WIND ENERGY IN INDIA

Prelims- Economics- Infrastructure

Mains- GS3 - Infrastructure: Energy, Ports, Roads, Airports, Railways, etc.

Context- India's emerging green economy will require additional investments of around $80 billion till 2022, growing more than threefold to $250 billion during 2023-30,

Aim:

- The country has an installed **Renewable Energy Capacity** of about 80 gigawatts (GW) and is running the world's largest renewable energy programme with plans to achieve 175GW by 2022 and 500GW by 2030, as part of its climate commitments.
- **Policy**- National Off-Shore Wind Policy was notified in 2015

Offshore Wind Farming:

- Two Types viz. shallow water and deep-sea farming
- **Advantages of Offshore wind farming**
  - Stronger Winds for efficient generation of power;
  - No impact on real estate value of land as in case of onshore wind farming;
  - Its ability to fulfill the demand of the heavily populated coastal regions

Issues

- Heavy investments, better technology needed, maintenance issues etc.
- challenges of assigning no-go areas for commercial shipping

Why so much Investment in Wind energy now?

- The push for green energy also comes against the backdrop of the **Organization of the Petroleum Exporting Countries (OPEC)-**plus arrangement extending its compact for production cuts.
- The production cut extension will have a wide-ranging impact on energy markets, given that OPEC accounts for around 40% of the global output.
- It is expected to have a particular fallout on India due to the OPEC accounting for around 83% of the country's total crude oil imports.

Global Energy Landscape:

- **London Stock Exchange (LSE)** has classified oil and gas stocks as **non-renewable energy.** The move marks a fundamental change in the global investment culture against

the backdrop of growing climate concerns with several countries focusing on renewable energy.

- India has also emerged as the voice of consuming nations amid global uncertainties in the energy markets with supplies from **Iran and Venezuela drying up** and **tension escalating in the Persian Gulf.**

Efficiency and Universal access of Energy:

- Energy intensity of India's GDP has been declining in the recent past, which is reflective of **increases in the efficiency of energy use.**
- India cannot become an upper-middle-income country without
    1. Rapidly raising its share of the global energy consumption commensurate with its share of the global population, and
    2. Ensuring universal access to adequate modern commercial energy at affordable prices.

Conclusion:

- Having greater energy efficiency is crucial for India that is now the biggest emitter of greenhouse gases after the US and China, and which is also among nations most vulnerable to climate change.
- India plans to reduce its carbon footprint by 33-35% from its 2005 levels by 2030, as part of its commitments to the **United Nations Framework Convention on Climate Change** adopted by 195 countries in Paris in 2015.