme. The various modes for selection of SPPD and eligibility of CFA under various modes are given at Table 3.3:

Table 3.3: Different Modes under which Solar Power Parks are developed

Mode	Brief Description	CFA Pattern
Mode-1	The State designated nodal agency or a State Government Public Sector Undertaking (PSU) or a Special Purpose Vehicle (SPV) of the State Government.	Rs 12 lakh/MW or 30 % of the project cost, whichever is lower, to SPPD for development of internal infrastructure, and Rs 8 lakh/ MW or 30 % of the project cost, whichever is lower, to the CTU/STU for creation of external transmission infrastructure.
Mode-2	A Joint Venture Company of State designated nodal agency and Solar Energy Corporation of India Ltd (SECI).	
Mode-3	The State designates SECI as the nodal agency	
Mode-4	(i) Private entrepreneurs with/without equity participation from the State Government	
Mode-5	(ii) Selection of private entrepreneurs based on open transparent bidding process.	
Mode-6	Central Public Sector Undertakings (CPSUs) like SECI, NTPC etc.	No CFA
Mode-7	Private entrepreneurs without any Central Financial Assistance from MNRE	Rs 20 lakh/MW or 30% of the project cost, whichever is lower, for external transmission infrastructure only.
Mode-8	SECI will act as the Solar Power Park Developer (SPPD) for Renewable Energy Parks CPSU/ state PSU/ Government organisation/ their subsidiaries or the JV of above entities can act as SPPD.	Rs 20 lakh/MW or 30% of the project cost, whichever is lower, for internal infrastructure only.

3.4.2 Progress of Solar Park Scheme

The progress of Solar Park Scheme as on 31-12-2025 is given below:

1. **Capacity approved:** Based on the proposals received from the States, 55 Solar Parks of aggregate capacity 39,973 MW have been approved to 13 States. These Solar Parks are at different stages of development. The list of parks is given in Table-3.4 below.
2. **Commissioned capacity of solar projects inside Solar Parks:** Solar projects of aggregate capacity 16,121 MW have been commissioned inside various Solar Parks as given in the Table below:

Table-3.4: List of Solar Parks as on 31-12-2025

Sl. No.	State	Name of Park	Capacity sanctioned (MW)	Projects installed (as on 31.12.2025) (MW)
1.	Andhra Pradesh	Ananthapuramu-I Solar Park	1400	1400
2.		Kurnool Solar Park	1000	1000
3.		Kadapa Solar Park	1000	750
4.		Ananthapuramu-II Solar Park	500	400
5.		Ramagiri Solar Park, Ananthapuramu district	300	0
6.	Chhattisgarh	Rajnandgaon Solar Park	100	100
7.	Gujarat	Radhnesada Solar Park, Banaskantha district	700	700
8.		Dholera Solar Park, Ahmedabad district	1000	300
9.		NTPC RE Park, Kutch district	4750	1332
10.		GSECL RE Park, Kutch district	3325	0
11.		GIPCL RE Park Ph-I, Kutch district	600	600
12.		GIPCL RE Park Ph-II, Kutch district	1200	0
13.		GIPCL RE Park Ph-III, Kutch district	575	0
14.	Jharkhand	SECI Floating Solar Park, Ranchi district	100	0
15.		DVC Floating Solar Park Ph-II, Dhanbad	234	0
17.	Jharkhand & West Bengal	Floating Solar Park Ph-I, Tilaiya Dam (Jharkhand) & Panchet Dam (in Jharkhand & partly in West Bengal)	755	0
18.	Karnataka	Pavagada Solar Park, Tumkur	2000	2000
19.	Kerala	Kasargod Solar Park	105	105
20.		Floating Solar Park, Kollam	50	0
21.		Kasargod Solar Park Ph-II	100	0

22.	Madhya Pradesh	Rewa Solar Park	750	750
23.		Mandsaur Solar Park	250	250
24.		Neemuch Solar Park	500	330
25.		Agar Solar Park	550	550
26.		Shajapur Solar Park	450	450
27.		Omkareswar Floating Solar Park, Khandwa	518	278
28.		Barethi Solar Park, Chhatarpur	630	0
29.		Morena Park	600	0
30.		Dhar Solar Park	200	0
31.	Maharashtra	Sai Guru Solar Park, Dhule	500	0
32.		Dondaicha Solar Park, Dhule	250	100
33.		Patoda Solar Park, Beed	250	0
		Erai Floating Solar Park, Chandrapur	105	0
34.	Mizoram	Vankal Solar Park, Champai	20	20
35.	Odisha	Solar Park by NHPC, Ganjam	40	0
36.	Rajasthan	Bhadla-II Solar Park, Jodhpur	680	680
37.		Bhadla-III Solar Park, Jodhpur	1000	1000
38.		Bhadla-IV Solar Park, Jodhpur	500	500
39.		Phalodi-Pokaran Solar Park	750	750
40.		Fatehgarh Phase-1B Solar Park, Jaisalmer	421	421
41.		Nokh Solar Park, Jaisalmer	925	925
42.		Pugal Solar Park Ph-I, Bikaner	1000	0
43.		Pugal Solar Park Ph-II, Bikaner	1000	0
44.		Pugal Solar Park Ph-III, Bikaner	450	0
45.		RVUN Solar Park, Bikaner	2000	0
46.		Bodana Solar Park, Jaisalmer	2000	0

47.	Uttar Pradesh	Solar Park in UP (Jalaun, Allahabad, Mirzapur & Kanpur Dehat)	365	365
48.		Jalaun Solar Park	1200	0
49.		Mirzapur Solar Park	100	0
50.		Kalpi Solar Park, Jalaun	65	65
51.		Lalitpur Solar Park	600	0
52.		Jhansi Solar Park	600	0
53.		Chitrakoot Solar Park	800	0
54.		Kanpur Dehat Park	75	0
		Kanpur Nagar Park	35	0
Total			**39973**	**16121**

3.5. Scheme for "Installation of grid-connected solar project & various off-grid applications for 100% Solarization of Konark Sun Temple & Konark Town"

The administrative guidelines of the Scheme for solarisation of Konark sun-temple & Konark city has been issued on 19.05.2020 with support of total CFA of around Rs. 25.00 crores as a high visibility project. Odisha Renewable Energy Development Agency (OREDA) is implementing this scheme. All off-grid applications are already commissioned and the 10 MW grid connected solar project is under implementation.

3.6. Setting up of grid-connected Solar PV Project of capacity 25 MW(AC)/50 MW (DC) with battery storage of 50 MWh under J&K Prime Minister Development Package (PMDP) – 2015

Ministry sanctioned this project of capacity 25 MWac/50 MWdc with battery storage of 50 MWh at Taru, Leh under J&K Prime Minister Development Package (PMDP) – 2015 on 08.11.2021 with a financial support of Rs. 250 crores. The project is being implemented by SECI under EPC mode and is under implementation.

3.7 One Sun One World One Grid

Hon'ble Prime Minister of India had called for connecting the global solar resources through the vision of 'One Sun One World One Grid' (OSOWOG) with the concept that 'The Sun Never Sets' and is always shining at some geographical location, globally, at any point of time.

MNRE is conducting a study for developing the long-term vision, implementation plan, road map and institutional framework for implementing the initiative of OSOWOG. The International Solar Alliance is the implementing agency of the study. The study is being conducted by a consortium of consultants; Électricité de France (EDF), Application Européenne de Technologies et de Services (AETS), and The Energy and Resources Institute (TERI). The Phase-I of the study is complete and the balance study is underway.

