International Energy Agency (IEA)
India Energy Outlook 2021: IEA
Relevant to M&M-Auto, Mahindra Susten & Group Sustainability

Introduction

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. India became an Associate member of IEA in March 2017, but it was in engagement with IEA long before its association with the organization. Recently, India has inked a Strategic Partnership Agreement with the IEA to strengthen cooperation in global energy security, stability, and sustainability.

Context

Recently, the International Energy Agency (IEA) has released the India Energy Outlook 2021 Report which explores the opportunities and challenges ahead for India as it seeks to ensure reliable, affordable and sustainable energy for a growing population. The report examines pathways out of the crisis that emerged from the Covid-19 pandemic, as well as longer-term trends, exploring how India's energy sector might evolve to 2040 under a range of scenarios.

Highlights

Third Largest Energy Consumer by 2030:

- India will make up the biggest share of energy demand growth at 25% over the next two decades, as it overtakes the European Union as the world's third-biggest energy consumer by 2030.Presently, India is the fourth-largest global energy consumer behind China, the United States and the European Union.

- India's energy consumption is expected to nearly double as the nation's Gross Domestic Product (GDP) expands to an estimated USD 8.6 trillion by 2040 under its current national policy scenario.

- Prior to the global pandemic, India's energy demand was projected to increase by almost 50% between 2019 and 2030, but growth over this period is now closer to 35%.

Industrialisation is a Major Driving Force

- Over the last three decades, India accounted for about 10% of World Growth in Industrial Value-added [in Purchasing Power Parity (PPP) terms.

- By 2040, India is set to account for almost 20% of Global Growth in Industrial value-added, and to lead global growth in industrial final energy consumption, especially in steelmaking.

Reliance on Imports

- India's growing energy needs will make it more reliant on fossil fuel imports as its domestic oil and gas production has been stagnant for years despite government policies to promote petroleum exploration and production and renewable energy.

- Rising oil demand could double India's oil import bill to about USD 181 billion by 2030 and nearly treble it to USD 255 billion by 2040 compared with 2019.

Oil Demand

- India’s oil demand is seen rising by 74% to 8.7 million barrels per day by 2040 under the existing policies scenario.
- A five-fold increase in per capita car ownership will result in India leading the oil demand growth in the world.
- Its net dependence on oil imports - taking into account both the import of crude oil and the export of oil products - increases to more than 90% by 2040 from the current 75% as domestic consumption rises much more than production.

Gas Demand

- India will become the fastest-growing market for Natural gas, with demand more than tripling by 2040.
- Natural gas import dependency increased from 20% in 2010 to almost 50% in 2019 and is set to grow further to more than 60% in 2040.

Coal Demand

- Coal currently dominates India's electricity sector, accounting for over 70% of overall generation.
- Coal demand is seen rising to 772 million tonnes in 2040 from the current 590.

Renewables Energy Resources Demand

- India's share in the growth in renewable energy is the second largest in the world, after China.

Other Important Observations

i. India's future prosperity will hinge on affordable, clean, and reliable energy
ii. India has a wide range of possible energy futures before it
iii. Covid-19 will leave lasting scars
iv. India's size and dynamism will keep it at the heart of the global energy system
v. The Indian electricity sector is on the cusp of a solar-powered revolution
vi. Rising demand for air-conditioning pushes up the peak in power demand
vii. India requires a massive increase in power system flexibility
viii. As solar takes power, the focus for coal switches to industry
ix. Oil continues to dominate a fast-growing transport sector in the STEPS
x. India's building spree will shape its energy use for years to come
xi. Today's clean energy momentum enables India to outperform its Paris pledges
xii. The path to a "gas-based economy" is not fully mapped out
xiii. India's faces energy security hazards ahead
xiv. Booming industry and transport push up CO2 emissions and harm air quality

Conclusion

As the world seeks ways to accelerate the pace of transformation in the energy sector, India is in a unique position to pioneer a new model for low-carbon, inclusive growth. If this can be done, it will show the way for a whole group of energy-hungry developing economies, by demonstrating that robust economic expansion is fully compatible with an increasing pace of emissions reductions and the achievement of other development goals.

India is already a global leader in solar power, and solar combined with batteries will play a massive part in India's energy future. But India will need a whole host of technologies and policies to chart this new path.

As new industrial sectors emerge and clean energy jobs grow, India will also need to ensure that no one is left behind, including in those regions that are heavily dependent on coal today.