

Renewable Energy Capacity of India

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Context

As per the **Ministry of New & Renewable Energy (MNRE)**, India has added 21% higher **renewable energy capacity in 2023-24** than previous year.

About

- India, a country with a hastily growing economic system and growing energy demands, has made widespread strides in its renewable energy sector.
- It added 18.48 GW of renewable energy capacity in the fiscal year 2023-24, which is over 21% higher than the 15.27 GW introduced a year ago.
- It was in general pushed by solar installations (12.78 GW) and wind energy (2.27 GW).
- The total set up renewable energy potential has multiplied from 76.37 GW in 2014 to 178.98 GW in October 2023, marking an increase of around 2.34 times.

Leading States in Renewable Energy

- Gujarat and Rajasthan (27 GW each) have the largest renewable energy capacities, followed by Tamil Nadu (22 GW), Karnataka (21 GW) and Maharashtra (17 GW).
- Himachal Pradesh and Andhra Pradesh (11 GW every) have set up renewable energy capacity.

India Towards a Greener Future

- India aims to attain a non-fossil fuel energy capacity of 500 GW by 2030 and fulfil at least half of its energy requirements by renewable energy by 2030 at the [COP26](#).
 - To gain this target, the MNRE is focused on the bidding of around 50 GW of renewable energy projects per annum.
- India's installed non-fossil fuel capacity has improved 39.6% in the remaining 8.5 years and stands at more than 190.97 GW (including big Hydro and nuclear), about 44% of the country's overall capacity (as of Feb 2024).
- India's renewable energy sector has the potential to employ around one million people by 2030, and most of the new jobs would be generated by small-scale renewable energy projects.

Challenges Faced by the Renewable Energy Sector in India

- **Financial Health of Power Distribution Companies (DISCOMs):** The bad financial condition of power distribution corporations (discoms), which are mostly owned by state governments.
 - Almost all renewable energy is bought by such discoms, ensuing in very lengthy and unsustainable payment cycles.
- **Land Utilisation and Availability:** Issues which include lack of a right Land Utilisation Policy, poorly maintained land statistics, land ceiling limits, and the assignment of obtaining permissions from local bodies act as roadblocks to the implementation of huge-scale renewable energy projects.
- **Rapid Demand Growth and Chronic Supply Shortages:** India currently studies a massive growth in energy demand pushed by fast financial growth, which necessitates a shift faraway from fossil fuels.
 - However, fossil fuels still dominate worldwide energy consumption, persevering to raise GHG emission levels.

Government Efforts in India's Renewable Energy Sector

- **Permitting FDI:** India has authorised FDI as much as 100% under the automatic route to attract foreign investments.
- **Waiver of Inter State Transmission System (ISTS) prices:** For inter-state sale of solar and wind power for projects, ISTS charges have been waived off.
- **Major Renewable Energy Schemes and Programmes**
 - Scheme for Development of Solar Parks and Ultra-mega Solar energy Projects;
 - Central Public Sector Undertaking (CPSU) Scheme Phase-II;
 - [Production Linked Incentive \(PLI\) Scheme 'National Programme on High Efficiency Solar PV Modules'](#);
 - [PM-KUSUM](#) Scheme;
 - Rooftop Solar Programme Phase II;
 - Green Energy Corridors (GEC), and;
 - Bio-Energy Programme.
- **Increasing Awareness:** Efforts were made with the aid of the Government to increase attention about the use of renewable energy by introduction of numerous schemes and

publicity by print and media.

Conclusion

- India's record addition of renewable energy capacity in FY24 is a testimony to the country's commitment to a sustainable and green future.
- As the world grapples with the demanding conditions of climate change, India's strides in renewable energy provide a beacon of hope and a version for different countries to comply with.

Source: *The Indian Express*

UPSC Mains Practice Question

Q. India has immense potential of solar energy though there are regional variations in its developments. Elaborate (2020)