The Ministry of Power has also constituted a Task Force in November, 2021 to identify and study the aspects (technical, operational, legal, regulatory, commercial and institutional) of grid interconnection in South Asia, South East Asia, Middle East (GCC), Africa, Europe etc.

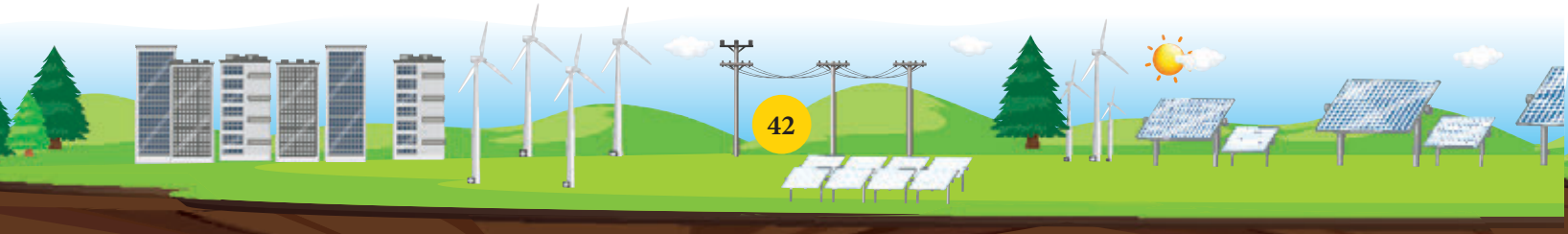
Table 3.5: Capacities allotted till 31.12.2025 under CPSU Scheme Phase-II

Sl. No.	Name of Government entity	Total Capacity of solar PV power plants allotted (MW)	Capacity Commissioned (MW)					
			FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26 (till 31.12.2025)	Total (MW)
1.	**NTPC Limited**	3682	200	1232	110	395	1523	3460
2.	**The Singareni Collieries Company Limited**	171	90	5		21.5		116.5
3.	**Delhi Metro Rail Corporation Limited**	3	3					3
4.	**Assam Power Distribution Company Limited**	30						Cancel led
5.	**NHDC Ltd.**	25						Cancel led
6.	**Nalanda University**	5			5			5
7.	**Indore Municipal Corporation**	100*						0
8.	**SJVN Limited**	1000				242	758	1000
9.	**NLC India Limited**	510			10		159	169
10.	**NHPC Limited**	1000					300	300
11.	**IRCON International Limited**	500				150	250	400
12.	**Solar Energy Corporation of India Limited**	1200						0
	TOTAL	**8226**	**293**	**1237**	**125**	**808.5**	**2990**	**5453.5**

**Note: 40 MW out of 100 MW awarded to Indore Municipal Corporation have been cancelled.*

3.8 Off Grid And Decentralised Solar Pv Applications Programme

Under the Off-Grid and Decentralized Solar PV Applications Programme, Ministry provided Central Financial Assistance (CFA) for the deployment of Solar Street Lights, Solar Study Lamps/ Lanterns, Solar Home Lighting Systems, Standalone Solar Pumps and Solar Power Packs to meet the electricity and lighting needs of local communities, institutions, and individuals mainly in



rural areas. The Phase-III of the Programme was closed in March 2021 and further continuation of the Programme was not agreed.

3.9 Framework For Promotion Of Decentralised Renewable Energy (Dre) Livelihood Applications

The Ministry issued a Framework on 14.02.2022 for the Promotion of Decentralized Renewable Energy (DRE) Livelihood Applications to facilitate the development of an enabling ecosystem for widespread access and to promote sustainable livelihoods through DRE in the country, including rural and remote areas.

3.10 Solarisation Of Forward Defense Locations (FDLS)

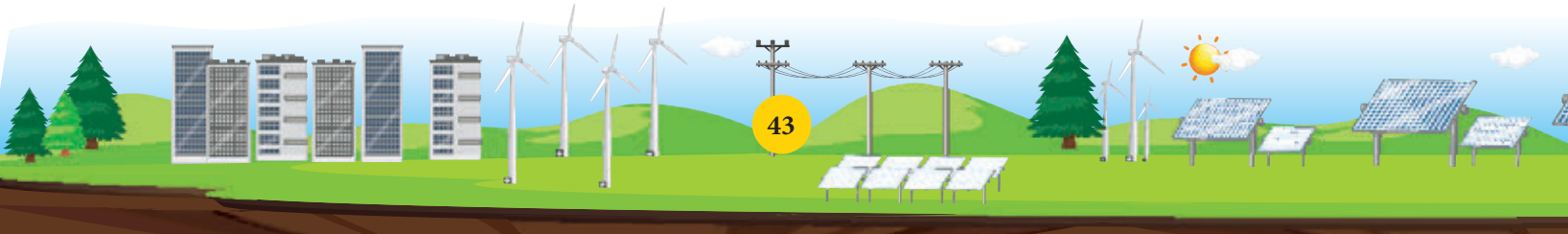
The Ministry in August 2022 had sanctioned a project for the Solarisation of 115 Forward Defense Locations (FDLs) of the Border Security Force (BSF) at Jammu & Kashmir Frontier with a total Off-grid Solar PV capacity of 1.21 MWp and Central Financial Assistance (CFA) of Rs.16.73 Cr. The BSF has completed the tender process and issued a Letter to Awards (LoA) to the selected vendors. The timelines for completion of balance FDLs have been extended up to August 2025. It has been reported that solarisation of 60 FDLs have been completed under the Project as on 31.12.2025.

3.11 New Solar Power Scheme (For Tribal And Pvtg Habitations/ Villages)

The Union Cabinet in November 2023, approved Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN) to focus on eleven critical interventions through Nine-line Ministries for implementation. The Mission, inter-alia, covers implementation of New Solar Power Scheme (for Particularly Vulnerable Tribal Groups (PVTG) Habitations/Villages) for electrification of one lakh number of un-electrified households (HHs) in PVTG areas located in 18 States, by provision of off-grid solar systems where electricity supply through grid is not techno-economically feasible. In addition, the New Solar Power Scheme has a provision for providing solar lighting in 1500 Multi-Purpose Centers (MPC) in PVTG areas where electricity through grid is not available. The implementation guidelines were issued in January 2024.

The Union Cabinet in September 2024 approved Pradhan Mantri Janjatiya Unnat Gram Abhiyan for improving the socio-economic condition of tribal communities, by adopting saturation coverage for tribal families in tribal-majority villages and aspirational districts. The Mission will cover around 63,000 tribal majority villages in 549 districts and 2,740 blocks spread across 30 State/ UTs benefitting more than 5 crore tribal people. The mission was later renamed as Dharti Aaba Janjatiya Gram Utkarsh Abhiyan (DA JGUA). The mission inter-alia, provides scaling up of the New Solar Power Scheme covering:

- Electrification of One Lakh un-electrified households (HHs) in Tribal and PVTG areas identified by Ministry of Tribal Affairs (MoTA) by provision of off-grid solar systems.



- Providing off-grid solar lighting in 1500 Multi-Purpose Centres (MPCs) in PVTG areas as approved under PM JANMAN.
- Solarisation of 2000 public institutions through off-grid solar systems.

The off-grid solar systems shall be provided only where electricity supply through grid is not techno-economically feasible.

