Scheme to Promote Manufacturing of Rare Earth Permanent Magnets

The Union government launched the scheme to build a domestic manufacturing ecosystem and reduce import dependence.

A strategic initiative aimed at establishing domestic sintered rare-earth permanent magnet capacity for high-technology industries.

KEY EXAM POINTS

- The scheme seeks to create **6,000 MTPA** of domestic sintered rare-earth permanent magnet capacity.
- It focuses on reducing India's dependence on imports, particularly from **China**, for critical high-tech components.
- Experts highlight a 'visibility gap' in mapping technological capabilities and strategic dependencies across the **REPM value chain**.
- Rare-earth magnets are critical inputs for **electric vehicles**, wind turbines, advanced electronics, and robotics.
- The most important commercial type of magnet for electric mobility is **NdFeB** (neodymium-iron-boron).

DID YOU KNOW..!?

Rare-earth elements associated with permanent magnets include **Neodymium**, Praseodymium, Dysprosium, Terbium, Samarium, and Cobalt.

Compared with conventional ferrite and AlNiCo magnets, **REPMs** provide high magnetic strength, high coercivity, and high energy density.

India's non-fossil electricity capacity target and **renewable energy** push directly depend on critical mineral supply chains like REPMs.

Critical minerals and rare earths governance in India falls under the administrative purview of the **Ministry of Mines**.

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The scheme aims to create 6,000 MTPA of domestic sintered rare-earth permanent magnet capacity.

Syllabus Relevance: Important for understanding central government schemes promoting domestic manufacturing, high-tech industries, and critical mineral dependencies.

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