



Global Wind Report 2022

For Prelims: Global Wind Report for 2022, Global Wind Energy Council.

For Mains: Global Wind Report for 2022, India's renewables energy targets, challenges and initiatives taken to achieve it.

Why in News?

Recently, the **Global Wind Report for 2022** was published by the **Global Wind Energy Council (GWEC)**.

- GWEC was established in 2005 to **provide a credible and representative forum** for the entire wind energy sector at an international level.

What are the Key Highlights of the Report?

- **Wind Energy Installations Must Quadruple Every Year:**
 - Wind energy installations **every year across the world must quadruple from the 94 GW (Gigawatt) installed in 2021** within this decade to meet the global climate targets.
 - Without the necessary amplification, restricting global warming over pre-industrial levels to 1.5 degrees Celsius — a target set by the [Paris Agreement](#) — and achieving [Net Zero emissions](#) by 2050 may become difficult.
- **Capacity Installed in 2021:**
 - New installations of 93.6 GW in 2021 brought global cumulative wind energy capacity to 837 GW, a Year-on-Year (YoY) growth of 12%.
 - The **onshore wind market** added 72.5 GW worldwide. That is 18% lower than the previous year **due to a slowdown in China and the US, the world's two largest wind markets**.
 - The **offshore wind market** enjoyed its best ever year in 2021, with 21.1GW commissioned.
- **New offshore installations likely to Decline:**
 - New offshore installations in 2022 are likely to decline to the 2019 / 2020 levels.
 - Decline will be primarily **due to the reduction of installations in China**.
 - However, **market growth is expected to regain momentum from 2023**, eventually passing the 30GW-mark in 2026.
- **Offshore Wind Energy Generation Increases Return:**
 - Offshore wind energy generation **increases return on investment**, along with reducing [greenhouse gas emissions](#).
 - Carbon dioxide emissions can reduce by 0.3-1.61 gigatonnes every year by 2050 if offshore wind energy generation is scaled up.

What are the Challenges to Growth of the Wind Energy Sector?

- **Inconsistent policy environments** focused on short-term political aims.

- **Badly designed markets** which do not enable bankable renewable energy projects.
- Infrastructure and transmission bottlenecks.
- **A lack of adequate industrial and trade policies** related to renewable technologies
- Hostile political or misinformation campaigns.

What is the Scope of the Wind Energy Sector in India?

- In India, more than **1.4 GW of wind was installed in 2021**, exceeding the 1.1 GW of installations during the previous year.
- The Government has **set a target of installing 5 GW of offshore capacity by 2022 and 30 GW by 2030**.
 - India is yet to develop its offshore wind energy facility.
- India can **generate 127 GW of offshore wind energy** with its 7,600 km of coastline.
 - **Onshore wind energy** refers to turbines that are located on land and use wind to generate electricity.
 - **Offshore wind energy** is the energy generated from the wind at sea.
- The Indian wind market outlook for 2022 and 2023 is projected at 3.2 GW and 4.1 GW of onshore wind installations, respectively.

What are the Related Initiatives?

- **National Wind-Solar Hybrid Policy:** The main objective of the National Wind-Solar Hybrid Policy, 2018 is to provide a framework for promotion of large grid connected wind-solar PV hybrid systems for optimal and efficient utilization of wind and solar resources, transmission infrastructure and land.
- **National Offshore Wind Energy Policy:** The National Offshore wind energy policy was notified in October 2015 with an objective to develop the offshore wind energy in the Indian **Exclusive Economic Zone (EEZ)** along the Indian coastline of 7600 km.

Way Forward

- Governments **need to tackle issues** such as planning barriers and grid connection challenges.
- To sustain and increase growth in wind-based generation capacity, **policymakers need to streamline the procedures to grant permits**, including land allocation and grid connection projects.
- Workforce planning for large-scale renewables deployment should be an early policy priority and investment in grids must treble from current levels through to 2030.
- There is also a **need for greater public-private co-operation** to confront “the new geopolitics of the wind supply chain”.
- A stronger international regulatory framework is needed to address the increased competition for commodities and critical minerals.

Source: DTE

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