Accordingly, Ministry issued the guidelines for New Solar Power Scheme (for Tribal and PVTG Habitations/Villages) under PM JANMAN and DA JGUA in October 2024. The financial outlay approved for the scheme is given below:

Sl. No.	Components	Central Share (100%)	Approved Financial Outlay (in Rs. Crore)	Timeline
1	Provision of 0.3 kW Solar off-grid system for 1 lakh Tribal and PVTG HHs	Rs. 50,000 per HH or as per actual cost	500	FY 2023-24 to FY 2025-26
2	Solar street lighting and provision of lighting in 1500 MPCs of PVTG areas	Rs. 1 lakh per MPC	15	
3	Solarisation of 2000 public institutions through off-grid solar systems	Rs 1 lakh per kW	400	FY 2024-25 to FY 2028-29

Based on the proposals received from States under the Scheme (PM JANMAN Component), 8823 un-electrified PVTG households (HHs) (after cancellation of few households by the States as they were electrified through grid) have been sanctioned for electrification through off-grid solar PV systems in eight States namely Andhra Pradesh, Chhattisgarh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Telangana and Tripura. The State implementing agencies have reported electrification of 6154 households against sanctioned 8823 households as on 30.11.2025.

Based on the proposals received from States under the Scheme (DA JGUA Component), Ministry has sanctioned electrification of total 4099 un-electrified Tribal households (HHs) through off-grid solar PV in two states namely Arunachal Pradesh and Manipur and 8 nos. of Public Institutions in Assam.

3.12 Green Energy Corridor

3.12.1 Intra-State Transmission System Green Energy Corridor Phase-I

i. The InSTS GEC scheme with total target of approx. 9767 ckm intra-state transmission lines and approx. 22689 MVA sub-stations was approved by the Cabinet Committee on Economic Affairs (CCEA) in 2015. The InSTS GEC scheme is currently under implementation by the State Transmission Utilities (STUs) of 8 RE rich States, i.e. Andhra Pradesh, Gujarat,

Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan & Tamil Nadu. The project cost is Rs. 10,141.68 crore with funding mechanism consisting of 40% central grant from MNRE (Rs. 4056.67 crore), 40% loan from KfW Germany (EUR 500Million) and 20% equity by the STUs. The projects are being set up for evacuation of approx. 24 GW of RE power in the above 8 States.

ii. As on 31.12.2025, 9170 ckm of transmission lines have been constructed and 22116 MVA of substations have been charged. Out of the 8 States, 6 have completed all the projects, viz. Rajasthan, Madhya Pradesh, Tamil Nadu, Andhra Pradesh, Himachal Pradesh and Karnataka. The remaining two states viz., Maharashtra and Gujarat, have been given the extension up to March 2026. The delay is mainly due to forest clearances, right of way (RoW) and GIB issues. As on 31.12.2025, cumulative grant of Rs. 2839.104 crore has been disbursed to the States.

3.12.2 Intra-State Transmission System Green Energy Corridor Phase-II

i. The InSTS GEC-II scheme with total target of 10753 ckm intra-state transmission lines and 27546 MVA sub-stations (revised to 7919 ckm & 22448 MVA) was approved by the CCEA in January 2022. The InSTS GEC-II scheme is currently under implementation by the State Transmission Utilities (STUs) of 7 States, i.e. Gujarat, Himachal Pradesh, Karnataka, Kerala, Rajasthan, Tamil Nadu and Uttar Pradesh. The scheduled commissioning timeline for the projects under this scheme is March 2026.

ii. The project cost is Rs. 12031.33 crore with central financial assistance from MNRE of Rs. 3970.34 crore (i.e. 33% of project cost). The projects are being set up for evacuation of approx. 20 GW of RE power in the above 7 States. There are total 91 packages and currently, these are under various stages of tendering. As on 31.12.2025, a total of 75 packages have been tendered out of total 91 packages in which 73 have been awarded.

3.12.3 Green Energy Corridor - Inter-State Transmission System for 13 GW RE Projects in Ladakh

i. Ministry of New & Renewable Energy plans to set up 13000 MW RE (9000 MW Solar + 4000 MW Wind) along with 12000 MWh Battery Energy Storage System (BESS). An Inter-State Transmission System would be set up for power evacuation and grid integration of the 13 GW RE projects in Ladakh and despatch of power from the U.T. of Ladakh to other parts of the country. The project will also ensure reliable power supply to the Ladakh region as well as Jammu & Kashmir.

ii. POWERGRID is the implementing agency for this project. The project cost for this transmission project works out to Rs. 20,773.70 crore (excluding IDC of Rs. 2168.69 crore)

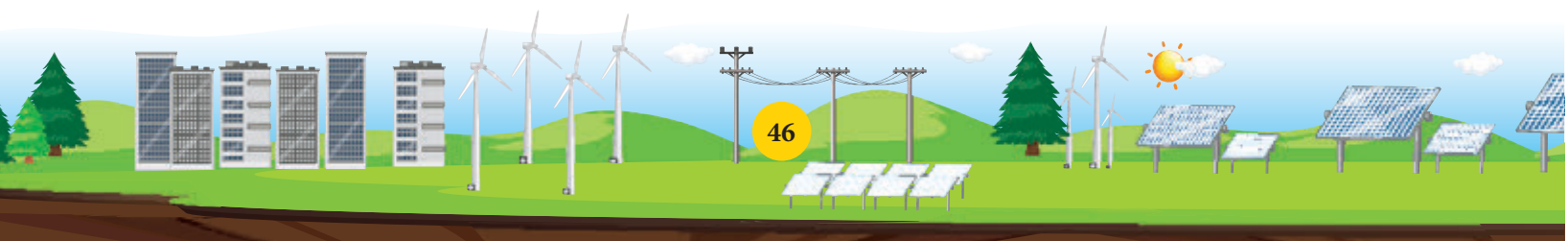
and the central grant will be 40% of project cost is Rs. 8,309.48 crore. The project is anticipated to be completed by FY 2029-30. Under this project, 1268 ckm transmission lines and 2 Nos. of HVDC terminals of 5000 MW capacity each would be setup.

iii. The transmission project has been approved by the Cabinet Committee on Economic Affairs (CCEA) on 18.10.2023. Sanction order along with project implementation guidelines has been issued on 15.02.2024.

iv. Current status of transmission infrastructure:

- Front End Engineering and Design (FEED-1) Study completed.
- NIT for HVDC Terminal Package (2-Stage bidding) in DCB Mode published on 18.07.2024 (Award by March 2025).
- No response received even after several bid submission extension.
- On the request of bidder, MoP allowed GCB on 27.12.2024
- NIT with GCB Mode published: 21.01.2025
- Stage-1 Technical Bid opened: 16.04.2025
- LIDAR Survey for Pang-Kaithal HVDC transmission line and 220kV Pang-Phyang transmission line corridor 50% completed.

v. The scheme is currently under review based on findings from FEED studies.



Wind: On-Shore And Off-Shore

4.1. Wind Energy

4.1.1. Introduction

India's wind energy sector is led by indigenous wind power industry and has shown consistent progress. The expansion of the wind industry has resulted in a strong ecosystem, project operation capabilities and manufacturing base of more than 20,000 MW per annum. The country currently has the fourth highest wind installed capacity in the world with a total installed capacity of 54.51 GW (as on 31.12.2025) of which 6.34 GW was added during January to December, 2025. The number of units generated from wind power projects from 01.01.2025 to 01.12.2025 was 104 billion units, which contributed 5.73% of total electricity generation in the country.

