

STRATEGIC RAW MATERIALS

Rare earth elements for permanent magnets

Rare Earth Elements (REEs) is a group of 17 elements. The elements neodymium, praseodymium, terbium, dysprosium, gadolinium, samarium, and cerium are essential for high performance permanent magnets used in electric vehicles, wind turbines, high-performance electronics, aerospace and defence. REEs are usually occurring together in different minerals, from which they can be extracted. End-of-life permanent magnets will become an important source of REEs.



RENEWABLES



E-MOBILITY



AEROSPACE
AND DEFENCE

Supply and Demand

The EU is highly dependent on third-country supply for REEs, lacking domestic mining production and metal making. The EU has processing capacity for some of the REEs. By 2030, the EU demand for REEs in strategic technologies is expected to increase 5 times compared to 2020 levels to 6800 tonnes¹. Still, at processing stage, the selected projects could help cover most of the EU demand.

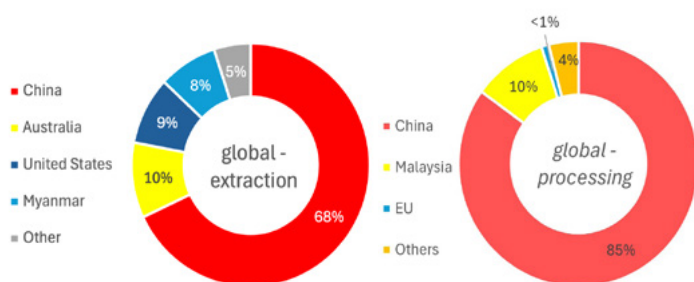
EU Dependency²

Extraction stage: 100%

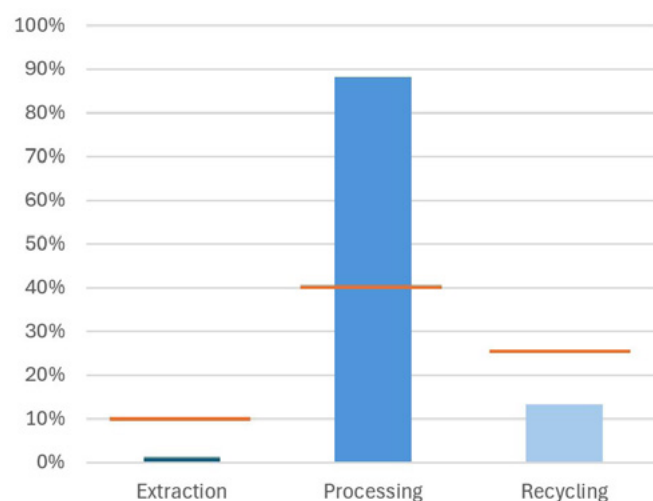
Processing stage: >99%



Global sourcing²



Expected contribution of strategic projects to 2030 Benchmarks



¹ Supply chain analysis and material demand forecast in strategic technologies and sectors in the EU – A foresight study

² Study on the Critical Raw Materials for the EU 2023