Environment & Ecology · GS - III

Do you think India will meet 50 percent of its energy needs from renewable energy by 2030? Justify your answer. How will the shift of subsidies from fossil fuels to renewables help achieve the above objective? Explain.

EXAM YEAR	PAPER	SUBJECT
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MARKS	WORD LIMIT
15	~250 words

Answer Hint

India’s COP26 commitment concerned meeting 50% of its energy requirements from renewable energy, while the formal target specified 50% of installed electricity capacity from non-fossil sources by 2030. Rapid solar and wind expansion supports progress, but storage, grid integration, finance and fossil-fuel dependence remain challenges. Redirecting inefficient fossil-fuel subsidies can accelerate the transition.

Model Answer

Introduction

India has expanded solar, wind and other non-fossil electricity sources while balancing climate commitments with energy security, affordability and development needs.

Prospects of Achieving the Target

India has significant solar and wind potential, falling renewable-energy costs and supportive initiatives such as the National Solar Mission. Rooftop solar, renewable-energy parks and green hydrogen can further strengthen the transition.

However, coal remains important for reliable electricity, while transport and industry depend heavily on fossil fuels. Land constraints, transmission bottlenecks, intermittency, storage costs and financing requirements may slow

progress. Moreover, **50% non-fossil installed electricity capacity is not equivalent to 50% of total energy consumption**.

Role of Shifting Subsidies

First, redirecting inefficient fossil-fuel subsidies towards renewables can improve their cost competitiveness and attract private investment. Second, support for battery storage, grid modernisation and research can address intermittency. Third, incentives for rooftop solar, decentralised renewable energy and clean cooking can expand access. Finally, targeted assistance can protect low-income households and workers affected by the transition.

Way Forward

India needs predictable policies, stronger transmission networks, domestic manufacturing, energy storage, green finance and a just transition for coal-dependent regions.

Conclusion

India has a strong basis for expanding clean energy, but achieving its 2030 ambitions requires accelerated investment and structural reforms. Subsidy rationalisation can help when accompanied by social protection and reliable energy access.

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