4.1.2. Potential of Wind Energy in India

Wind is an intermittent and site-specific source of energy and therefore, an extensive Wind Resource Assessment is essential for the selection of potential sites. Over a period of time, the Ministry, through National Institute of Wind Energy (NIWE), has installed about 916 wind-monitoring stations all over the country and issued wind potential maps at 50 m, 80 m, 100 m, 120 m and 150 m above ground level. The latest assessment indicates gross wind power potential of 1163.85 GW in the country at 150 m above ground level. Most of this potential exists in eight windy States as given in Table 4.1 below:

Table 4.1: Wind Power Potential in India at 150 meter above ground level (agl)

S. No.	State	Wind Power Potential at 150 mtragl (GW)
1	Andhra Pradesh	123.33
2	Gujarat	180.79
3	Karnataka	169.25
4	Madhya Pradesh	55.42
5	Maharashtra	173.86
6	Rajasthan	284.25
7	Tamil Nadu	95.1
8	Telangana	54.71
	Total (8 windy states)	1136.71

	Other States	27.14
	All India Total	1163.85

The wind atlas is available on the NIWE's website http://www.niwe.res.in and wind potential map at 150 m above ground level is given below in Fig. 4.1.

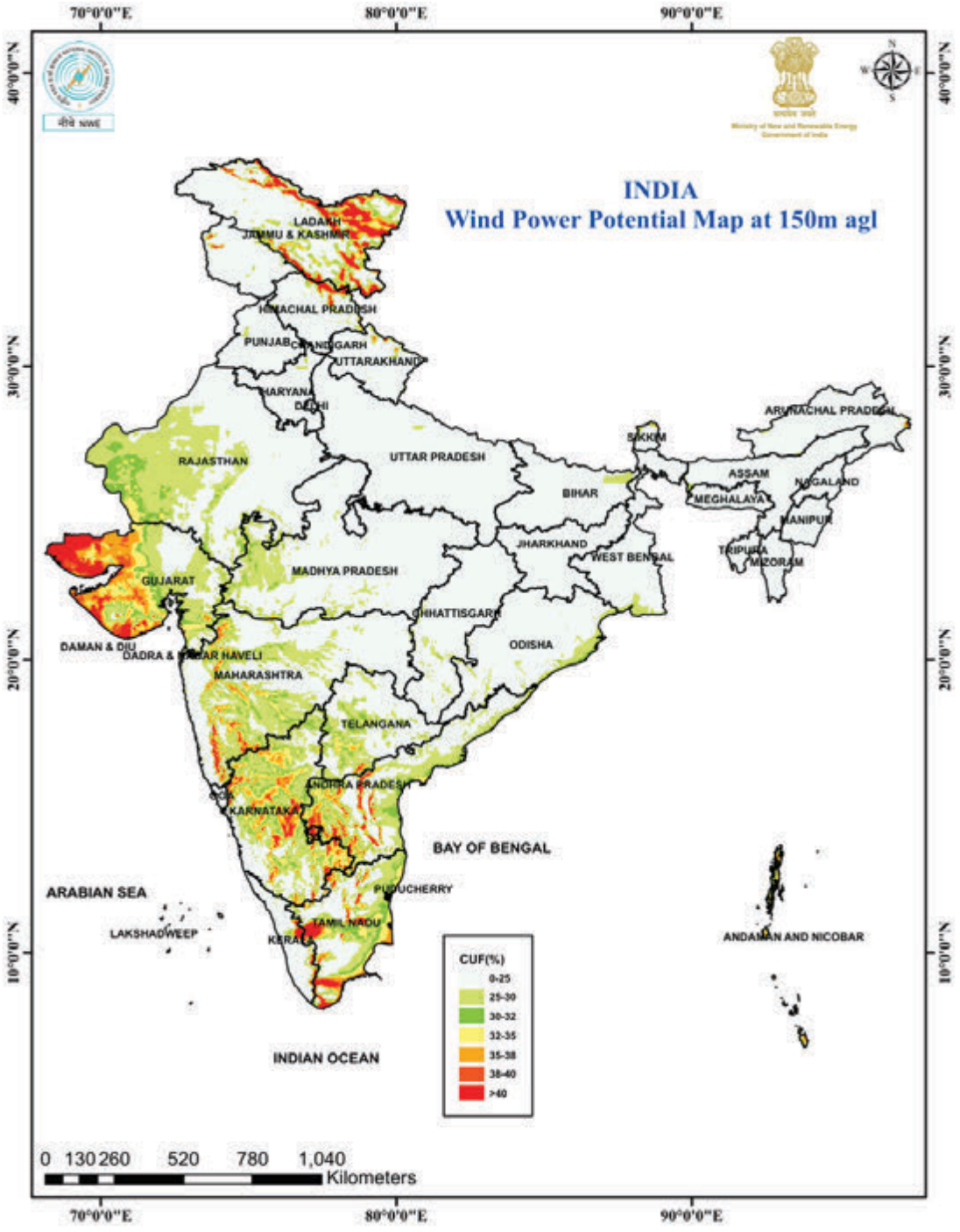


Fig. 4.1. Wind Potential Map at 150 meters above ground level

4.1.3. Installed Capacity of Wind Power in the country

The installed capacity of grid-interactive wind power in the country as on 31.12.2025 is 54.51 GW and state wise installed capacity (in MW) is shown in Table 4.2.

Table 4.2: State wise Wind Power Installed as on 31.12.2025

S. No.	State	Installed Capacity (MW)
1	Andhra Pradesh	4397.78
2	Gujarat	14820.935
3	Karnataka	8413.64
4	Kerala	71.525
5	Madhya Pradesh	3548.15
6	Maharashtra	5822.01
7	Rajasthan	5229.145
8	Tamil Nadu	12075.34
9	Telangana	128.1
10	Others	4.3
	Total (MW)	**54510.925**

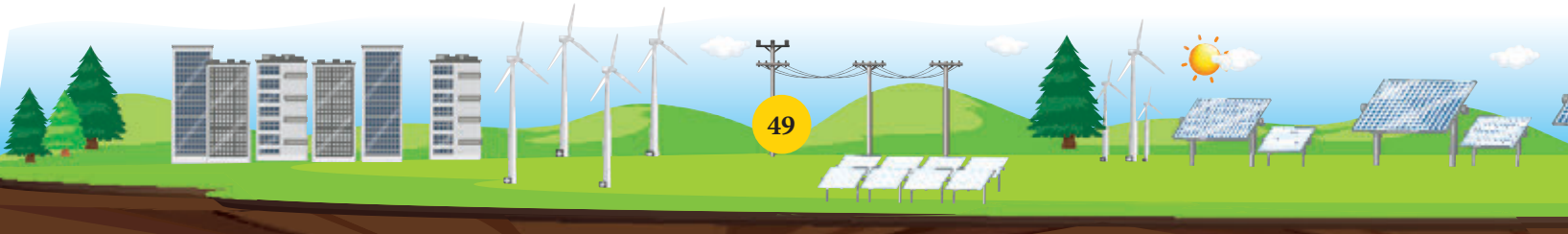
The year-wise electricity generation from wind energy source is shown in Table 4.3.

Table 4.3: Year wise Electricity Generation from Wind Energy Sources

S. No.	State	Generation (MU)
1	2015	32741
2	2016	43452
3	2017	52629
4	2018	60312
5	2019	63313
6	2020	60427
7	2021	68094
8	2022	70045
9	2023	82106
10	2024	81544
11	2025	104006

4.1.4. Technology development and manufacturing base for Wind Power

The Wind Turbine Generator technology has evolved and state-of-the-art technologies are available in the country for the manufacture of wind turbines. Around 70-80% localization has been achieved with strong domestic manufacturing capacity for wind energy turbines and its components in the country.



