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Daily news summary**Domestic Polysilicon Capacity Target MNRE 2030**

UPSC Civil Services · 23 August 2026 · Prelims and Mains

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WHY IN NEWS

- Ministry of New and Renewable Energy (MNRE) targeted 30 GW domestic polysilicon manufacturing capacity by 2030.

STRATEGIC RATIONALE

- Polysilicon is the foundational raw material for silicon-based photovoltaic (PV) solar wafers, ingots, cells, and modules.
- India currently relies heavily on imported polysilicon, exposing its 500 GW non-fossil fuel energy target by 2030 to supply chain vulnerabilities.

POLICY FRAMEWORK

- Backed by planned investments of ₹25,000 crore under targeted government manufacturing incentive frameworks.
- Complemented by research into grid-scale energy storage options such as Vanadium Redox Flow Batteries.

KEY TERMS

- **Polysilicon:** High-purity polycrystalline form of silicon used as a fundamental raw material in solar PV manufacturing.
- **Vanadium Redox Flow Battery:** A type of rechargeable flow battery that uses vanadium ions in different oxidation states to store chemical potential energy.

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PRELIMS FACTS

- Polysilicon is refined from quartzite and forms the initial stage of the solar PV manufacturing value chain.

MAINS DISCUSSION

- Discuss strategies to overcome upstream manufacturing bottlenecks in India's renewable energy sector.

KEY DATA

- **Target Capacity:** 30 GW by 2030 - National target set by MNRE for upstream solar component localization.
- **Nodal Ministry:** Ministry of New and Renewable Energy - Oversees domestic solar cell and raw material manufacturing policies.

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