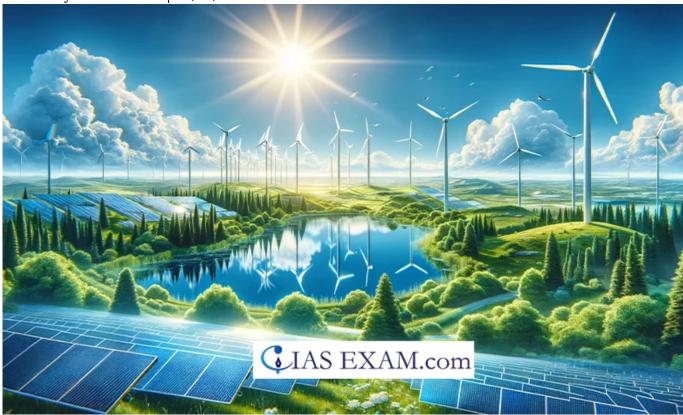
# Renewable Energy Capacity of India

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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 capcapacity 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;
  - <u>Production Linked Incentive (PLI) Scheme 'National Programme on High Efficiency</u> 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)