As per the guidelines for Development of Onshore Wind Power Projects, the Approved List of Models and Manufacturers (ALMM-Wind) enlisted turbines are eligible for installation in the country. Further, an amendment to the procedure for enlistment of wind turbines in ALMM (Wind) issued mandating sourcing of Major Wind Turbine Components like blade, tower, Gearbox, Generator and Special Bearings (Yaw, Pitch and Main Bearing) only from manufacturing facilities enlisted in Approved List of Models & Manufacturers (Wind Turbine Components). ALMM enlistment is done based on the recommendation of ALMM committee chaired by JS(Wind) which evaluates Type Certificate, ISO Certificate, Hub, and Nacelle manufacturing/assembly facility in India. The committee meetings are held on a monthly basis. During the period between 01.01.2025 and 31.12.2025, the committee has recommended 03 Nos of new wind turbine models for inclusion and 22 Nos of existing models for updation.

All the major global players in this field have their presence in the country and 34 different models of wind turbines are being manufactured by 15 different companies, through (i) joint ventures under licensed production (ii) subsidiaries of foreign companies, and (iii) Indian companies with their own technology. The unit size of the largest machine has gone up to 5.3 MW.

Wind turbines and components manufactured in India are also being exported to various countries. The current annual production capacity of wind turbines in the country is more than 20,000 MW.

Further, MNRE issued the Standard Operating Procedure (SOP) for ALMM-Wind and ALMM-WTC, detailing the end-to-end process for application, verification, factory inspection, component evaluation and model enlistment.

4.1.5. Tender/bidding in Wind Energy Sector

Government issued Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Wind Power Projects vide resolution notified on 08.12.2017. The Government revised its Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Wind Power Projects vide resolution notified on 26.07.2023. The Guidelines have also been further amended vide notifications dated 17.11.2023, 02.02.2024 and 12.02.2025.

The objectives of the guidelines were to facilitate renewable capacity addition and fulfilment of RCO requirements of distribution licensees; to provide a transparent and standardized procurement framework based on competitive bidding with appropriate risk sharing between stakeholders to enable power procurement at competitive prices; improve bankability while ensuring reasonable return to investors; provide a framework for inter-state/ intra-state, long-term, sale-purchase of power as a further measure to de-risk the sector.

The guidelines are applicable to wind power projects of minimum 10 MW capacity for intra-state projects and minimum 50 MW for inter-state projects. The salient features include capacity allocation through bucket filling method; consideration of already built-up untied capacity for

participation in bid; PPAs for 20 years with extension up to 25 years and generation compensation in case of grid unavailability or reduced offtake.

4.1.6. Status of tenders for Wind Power Projects

To enable DISCOMs of the non-windy States to fulfil their Wind Renewable Consumption Obligation (RCO), through purchase of wind power at a tariff determined by transparent bidding process, MNRE through Renewable Energy Implementation Agencies (SECI, NTPC, NHPC and SJVN) auctioned wind power capacity in various tranches. Further states like Gujarat, Maharashtra and Tamil Nadu have also auctioned wind power capacities.

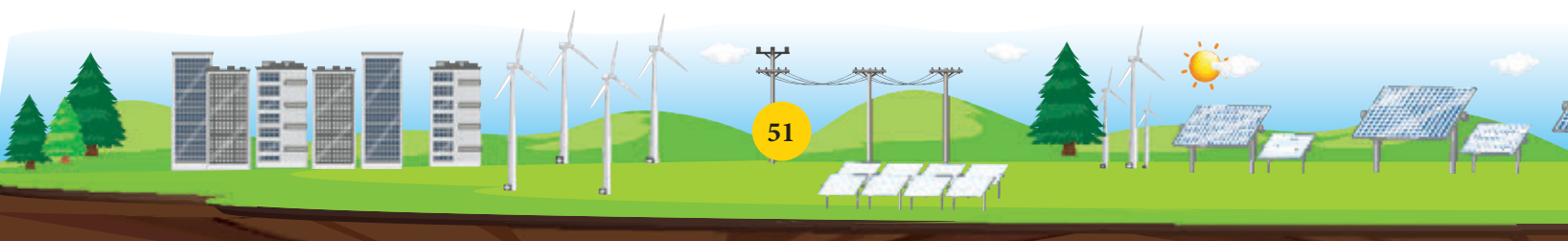
1. Cumulative commissioned capacity till 31/12/25: 54.51 GW
2. Capacity under implementation: 30.04 GW
3. Total ongoing bids: 1.8 GW

   Total (1+2+3): 86.355 GW

The details of capacity awarded under REIA wind bids are shown in **Table 4.4.**

Table 4.4: Details of REIA Tenders auctioned for Wind Power

S. No.	Bidding Agency	Awarded Capacity (MW) (A)	Cancelled Capacity (MW) (B)	Net Capacity (MW (C=A-B)	Capacity Commissioned (MW)	Bidding Agency Type	Minimum Tariff (Rs. / kWh)
1	SECI Wind-I	1049.9	50	999.9	999.9	Central	3.46
2	SECI Wind-II	1000	239.9	760.1	760.1	Central	2.64
3	SECI Wind-III	2000	1049.8	950.2	950.2	Central	2.44
4	SECI Wind-IV	2000	1276	724	724	Central	2.51
5	SECI Wind-V	1190	568.5	621.5	621.5	Central	2.76
6	SECI Wind-VI	1200	227	973	973	Central	2.82
7	SECI Wind-VII	480	300	180	180	Central	2.79
8	SECI Wind-VIII	440.8	0	440.8	250.71	Central	2.83
9	SECI Wind-IX Blended	970	0	970	862	Central	2.99
10	SECI Wind-X	1200	450	750	750	Central	2.77
11	SECI Wind-XI	1200	750	450	54.6	Central	2.69
12	SECI Wind-XII	1100	300	800	0	Central	2.89
13	SECI Wind-XIII	600	0	600	0	Central	2.9
14	SECI Wind-XIV	690	190	500	0	Central	3.18
15	SECI Wind-XVI	1175	0	1175	0	Central	3.6
16	SECI Wind-XVII	50	0	50	0	Central	3.81



17	NTPC Wind-I	1150	1150	0	0	Central	2.77
18	SJVN Wind-I	170	0	170	0	Central	3.41
19	SJVN Wind-II	312	0	312	0	Central	3.74
	Total	**17977.7**	**6551.2**	**11426.5**	**7126.01**		

4.1.7. Incentives available for Wind Sector

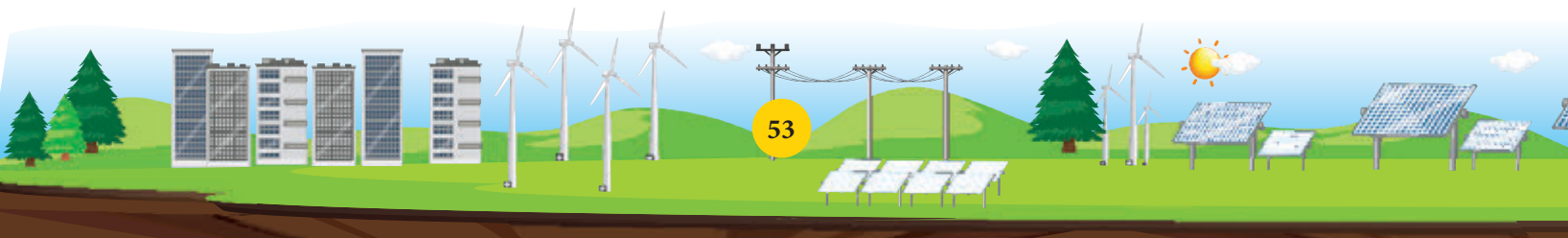
The Government has taken several steps to promote renewable energy, including wind energy, in the country. These, inter alia, include;

