Research Unit
Press Information Bureau
Government of India

India's Renewable Energy Revolution

2024 Achievements & 2025 Roadmap

(Ministry of Renewable Energy)

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As India accelerates its transition towards a sustainable future, its renewable energy (RE) sector has witnessed **unprecedented growth**. In 2024, the country made significant strides in solar and wind energy installations, policy advancements, and infrastructural improvements, setting the stage for ambitious targets in 2025. With a commitment to achieving **500 GW of non-fossil fuel-based energy capacity by 2030**, India is emerging as a **global leader in clean energy**. As on 20th Jan 2025, India's **total non-fossil fuel based energy capacity** has reached **217.62 GW**.

The year 2024 saw a record-breaking **24.5 GW of solar capacity** and **3.4 GW of wind capacity** added, reflecting a more than **twofold** increase in solar installations and a **21% rise** in wind installations compared to 2023. This surge was driven by government incentives, policy reforms, and increased investments in domestic solar and wind turbine manufacturing. Solar energy remained the dominant contributor to India's renewable energy growth, accounting for **47% of the total installed renewable energy capacity.** Last year saw the installation of **18.5 GW of utility-scale solar capacity**, a nearly **2.8x increase** compared to 2023. **Rajasthan**, **Gujarat**, and **Tamil Nadu** emerged as the top-performing states, contributing **71%** of India's total utility-scale solar installations.

The rooftop solar sector also experienced significant growth in 2024, with **4.59 GW of new capacity installed**, marking a **53% increase** from the year 2023. The **PM Surya Ghar: Muft Bijli Yojana**, launched in **2024**, played a crucial role in this expansion, facilitating **7 lakh rooftop solar installations within ten months**. Additionally, the off-grid solar segment recorded a **182% increase**, adding **1.48 GW** in 2024, furthering India's energy access goals in rural areas.

India added **3.4 GW** of new **wind capacity in 2024**, with **Gujarat** (1,250 MW), **Karnataka** (1,135 MW), and **Tamil Nadu** (980 MW) leading the way. These states accounted for **98%** of the new wind capacity additions, highlighting their continued dominance in wind power generation.

The **Ministry of New & Renewable Energy (MNRE)** played a pivotal role in fostering RE growth through policy interventions and financial support. Key highlights include:

- **Green Hydrogen Push**: The government actively pursued the development of green hydrogen policies to reduce costs and attract investments in this emerging sector.
- **Manufacturing Expansion**: Domestic solar PV and wind turbine manufacturing were scaled

up, supporting India's ambition to become a global RE manufacturing hub.

- **Grid Infrastructure Development**: The MNRE proposed significant investments in inter-state transmission systems to evacuate power from renewable-rich states like **Rajasthan, Gujarat, and Madhya Pradesh.**

India's renewable energy sector is on a transformative journey, **with 2024 marking a year of record capacity additions and policy advancements**. As the country moves into 2025, addressing regulatory, financial, and infrastructural challenges will be crucial. With continued policy support, increased investment, and a focus on emerging technologies, India is well-positioned to achieve its **ambitious renewable energy targets** and **solidify its status as a global leader in the clean energy transition.**

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References:

- Ministry of New and Renewable Energy
- https://npp.gov.in/dashBoard/gc-map-dashboard

Santosh Kumar/ Sarla Meena/ Rishita Aggarwal