Pradhan Mantri Surya Sarovar Yojana (PM-SSY)

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Why in News?

Recently, the Union Cabinet approved the Pradhan Mantri Surya Sarovar Yojana (PM-SSY), a scheme to accelerate floating solar power installations on reservoirs and water bodies.

- **Floating solar plants –** An array of photovoltaic panels mounted on buoyant platforms like reservoirs, lakes, or dams.
- **Key Components –** Pontoons, anchoring systems and underwater cables.

Feature	Floating Solar (FPV)	Ground-Mounted Solar
Efficiency and Cooling	**5% to 15% higher yield** because water naturally cools the panels.	Standard yield because panels get hotter on land.
Upfront Cost	**10% to 25% higher** due to specialized floating platforms and anchors.	Lower installation costs using standard racking.
Space Savings	**Preserves valuable land** by using reservoirs and ponds.	Consumes large fields that could be used for farming.

Key Features

- **Target –** 5,000 MW floating solar capacity by 2030-31.
- **Objective –** Diversify solar fleet, reduce land dependence, integrate storage for reliability.
- **Financial Assistance –** Central Financial Assistance (CFA) up to Rs. 1 crore per MW.
- **Implementation –** By Solar Energy Corporation of India (SECI).
- **Battery Storage –** Projects under the scheme must include battery storage of at least two hours, totaling 10,000 MWh across the programme.

Current Status

- **Installed Floating Solar –** 0.7 GW
- **Potential –** 102 GW (National Institute of Solar Energy estimate).
- **Largest Project –** Omkareshwar floating solar park, Madhya Pradesh (278 MW, planned 600 MW).
- **Potential States –** Maharashtra, Madhya Pradesh, Karnataka, Odisha, Telangana.

Reference

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