- 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 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.
- 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, 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 been taken specifically for promoting wind energy.
- Declaration of trajectory for Wind Renewable Consumption Obligation (Wind RCO) up to the year 2030.
- Concessional custom duty exemption on certain components required for manufacturing of wind electric generators. During the period 01.01.2025 to 31.12.2025, about 278 Nos of CCDC certificates issued.
- Generation Based Incentive (GBI) is being provided to the wind projects commissioned on or before 31.03.2017.
- "National Repowering and Life Extension Policy for Wind Power Projects, 2023" has been issued.
- Technical support including wind resource assessment and identification of potential sites through the National Institute of Wind Energy, Chennai,
- Issuance of 'Elevation Certificate' by NIWE for obtaining NOC from Ministry of Defense.
- Ministry also facilitated issuance of No Objection Certificate from Ministry of Defence. In the period between 01.012025 and 31.12.2025, 132 applications have been approved by MoD.
- Strategy for Establishment of Offshore Wind Energy Projects" has been issued indicating various business models for project development.
- 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.
- VGF Scheme for Offshore Wind Energy Projects" has been launched.
- Ministry also issued the revised guidelines for installation of prototype wind turbine models on 12.06.2025.

4.1.8. Offshore Wind Development in India

India's mainland is blessed with a coastline of about 7600 kms surrounded by seawater on three sides and has tremendous power generation potential from offshore wind energy. Considering this, the Government had notified the National Offshore Wind Energy Policy as per the Gazette Notification dated 06.10.2015. As per the policy, Ministry of New and Renewable Energy will act as the nodal ministry for development of Offshore Wind Energy in India and work in close coordination with other government entities for Development and Use of Maritime Space ithin the Exclusive Economic Zone (EEZ) of the country in an effective manner for production of enormous quantity grid quality electrical power for national consumption.



National Institute of Wind Energy (NIWE), Chennai has been designated as the nodal agency to execute various pre-feasibility activities relating to resource assessment, surveys and studies within EEZ (Exclusive Economic Zone), demarcation of offshore potential blocks and facilitating offshore wind energy project developers for setting up offshore wind energy farms.

Based on the preliminary assessment from satellite data and data available from other sources, potential zones off the coast of Gujarat and Tamil Nadu have been identified (Fig. 4.2 and Fig. 4.3).

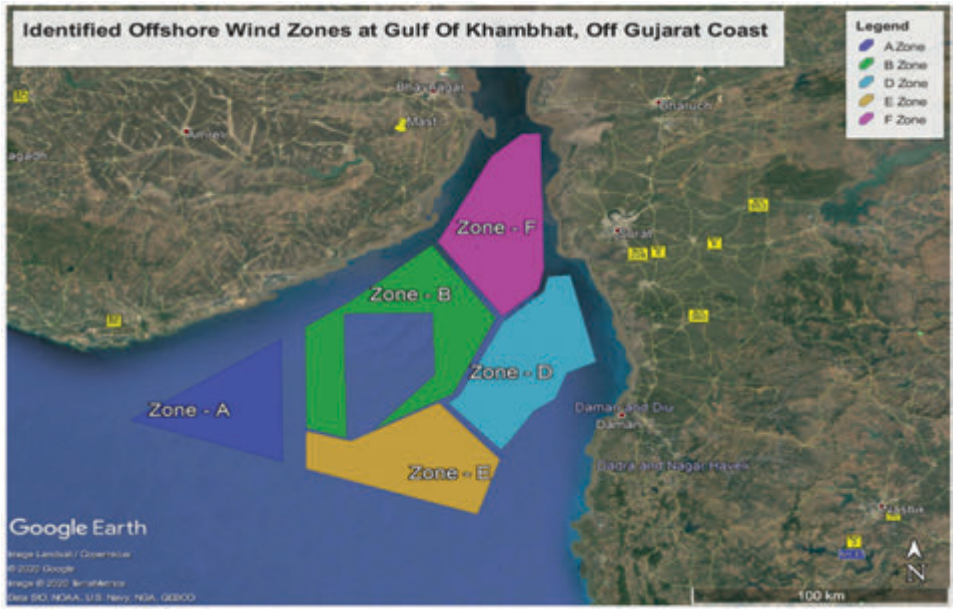


Fig. 4.2. Gujarat Offshore Wind Potential Zone

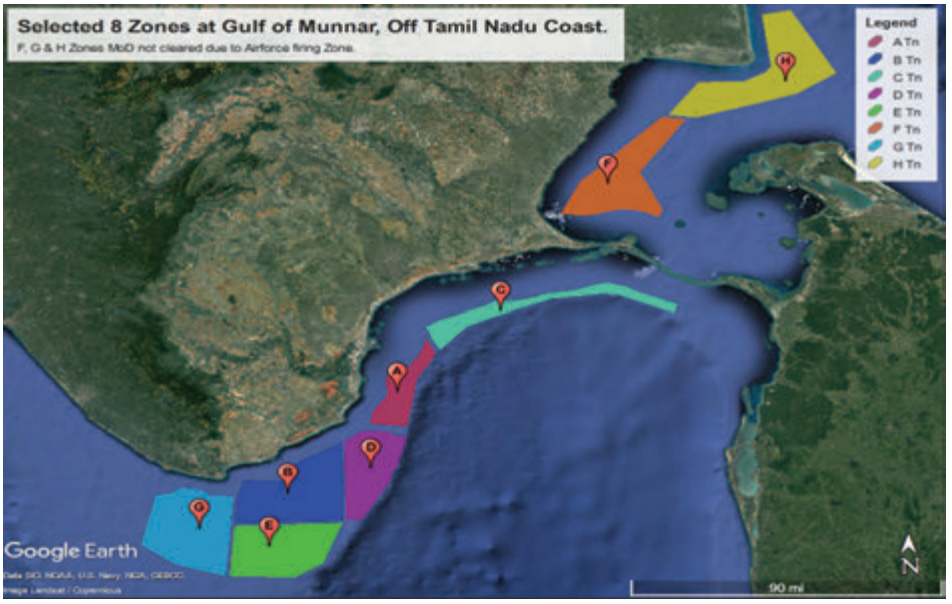


Fig. 4.3. Tamil Nadu Offshore Wind Potential Zone

4.1.9. Studies to Assess the Offshore Wind Potential

1. **Offshore measurements off Gujarat and Tamil Nadu coast**

   LiDAR based offshore wind potential measurements for 2 years have been completed at Gulf of Khambhat off Gujarat coast. The offshore LiDAR wind data measurement report for the first and second years have been published for benefit of stakeholder. Four more LiDARs have been procured by NIWE for carrying out offshore wind resource assessment off Gujarat and Tamil Nadu coast. The LiDARs have already been validated in the WTRS test station, Kayathar. 4 Nos of LiDAR off Tamil Nadu coast (2 at VOC port & 1 at Udangudi thermal coal jetty and one Floating LiDAR off Tamil Nadu coast) have been installed for wind resource measurement.

