



General Studies-3; Topic: Infrastructure: Energy

Renewable energy and India's economic growth

Introduction

- India is faced with challenges on the path to development.
- It has to **consume energy to grow economically and at the same time, has to mitigate carbon emissions.**
- In other words, it has to develop sustainably.

Rising Demand for Energy

- India's current population is 1.35 billion, which is expected to reach 1.5 billion by 2035.
- 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's per capita electricity consumption grew at a compound annual growth rate of 5.8 per cent between 1980 and 2020.

Role of Energy in India's Economic Growth

- 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.
- Energy is an important economic sector that creates jobs and value by extracting, transforming and distributing energy goods and services throughout the economy.

- Energy is the input for nearly every product and service in the economy and supports economic activities across each of its productive sectors.
- **Renewable energy contributes to mitigating carbon emissions and strengthening economic growth.**

Way Forward

- **India should concentrate on low carbon energy consumption from renewable energy sources** in achieving the economic goals and development.
- 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.
- Government commitments can take the form of credible, time-bound renewable energy targets, which serve to anchor investor confidence and set out the trajectory for the sector's development.
- Importantly, **targets must be backed by dedicated policies and regulatory frameworks.**

Conclusion

- 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.