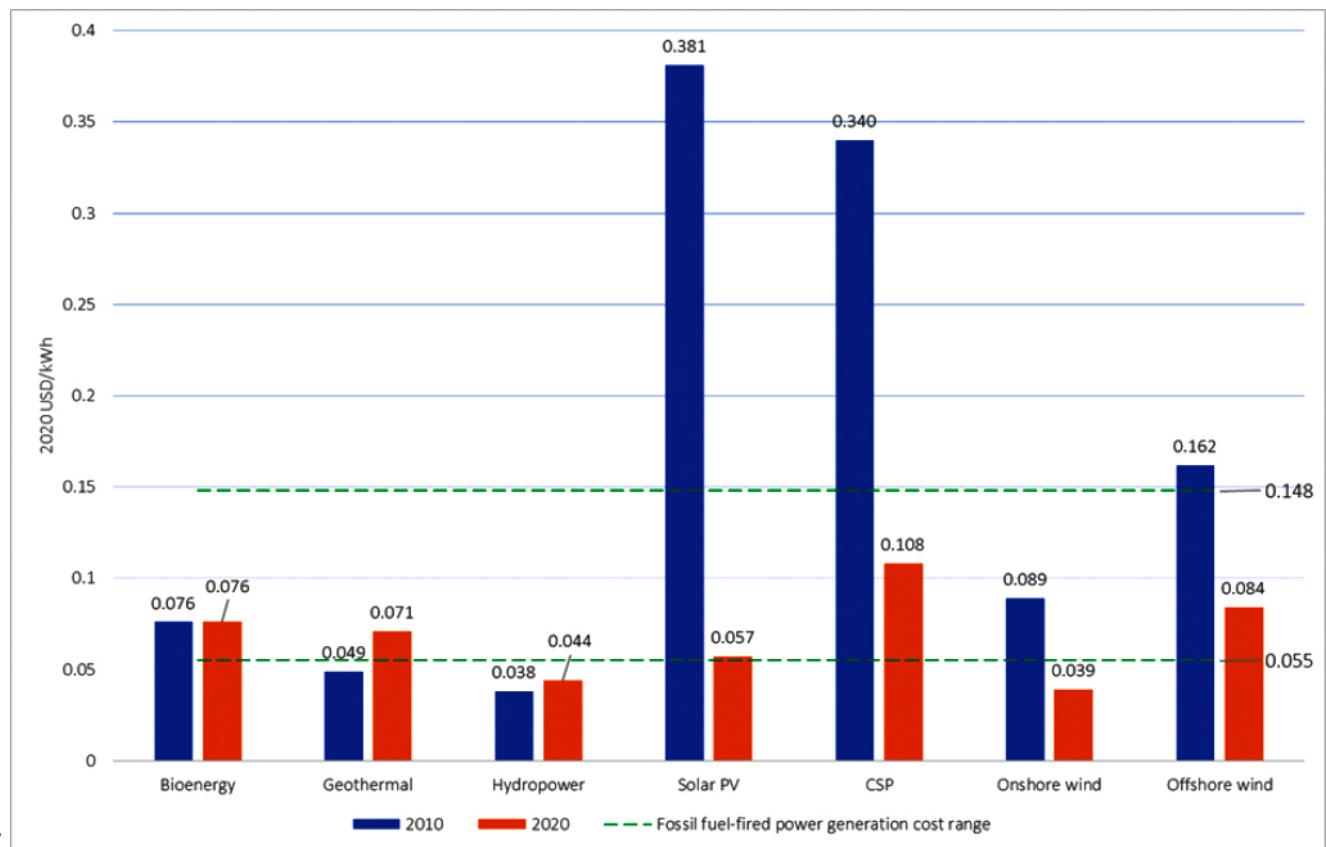




Renewable Power Generation Costs in 2020: IRENA

Why in News

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



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

PDF Reference URL: <https://www.drishtiias.com/printpdf/renewable-power-generation-costs-in-2020-irena>