2. **Geophysical investigation at Gulf of Khambhat off Gujarat coast**

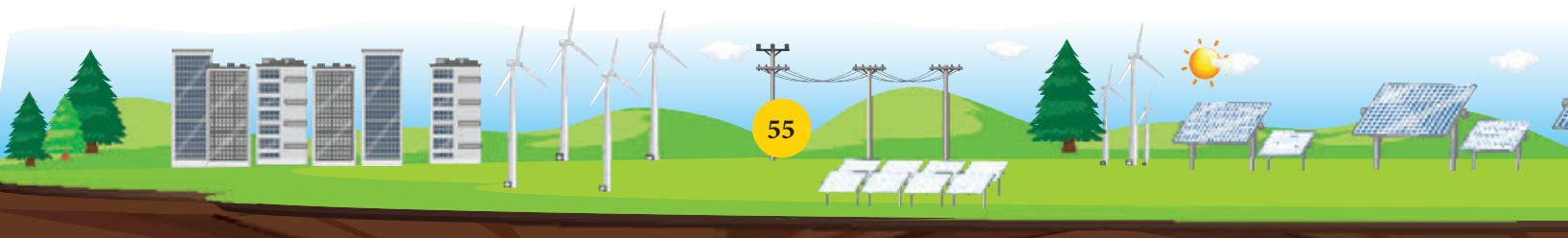
   In order to ascertain the nature of sub sea surface and soil profile available at recommended depths for the design of foundation for offshore structures, a detailed geophysical survey is required to be carried out. Onsite Geo-physical investigation (single beam bathymetry survey, side scan sonar, sub- bottom profiling, and magnetometer survey and sediment samples) covering an area of 365 sq. km for 1GW offshore project in Gulf of Khambhat off Gujarat Coast has been completed. Geophysical investigation for 500 MW site off Tamil Nadu coast has been completed.

3. **Geotechnical Investigation at Gulf of Khambhat and Gulf of Mannar off Tamil Nadu Coast**

   In order to understand the subsoil profile and load bearing capacity of the seabed geotechnical studies were carried out at five locations off the coast of Gujarat. The geotechnical investigations at three locations off the coast of Tamil Nadu have been completed.

4. **Marine Spatial Planning for offshore wind farms in Tamil Nadu**

   Marine Spatial Planning (MSP) for offshore wind projects off the coast of Gujarat and Tamil Nadu were carried out as joint initiatives between India and Denmark to acknowledge the marine traffic movements in the identified offshore zones. Under MSP, the screening of offshore zones was carried out considering various key factors such as wind speed, water depth, marine traffic, oil blocks, environmentally sensitive zones, etc. with an objective to prepare Levelized Cost of Energy (LCOE) Heat maps. The aim was to arrive at the best possible use of the offshore zones for offshore wind farm development in an efficient, safe and sustainable way. Based on the MSP report, the best suitable offshore sites for initial offshore wind projects have been demarcated (Fig 4.4).



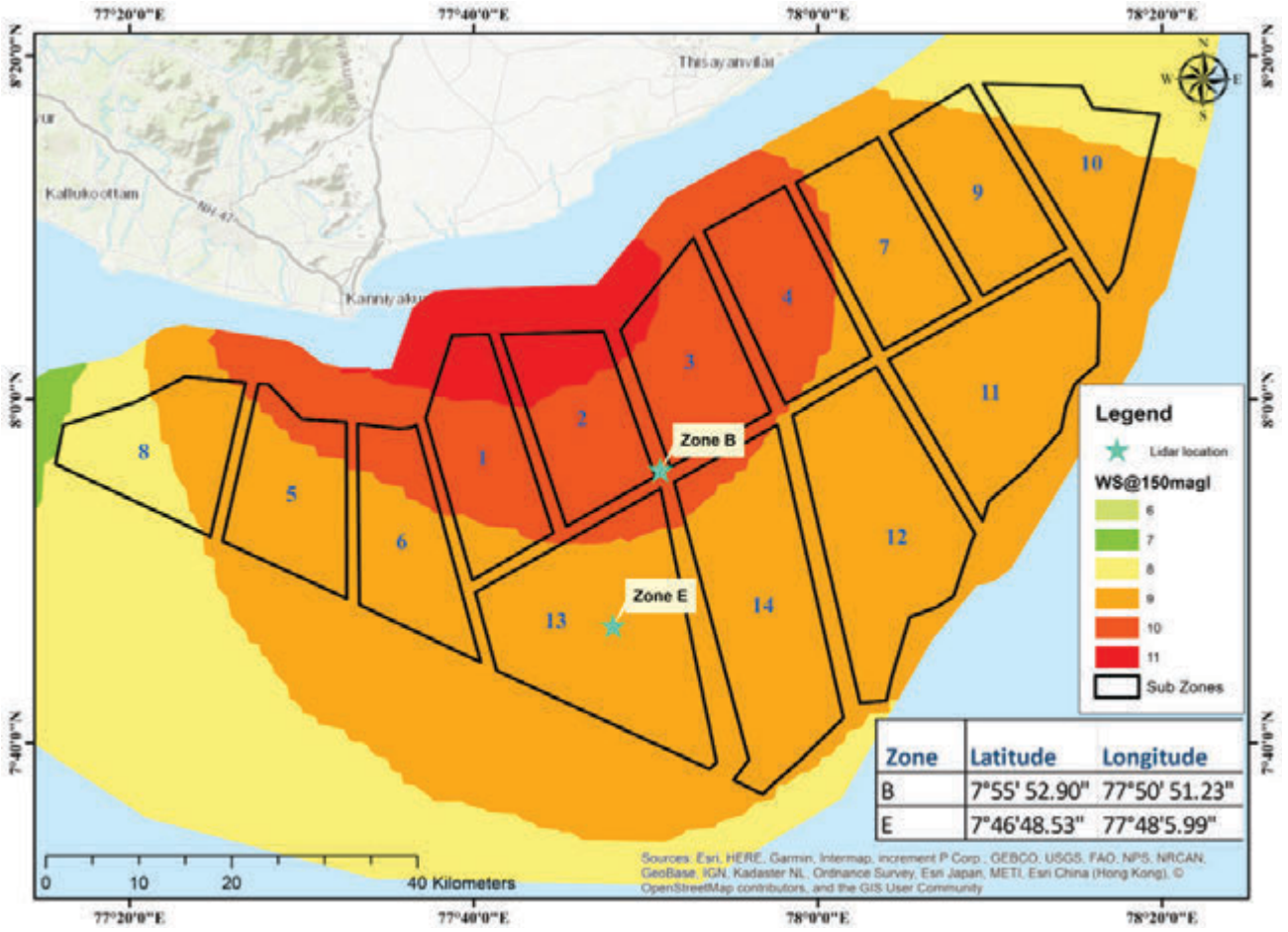


Fig. 4.4. Proposed Sites for Offshore Wind Projects off the coast off Tamil Nadu

4.1.10. Viability Gap Funding (VGF) scheme for offshore wind energy projects

The Union Cabinet has approved the 'Viability Gap Funding (VGF) scheme for offshore wind energy projects' on 19.06.2024 at a total outlay of ₹ 7453 crore, including an outlay of ₹ 6853 crore for installation and commissioning of 1 GW of offshore wind energy projects (500 MW each off the coast of Gujarat and Tamil Nadu), and grant of ₹ 600 crore for upgradation of two ports to meet logistics requirements for offshore wind energy projects.

The scheme guidelines for implementation of "VGF Scheme for Offshore Wind Energy Projects" issued on 11.09.2024.

