



Emerging Market for Renewables

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Why in News

According to a recent report, **fossil fuel electricity generation has peaked worldwide as emerging markets seize the opportunities of low-cost renewables.**

The Report was **published by** India's Council on Energy, Environment and Water (CEEW) and the financial think tank Carbon Tracker (both are not-for-profit organisations).

Key Points

- **Findings:**
 - **Emerging Market are Key to Global energy Transition:**
 - **Emerging markets** are key to the global energy transition, **accounting for 88% of all expected growth in electricity** demand from 2019-2040.
 - Overall, **82% of current emerging market electricity demand** and **86% of expected demand growth** comes from countries that **import coal and gas**, and they have powerful incentives to **switch to solar and wind**.
 - With the right policies in place, **technology and cost barriers to change can be crossed**.
 - The **transition is different in emerging markets** because they **have electricity demand growth from a lower base** as well as the **need to provide access to hundreds of millions of people**.
 - In developed markets, **demand for fossil fuels for electricity generation has fallen by 20%** since it peaked in 2007.
 - **Four Key Groups of Emerging Markets:**
 - **China, which is nearly half the electricity demand**, and 39% of the expected growth.
 - Other **importers of coal and gas** such as **India or Vietnam**, which are a third of the demand and nearly half the growth.
 - Coal and gas exporters such as **Russia or Indonesia**, which are 16% of demand but only around 10% of the growth.
 - **Resistance to the energy transition** is likely to be more entrenched in coal and gas exporting countries.
 - **'Fragile' states** such as **Nigeria or Iraq** which are **3% of demand and around the same share of growth**.
 - **India has set an Example:**
 - India, which **accounts for 9% of emerging market electricity demand and 20% of expected demand growth**, illustrates the speed and scale of change.
 - From **less than 20GW of solar in 2010**, it has grown to **96GW of solar, wind biomass and small hydro in May 2021**.
 - Including large hydropower, **renewables now provide 142GW or 37% of the country's power capacity**, and it has a target of 450GW by 2030.
 - **Demand for fossil fuel generation reached a plateau in 2018**, and fell in 2019 and 2020.
 - While **fossil fuel demand might again increase** in the near-term to meet latent electricity demand, India has demonstrated how a double leapfrog - connecting nearly all households to electricity and its renewable energy rollout - can be driven with policy priorities and market design.

- **Suggestions:**
 - **A supportive policy environment** is the key to driving growth in renewables.
 - If countries **liberalise markets and introduce competitive auctions**, they can **cut costs and attract international finance** as capital markets turn their backs on fossil fuels.
 - Auctions have helped India** drive the cost of solar down to one of the world's lowest levels.
 - **Developed countries can speed up the transition to renewables in emerging markets** by providing policy support, technology expertise and by using development finance to reduce the cost of capital.

Indian Initiatives for Renewable Energy

- **Hydrogen Energy Mission:** The **Union Budget for 2021-22** has announced a **National Hydrogen Energy Mission (NHM)** that will draw up a **road map for using hydrogen as an energy source**.
 - The initiative has the potential of **transforming transportation**.
- **Jawaharlal Nehru National Solar Mission (JNNSM):**
 - It was launched in **2009** with a target for **Grid Connected Solar Projects of 20,000 MW by 2022**.
 - The sector has **witnessed rapid development** with installed solar capacity increasing rapidly from 18 MW to about 3800 MW during 2010-15.
- **International Solar Alliance:**
 - It was launched by the **Prime Minister of India and the President of France** on **30th November 2015 in Paris, France** on the side-lines of the **Conference of the Parties (COP-21)**, with 121 solar resource rich countries lying fully or partially between the tropic of Cancer and tropic of Capricorn as prospective members.
- **PM- KUSUM:**
 - KUSUM stands for **Kisan Urja Suraksha evam Utthaan Mahabhiyan**.
 - It's objective is to **provide financial and water security** to farmers through harnessing solar energy capacities of 25,750 MW by 2022.
- **National Wind-Solar Hybrid Policy:**
 - The **main objective of the policy** is to provide a framework for promotion of **large grid connected wind-solar photovoltaic (PV) hybrid systems** for optimal and efficient utilization of wind and solar resources, transmission infrastructure and land.
 - The wind-solar PV hybrid systems will help in reducing the variability in renewable power generation and achieving better grid stability.
- **Rooftop Solar Scheme:**
 - Its objective is to **generate solar power** by installing **solar panels on the roof of the houses**.
 - The **Ministry of New and Renewable Energy** is the **implementing agency** of the **Grid-connected Rooftop Solar Scheme (Phase II)**.

Source: IE