



European
Commission

Technology factsheet: Competitiveness of clean energy technology – Battery technology

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Key technologies

Batteries are used commercially in a wide range of contexts including transport (electric vehicles), energy storage at home and for the grid to help smooth volatile power generation.

tech 1

Technological Readiness Level (TRL) 9: VRFB; Zn-Br flow & non-flow; Fe-Cr (ICRFB); Ni-Zn; Li-ion; All iron (IRFB); Na-Ion

tech 2

TRL 7-8: H-Br; Sea-salt (multimetal); Li-air; Al-air

tech 3

TRL 4-6: S-Br (SBB); Zn-Ion

Key value chain figures

- **EU production value of Li-ion batteries:** EUR 15 billion (2022).
- The share of electric vehicles in total passenger car sales has seen strong growth in recent years, reaching nearly a quarter by 2022, boosting demand for batteries.



Key facts

Fact 1

Batteries play a crucial role in the clean energy transition, both for transport and stationary applications and will become ever more important as the EU transitions to zero-emissions cars by 2035.



Fact 2

Battery production in the EU is set to reach 458 GWh by 2025 and 1083 GWh by 2030, and is on track to meet the forecasted EU demand. However, the EU is in a weak position related to the production of cheaper batteries.

Fact 3

There is a large negative trade balance related to the battery sector (EUR 15 billion in 2022) and the EU is dependent on supply of battery materials from third countries, especially China.



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