

## AIR Spotlight - Energy For Sustainable Growth

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

### Participants –

- Chetan Chauhan, Journalist
- Dr C K Varshney, Environmentalist

### Context:

Recently, the Prime Minister delivered the opening address for the Webinar on “Energy for Sustainable Growth”.

### Sustainable Living: –

- Sustainable living is the act of limiting your demand on natural resources by ensuring that you can replace what you use as much as possible.
- It implies living in a way that satisfies our basic needs for food, water, and shelter without hurting the environment or endangering future generations’ access to important resources.

### India needs renewable energy to meet its economic growth targets

- The demand for energy has steadily increased in India, given the increasing population.
- India is the third-largest consumer of electricity in the world, according to the International Energy Agency.
- India has witnessed rapid economic growth in the last three decades, with Gross Domestic Product growth rate averaging around six per cent.
- The economic development has been majorly driven by the development of industries and infrastructure at the macro-level.
- The upliftment of individuals’ living standards at the micro-level has been driven by improved access to transportation, cooking fuel, comfort heating or cooling and access to modern energy services.
- Energy and energy services have invariably played a major role at both the macro and micro levels.

### Key Aspects of Sustainable Growth in India

- **Developing Energy Storage for Renewable Energy(RE) Expansion:** There is a need of mandating storage obligation, ascertaining the percentage of energy storage to be part of RE development (RE + storage) tender, developing comprehensive energy storage policy, mandating energy storage in transmission planning and promoting large scale demand aggregation.
- **Lifestyle for Environment (LIFE):** The key area of sustainable growth is to enable the transition towards LIFE. These include behavioral measures for promoting adoption of Energy Efficient appliances and clean cooking, use of sustainable transport and construction and retrofitting of efficient buildings.

- **Coal Gasification:** Another aspect of sustainable growth is supporting coal gasification through increased availability of coal for gasification projects, development of indigenous gasification technology on commercial scale, development of indigenous technology for production of methanol from syn gas, etc.
- **Promoting Biomass as an Alternative Energy Source:** The Compressed Bio-Gas(CBG) is another aspect which includes predictable and transparent CBG pricing, ensuring simultaneous sale of CBG and CNG from CBG and CNG stations, low cost financing of CBG plants, etc.
- **Agro and Farm Forestry:** There is a need for greater adoption of agroforestry in India. These include pan India amendment / simplification or exemption in the tree felling and transit rules, strengthening institutional support by creating Agroforestry board, lowering GST on timber so that it can compete with MSP supported agricultural crop etc.
- **Scaling up of Renewable Energy:** Some of the recommendations for sustainable growth includes indigenisation of the entire value chain across renewable energies, extending indigenous manufacturing for solar modules to the entire value chain, energy banking of Green hydrogen production plants will require, examining the issues of e-reverse bidding process, etc.

### Indian Government's Efforts

- India had made a **commitment at Glasgow** to reach Net Zero by 2070.
- India's vision of Lifestyle for Environment (LIFE) pertaining to an environmentally sustainable lifestyle.
- India is providing leadership in global collaborations like the **International Solar Alliance**.
- India has set a target of achieving 500 gigawatt non-fossil energy capacity and achieving 50 per cent of installed **energy capacity through non-fossil energy by 2030**.
- Considering the recently announced **National Hydrogen Mission**, India can become a hub of green hydrogen given its inherent advantage in the form of abundant renewable energy power.
- To prioritize energy efficient products, the government has promoted LED bulbs at large scale under the **Ujala scheme**.

### Challenges

- **Policy Challenges:**
  - A comprehensive policy statement (regulatory framework) is not available in the renewable sector.
  - Institutes, agencies stakeholders show poor inter-institutional coordination.
- **Institutional Challenges:**
  - The single window project approval and clearance system is not very useful and not stable because it delays the receiving of clearances for the projects.
  - Proper or well-established research centers are not available for the development of renewable infrastructure.
- **Financial Challenges:**
  - There are a few budgetary constraints such as fund allocation, and budgets that are not released on time to fulfill the requirement of developing the renewable sector.

- There are uncertainties related to the assessment of resources, lack of technology awareness, and high risk perceptions which lead to financial barriers for the developers.
- **Technological Challenges:**
  - A renewable project contributes to complex risk challenges from environmental uncertainties, natural disasters, planning, equipment failure, and profit loss.
  - There is no clear document related to testing laboratories, referral institutes, review mechanism, inspection, and monitoring.
  - There are not many R&D centers for renewables.

### **Recommendations**

- India should concentrate on low carbon energy consumption from renewable energy sources in achieving these economic goals and development.
- Establish an investment promotion agency (IPA) that targets suitable foreign investors and connects them as a catalyst with the domestic economy.
- India should focus on inviting investments, enhancing the trade basket and generating employment opportunities.
- It is essential to consider the targeted sector (wind, solar, biomass, respectively) for which investments are required.
- Government commitments can take the form of credible, time-bound renewable energy targets, which serve to set out the trajectory for the sector's development.
- Importantly, targets must be backed by dedicated policies and regulatory frameworks.
- Establish the infrastructure needed for a quality investor, including adequate close-by transport facilities (airport, ports), a sufficient and steady supply of energy.

### **Conclusion:**

Energy is an important economic sector that creates jobs and value by extracting, transforming and distributing energy goods and services throughout the economy. Renewable energy and technology are fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which our well-being relies.

The adoption and promotion of renewable energy in India from an economic and sustainability perspective, using qualitative and quantitative frameworks and empirical data, is the need of the hour.

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