Land for green power will be a challenge

What is the issue?

As India is seized by the urgency to switch to mega green power plants, it would necessitate the need for large acreage of lands.

What are the challenges in the establishment of green power plants?

- **Demand for land** - Solar could occupy between 50,000 and 75,000 sq.kms of land, while wind could occupy an additional 15,000 to 20,000 sq.kms as the total project area.
- **Forceful acquisition of land** – In 1970s immoral realtors with the muscle power compelled individuals to give up their properties at throwaway prices.
- **Environmental concerns** - Land takeovers in the name of green power affects food security, biodiversity, ecosystem balance, etc.
- **Issues with wastelands** – In Charanka solar park in Gujarat and in Assam farmers are opposing solar installation claiming rights over using wastelands.
- Areas designated as 'wastelands' could actually be fragile and home to unique ecosystems.
- Wetlands are also the source of essential fodder to feed our 500 million livestock.
- Recently, the Supreme Court asked for solar transmission lines in Rajasthan to be laid underground to reduce the threat to the Great Indian Bustard.

How to tackle these challenges?

- Policy interventions such as developing clear environmental and social criteria for rating potential sites, incentivising the selection of the highest ranked locations, limiting undue regional concentration is imperative to optimise the benefits.
- Innovations such as leasing the rooftops for solar power by corporate or promoting floating solar projects can be done.
- Wind energy can be innovated to use rooftops and offshore wind projects to minimise land use.

- Designs such as solar trees and solar canopies could generate large amounts of energy in little space.
- Promotion of **agrivoltaics sector** by helping farmlands to host both wind and solar projects can be an alternate option.
- Extended research needs to be done on this method to establish optimal conditions for different geographies and crops.

Source: Business Line

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