WORLD ENERGY OUTLOOK 2024 - REPORTS

NEWS: The International Energy Agency's World Energy Outlook 2024 presents broad implications of global energy trends, especially in clean energy transitions, increasing the demands on energy, and the implications of the current geopolitical conflict. The report also brings out other facts like the growing demand of energy in India, dependence on coal followed by efforts to achieve net zero emission by 2070.

WHAT'S IN THE NEWS?

About the International Energy Agency (IEA)

- The International Energy Agency (IEA) is an autonomous Intergovernmental Organisation established in 1974 in Paris, France.
- IEA mainly focuses on its energy policies which include economic development, energy security and environmental protection. These policies are also known as the 3 E's of IEA.
- It is best known for the publication of its annual World Energy Outlook.

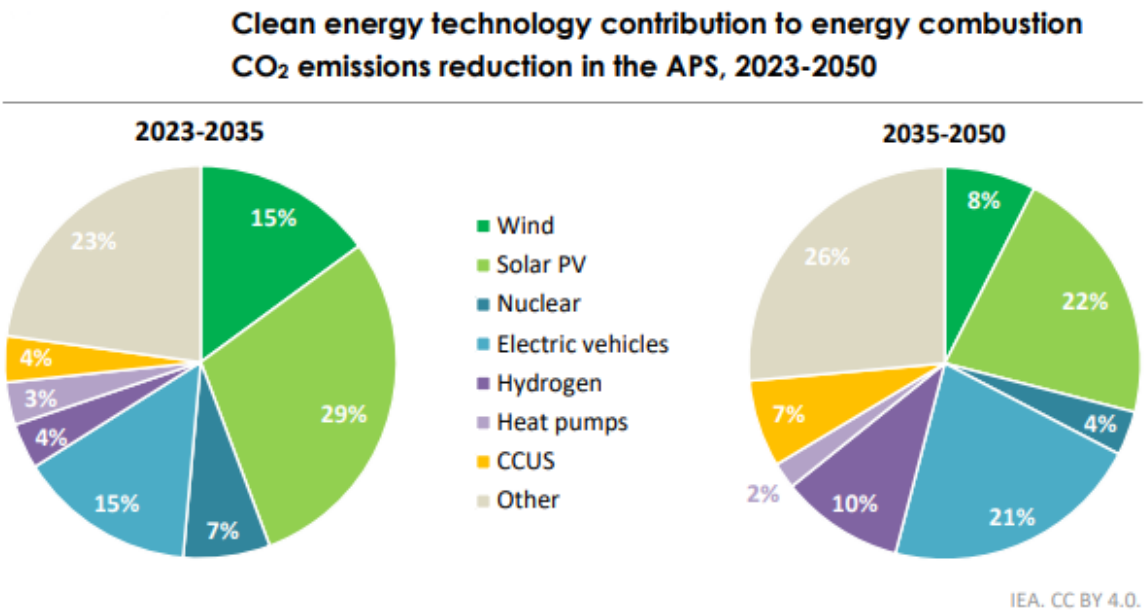
IEA's Role and Functions

- IEA's role has expanded to cover the entire global energy system, encompassing traditional energy sources such as oil, gas, and coal as well as cleaner and faster growing ones such as solar PV, wind power and biofuels.
- IEA acts as a policy adviser to its member states, as well as major emerging economies such as Brazil, China, India, Indonesia and South Africa to support energy security and advance the clean energy transition worldwide.
- IEA's mandate has broadened to focus on providing analysis, data, policy recommendations and solutions to help countries ensure secure, affordable and sustainable energy for all. In particular, it has focused on supporting global efforts to accelerate the clean energy transition and mitigate climate change.
- The IEA has a broad role in promoting rational energy policies and multinational energy technology co-operation with a view to reaching net zero emissions.
- IEA Clean Coal Centre is dedicated to providing independent information and analysis on how coal can become a cleaner source of energy, compatible with the UN Sustainable Development Goals.

Membership of IEA

- The IEA is made up of 30 member countries. Only OECD member states can become members of the IEA.
- IEA member countries are required to maintain total oil stock levels equivalent to at least 90 days of the previous year's net imports.
- In 2018, Mexico joined the IEA and became its 30th member.

- India became an Associate member of IEA (NOT full membership) in 2017 but it was in engagement with IEA long before its association with the organization.
- Other Association Countries of IEA apart from India are: Brazil, China, Indonesia, Morocco, Singapore, South Africa and Thailand.



Note: Other includes energy efficiency improvements, other fuel switching such as electrification or switching to biomass, and behaviour changes.

Major Highlights of the World Energy Outlook 2024 Report

Global Perspective

- **Geopolitical Conflicts**: Ongoing issues like the Russia-Ukraine war and Middle East tensions pose risks to global energy security.
- **Renewable Energy Surge**: A record 560 GW of renewable capacity was added globally in 2023, driving a major shift towards clean energy.
- **Dominance of Renewables by 2030**: Renewable sources are expected to surpass coal, oil, and gas as the main providers of electricity by 2030.
- **Increasing Role of Solar and Wind**: These sources, along with nuclear, are set to produce over 50% of global electricity by 2030.
- **Market Shifts**: The latter half of the 2020s may see a surplus in oil and LNG supplies, potentially lowering prices.
- **Electric Vehicle Growth**: EVs are projected to make up 50% of new car sales by 2030.

- **Energy Technology Competition**: There's fierce competition among suppliers of technologies like solar PV and battery storage.
- **Climate Change Challenges**: Extreme weather events pose new challenges to energy systems.
- **Energy Efficiency**: Despite the importance of improving energy efficiency, the global target to double efficiency by 2030 may not be met under current policies.

Highlights Related to India

- **Economic Growth**: India was the fastest-growing major economy in 2023, with significant economic advancements expected.
- **Population and Urbanization**: Having surpassed China in population, India faces substantial increases in energy demand due to urbanization.
- **Coal Dependency**: Despite growth in renewables, coal remains significant, with an expected addition of nearly 60 GW of coal-fired capacity by 2030.
- **Industrial Growth**: Major increases are anticipated in sectors like iron, steel, and cement production.
- **Air Conditioning Surge**: The demand for cooling is set to massively increase, significantly impacting electricity consumption.
- **Renewable Energy Expansion**: India is on track to nearly triple its electricity generation capacity to 1,400 GW by 2035, with a strong focus on renewables.
- **Battery Storage and Electric Mobility**: By 2030, India aims to have the third-largest installed battery storage capacity globally, essential for integrating renewable energy sources.
- **Net Zero by 2070**: India's ambitious targets for net-zero emissions involve significant reductions in coal and oil use, facilitated by the adoption of electric vehicles and hydrogen technologies.
- **Government Initiatives**: Programs like the PM-KUSUM scheme, the National Solar Mission, and the PLI Scheme for solar PV are critical components of India's clean energy strategy.

Source: https://www.hindustantimes.com/india-news/india-faces-higher-increase-in-energy-demand-over-next-decade-iea-101729074049017.html