The bid for development of a 500 MW offshore wind project off the coast of Gujarat was issued by Solar Energy Corporation of India Limited (SECI) in September 2024, and the pre-bid meeting was held on 06.12.2024. Subsequently, an amendment to the bid document was issued on 10.07.2025. The last date for bid submission was 31.07.2025. However, the tender was closed as no bids were received.

4.1.11. Offshore Wind Turbine Research and Test Centre at Dhanushkodi, Tamil Nadu

In order to strengthen the domestic capacity for design and development of new offshore wind energy turbines, a testing cum research facility was necessary and NIWE has already identified the suitable site at Dhanushkodi, Tamil Nadu for establishment of the testing cum research centre. The required land for the purpose has been allotted by Govt. of Tamil Nadu. The preliminary Detailed Project Report (DPR) Preparation for the test centre is under preparation by NIWE. Further, an EIA study has been completed for the site, and requisite clearances for establishment of the facility are under process.

4.1.12. Global Wind Day Celebration – 2025

MNRE organized a conference on 15.06.2025 on the occasion of Global Wind Day 2025 with support from WIPPA, NIWE, IWTMA & IWPA with the theme 'Pawan-Urja: Powering the Future of India'. During the conference, key issues faced by wind industry were discussed including India's wind growth trajectory, state-wise progress, and the strategic interventions required to meet national targets.

Shri Pralhad Joshi, Hon'ble Cabinet Minister for New and Renewable Energy, Shri Shripad Yesso Naik, Hon'ble Minister of State for New and Renewable Energy, Shri KJ George, Hon'ble Cabinet Minister of Energy, Government of Karnataka, Shri Santosh Kumar Sarangi, Secretary, MNRE and other key stakeholders from government, industry & academia were present at the event.

Figure 4.5. Global Wind Day Celebrations 2025

4.2. Energy From Wind-Solar Hybrid

4.2.1. National Wind-Solar Hybrid Policy

The Ministry issued National Wind-Solar Hybrid Policy on 14.05.2018 and amended on 13.08.2018. The main objective of the policy is to provide a framework for promotion of large-scale grid connected wind-solar PV hybrid systems for optimal and efficient utilization of wind and solar resources, transmission infrastructure and land. The wind-solar PV hybrid systems will help in reducing the variability in renewable power generation and achieving better grid stability. The policy also aims to encourage new technologies, methods and way-outs involving combined operation of wind and solar PV plants.

4.2.2. The Major Highlights of the Policy are as under:

i. A wind-solar plant will be recognized as hybrid plant if the rated power capacity of one resource is at least 25% of the rated power capacity of other resource.

ii. Both AC and DC integration of wind-solar hybrid project are allowed.

iii. The power procured from the hybrid project may be used for fulfilment of solar RCO and non-solar RCO in the proportion of rated capacity of solar and wind power in the hybrid plant respectively.

iv. Existing wind or solar power projects, willing to install solar PV plant or Wind Turbine Generators (WTGs) respectively, to avail benefit of hybrid project, may be allowed.

v. All fiscal and financial incentives available to wind and solar power projects will also be made available to hybrid projects.

vi. The Central Electricity Authority (CEA) and Central Electricity Regulatory Commission (CERC) shall formulate necessary standards and regulations including metering methodology and standards, forecasting and scheduling regulations, REC mechanism, grant of connectivity and sharing of transmission lines, etc., for wind-solar hybrid systems.

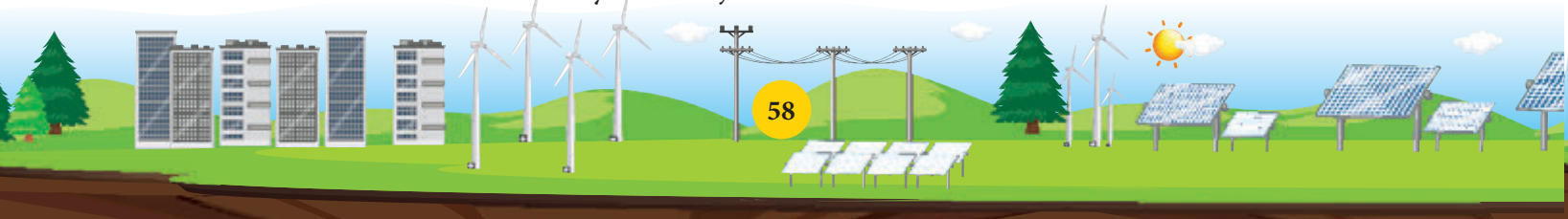
vii. Storage may be added to the hybrid project to ensure availability of firm power for a particular period.

4.2.3. Wind-Solar Hybrid Projects

The following are the Projects under the Wind-Solar Hybrid Programme

i. In order to implement the National Wind-Solar Hybrid Policy, a scheme for setting up of 2500 MW Inter State Transmission System (ISTS) connected wind-solar hybrid projects was sanctioned on 25.05.2018. The Solar Energy Corporation of India (SECI) was the nodal agency for implementation of the scheme through tariff based transparent competitive bidding process.

ii. Guidelines for Tariff Based Competitive Bidding Process for procurement of power from Grid Connected Wind Solar Hybrid Projects were issued on 14.10.2020 and further revised on



21.08.2023. The Guidelines also been further amended vide notifications dated 17.11.2023, 02.02.2024 and 12.02.2025. The objective is to promote renewable capacity additions and RCO fulfilment; facilitate a transparent and fair procurement of electricity through competitive means; provide for a standardized framework for an Intermediary Procurer as an Aggregator/Trader; and provide a risk-sharing framework between various stakeholders. Procurement shall be from hybrid power projects with a minimum bid capacity of 10 MW and 50 MW for projects connected to the intra-state transmission system and inter-state transmission system, respectively. The rated power capacity of one resource (wind or solar) shall be at least 33% of the total contracted capacity, and solar and wind components of the hybrid project can be located at the same or different locations. It has provisions for payment security mechanism, generator compensation for off-take constraints, adding storage to the hybrid power project, etc.

iii. The status of hybrid projects awarded under Wind-Solar Hybrid Policy are as given in Table 4.5.

Table 4.5: Details of REIA Tenders awarded under Solar-Wind Hybrid Policy

S. No.	Bidding Agency	Awarded Capacity	Capacity Commissioned (MW)	Minimum Tariff (Rs. / kWh)
1	SECI Hybrid-I	840	840	2.67
2	SECI Hybrid-II	600	600	2.69
3	SECI Hybrid-III	1110	546	2.41
4	SECI Hybrid-IV	1200	0	2.34
5	SECI Hybrid-V	1170	0	2.53
6	SECI Hybrid-VI	1200	0	4.64
7	SECI Hybrid-VII	900	0	3.15
8	SECI Hybrid-VIII	1200	0	3.43
9	SECI Hybrid-IX	600	0	3.25
10	NTPC Hybrid-I	1080	0	3.35
11	NTPC Hybrid-01/2024-25	1170	0	3.28
12	NTPC Hybrid-02/2024-25	1200	0	3.38
13	NTPC Hybrid-03/2024-25	1200	0	3.35
14	NTPC Hybrid-IV	1500	0	3.27
15	NTPC Hybrid-V	1000	0	3.41
16	NTPC Hybrid-VI	1000	0	3.43
17	NHPC Hybrid-I	960	0	3.48
18	NHPC Hybrid-II	2400	0	3.41
19	SJVN Hybrid-I	1500	0	3.43