



Global Wind Day

For Prelims: Wind Energy, Renewable Sources of Energy, Government Initiatives

For Mains: Significance of Wind Energy, Challenges in Wind Energy Projects, Related Government Initiatives

Why in News?

Global Wind Day celebrated on 15th Jun June 2023 by the Ministry of New and Renewable Energy (MNRE) with the theme of “**Pawan - Urja: Powering the Future of India**”.

- MNRE has **set the target of 500 GW renewable energy capacity by 2030** and **Wind Atlas at 150 meter above ground level** was also launched by **National Institute of Wind Energy (NIWE)**, estimating the **onshore wind potential at 1,164 GW**.

What is Global Wind Day?

- Global Wind Day is an annual event since 2007 to promote wind energy as a clean and renewable source of power.
- It was started by the European Wind Energy Association (EWEA) and later joined by the **Global Wind Energy Council (GWEC)**.
 - GWEC is a member-based organisation that represents the entire wind energy sector.

What is Wind Energy?

- **About:**
 - Wind energy is **a form of renewable energy that uses the kinetic energy of the air to generate electricity**.
- **Mechanism:**
 - Wind energy is **created using wind turbines, which are devices that have blades that rotate** when the wind blows.
 - The rotation of the blades drives a generator that produces electricity.
 - **Wind energy can be generated on land or offshore**, where there are stronger and more consistent winds.
- **Emission of Gases:**
 - Wind energy is a **clean and renewable source of power that does not emit greenhouse gases** or other pollutants.
- **Uses:**
 - Wind energy **can be used for homes, businesses, farms**, and other applications. Wind energy is one of the **fastest-growing renewable energy** sources in the world.
- **Some Facts About Wind Energy:**
 - **Global:**
 - The **largest wind power market in the world is China**, with a **capacity of over 237 GW** of wind power installed followed by U.S and Germany.

- China also has the world's largest onshore wind farm in Gansu Province, built out of the Gobi Desert.
- **India Specific:**
 - India ranks **fourth in wind power capacity** (with 42.8 GW as of April 2023) in the world and has a huge potential for both onshore and offshore wind energy production.
 - Wind energy is vital for India's transition to a low-carbon economy and achieving its goals of 50% non-fossil fuel-based energy by 2030 and **Net Zero by 2070**.
 - **Tamil Nadu installs highest wind power capacity** till June 2022 followed by Gujrat and Karnataka.
- **Indian 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.
- **Global Initiative:**
 - **Global Offshore Wind Alliance (GOWA)** founded by Denmark, the [International Renewable Energy Agency \(IRENA\)](#), and the **Global Wind Energy Council (GWEC)**, was officially launched at COP27 in November 2022, where a large group of countries agreed to a rapid ramp-up of offshore wind.
 - For the coming three years, the founders and **Colombia will co-chair the Alliance.**

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. Give an account of the current status and the targets to be achieved pertaining to renewable energy sources in the country. Discuss in brief the importance of National Programme on Light Emitting Diodes (LEDs). **(2016)**

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