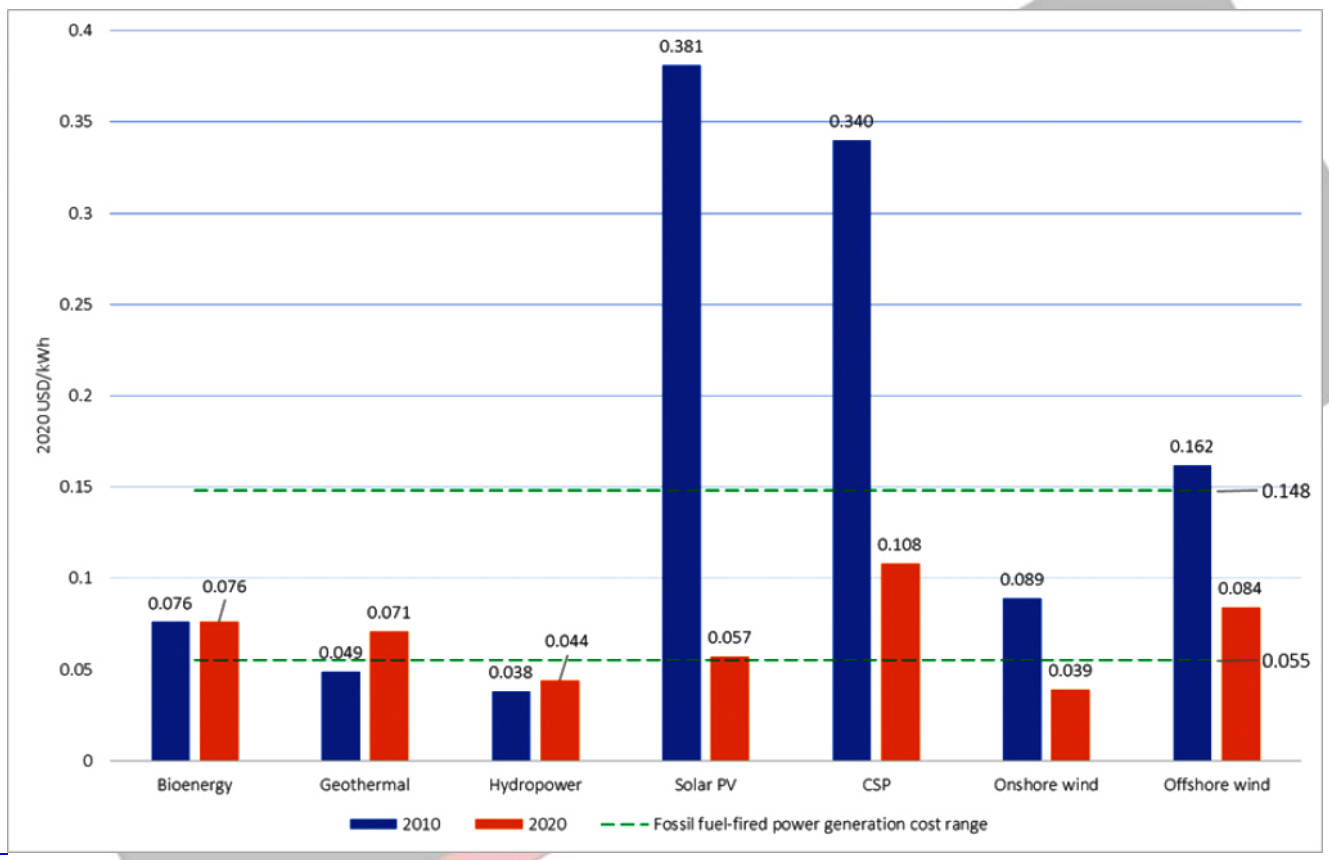
Renewable Power Generation Costs in 2020: IRENA

Why in News

Recently, the **International Renewable Energy Agency (IRENA)** released the **'Renewable Power Generation Costs in 2020' report.**



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Levelized cost of electricity trends by technology, 2010 and 2020

Key Points

- **Replacing Coal with Renewables:**
  - **810 gigawatts (GW) capacity** of the world's existing coal-fired plants i.e. 38% of the total global energy capacity now **have higher operating costs than new utility-scale photovoltaics and onshore wind energy.**
    - The cost range for generation of fossil fuel-fired power in **G20 countries** is estimated to be between **USD 0.055 per kilowatt-hour (kWh)** and **USD 0.148/kWh.**
  - **Replacing** this expensive **coal power with renewables** will save operators **USD 32**

billion a year and reduce annual carbon dioxide emissions by **around three billion tonnes.**

- Renewable capacities added in 2019 would have **saved** emerging and developing nations **USD 6 billion per annum** compared to the same capabilities from conventional sources.

- **Growth of Renewables in 2020:**
  - The year **2020 was a record year for renewables deployment** despite the **Covid-19-pandemic**, with **261 GW** installed. The addition was almost **50% higher than that made in 2019** and represented **82% of the global new power capacity.**
  - Around 162 GW or 62% of total renewable power capacity added last year had **lower costs than the cheapest new fossil fuel option.**
- **Supplies from Sources Added in 2020:**
  - Geothermal > Photovoltaics (PV)> Wind power> Hydropower > Bioenergy> Concentrating **solar power**.
- **Reasons for Growth:**
  - Between **2000 and 2020,** renewables capacity **grew more than three times, increasing by 754 GW to 2,799 GW.**
  - The growth was occasioned by **advancements in technologies, consistent fall in component costs, cost-competitive supply distribution channels, learning by using and commercial-scale availability.**
- **Reducing Cost of Renewables:**
  - In about **10 years (2010-2020),** the cost of power produced from commercial solar **PVs fell by 85%, CSP 68%, onshore wind 68% and offshore wind 48%.**
    - The outlook till **2022** sees global renewable power costs falling further.
- **Indian Initiatives for Renewable Energy:**
  - **Hydrogen Energy Mission.**
  - **Jawaharlal Nehru National Solar Mission (JNNSM).**
  - **International Solar Alliance.**
  - **PM- KUSUM.**
  - **National Wind-Solar Hybrid Policy.**
  - **Rooftop Solar Scheme.**

International Renewable Energy Agency

- **About:**
  - It is an **intergovernmental organisation,** it was officially **founded in Bonn, Germany, in January 2009.**
  - Currently it has 164 members, **India is the 77th Founding Member** of IRENA.
  - It has its **headquarters in Abu Dhabi, United Arab Emirates.**
- **Major Functions:**
  - It **supports countries in their transition to a sustainable energy** future, and serves as the **principal platform for international cooperation,** a centre of excellence, and a repository of policy, technology, resource and financial knowledge on renewable energy.
  - **It promotes the widespread adoption and sustainable use of all forms of renewable energy,** including bioenergy, geothermal, hydropower, ocean, solar and wind energy in the pursuit of sustainable development, energy access, energy security and low-carbon economic growth and prosperity.

Way Forward

- Renewables in all intent and purposes are **the most affordable energy sources. Countries should consider deploying these at scale to achieve the** Paris Agreement **targets and shield** their economies from **external shocks from fossil fuel markets.**
- **Right policy incentives and financial incentives** to de-risk the sector as well as **political support is the need of the hour** as most countries have already signaled their commitments towards deploying renewables.

Source: DTE