

AIR Spotlight: India's Commitment to Clean Energy Transition

AIR Spotlight is an insightful program featured daily on the All India Radio News on air. In this program, many eminent panellists discuss issues of importance which can be quite helpful in [IAS exam](#) preparation.

This article is about the discussion on: **'India's Commitment to Clean Energy Transition'.**

Participants:

- Mukul Sanwal: Environmentalist
- S. Rangabhashiyam: AIR Correspondent

Context - Exploring the achievability of India's ambitious goal of generating 65% of its power from non-fossil sources by 2030- the challenges of affordability and innovative financial models for the energy sector.

Introduction -

India faces a unique context due to its vast size and population, as well as the imperative to provide modern energy access to remote villages and underprivileged communities. Energy is not only crucial for electricity and transportation but also for industries like steel, cement, infrastructure, and basic amenities. While the energy demand is set to increase significantly, the proportion of non-fossil fuel sources will outpace coal generation.

- The country's commitment is not to reduce energy or to eliminate coal but to have a certain percentage from non-fossil sources.
- To have a comfortable middle-class living, the country's energy requirements will increase and the increasing requirement will continue to be met by coal but the percentage share of coal will continue to decline because the share of energy from non-fossil sources is going to increase.
- India is already sourcing about 43% of its energy requirements from non-fossil sectors. India stands 4th globally in Renewable Energy Installed Capacity (including Large Hydro), 4th in Wind Power capacity & 4th in Solar Power capacity.

Green Hydrogen - is envisaged as the future non-fossil fuel to replace fossil fuel

Green hydrogen is a technology-driven clean energy source produced by electrolysis of water using renewable energy sources such as wind, solar and hydropower.

- Green hydrogen has the potential to become a key player in the transition to a carbon-free economy and can help mitigate climate change. GoI launched the [National Green Hydrogen Mission](#) to make India the world's largest hydrogen hub.
- Green hydrogen produced from renewable sources emits zero Greenhouse Gases (GHGs) making it sustainable and environmentally friendly.
- It is a capital-intensive technology and its widespread adoption requires the development of a robust infrastructure for its production, storage and distribution.

Know more about [green hydrogen](#) in the linked article.

Overcoming Financial Hurdles Associated with Capital-Intensive Clean Energy Projects -

The GoI has taken certain innovative measures to tackle the financial issues such as leveraging the capital reserves of public sector enterprises like National Thermal Power Corporation (NTPC) and Coal India in renewable energy.

- NTPC and Coal India are energy companies, so if they have profit in one part they can invest in the developmental renewable energy sector.
- There is a great potential for public-private partnership wherein the public sector companies with capital reserves can venture into renewables and the private sector invests in the production of materials required for solar panels and thereby, creating a self-sustaining ecosystem.

From fossil fuel-based vehicles to Electric Vehicles -

India's choice between electric vehicles and internal combustion engine vehicles stems from its dependence on oil imports. India imports about 80% of its oil needs.

- As India's share of non-fossil fuel electricity generation increases, the carbon footprint associated with electric vehicles will significantly decrease compared to that of conventional vehicles running on imported oil.
- With the growing number of electric vehicles in the country and charging infrastructure getting widespread, there will be a significant decrease in the import of crude oil.
- Heavy-duty trucks pose a challenge, however, hydrogen as an alternative fuel is a viable option.
- The GoI has taken several initiatives to develop and promote the EV ecosystem in the country. The Faster Adoption and Manufacturing of Electric Vehicles ([Fame India Scheme Phase II](#)) scheme has been remodelled for consumers, the Production Linked Incentive (PLI) scheme for Advanced Chemistry Cell (ACC) has been revamped for suppliers, and a PLI scheme for auto and automotive components has been launched for the manufacturers of electric vehicles.

Conclusion - India is committed to transitioning towards clean energy. India is steadily boosting its green energy production capacity through wind, solar, and hydro-projects and reducing its dependence on fossil fuels.

