PRINT EDITION
EUROPE'S CRITICAL MATERIALS ATLAS

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CHARTS

All 23 charts, one per page

DATA AS OF
27 October 2026

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CREDIT
Hercinia, Europe's Critical Materials Atlas

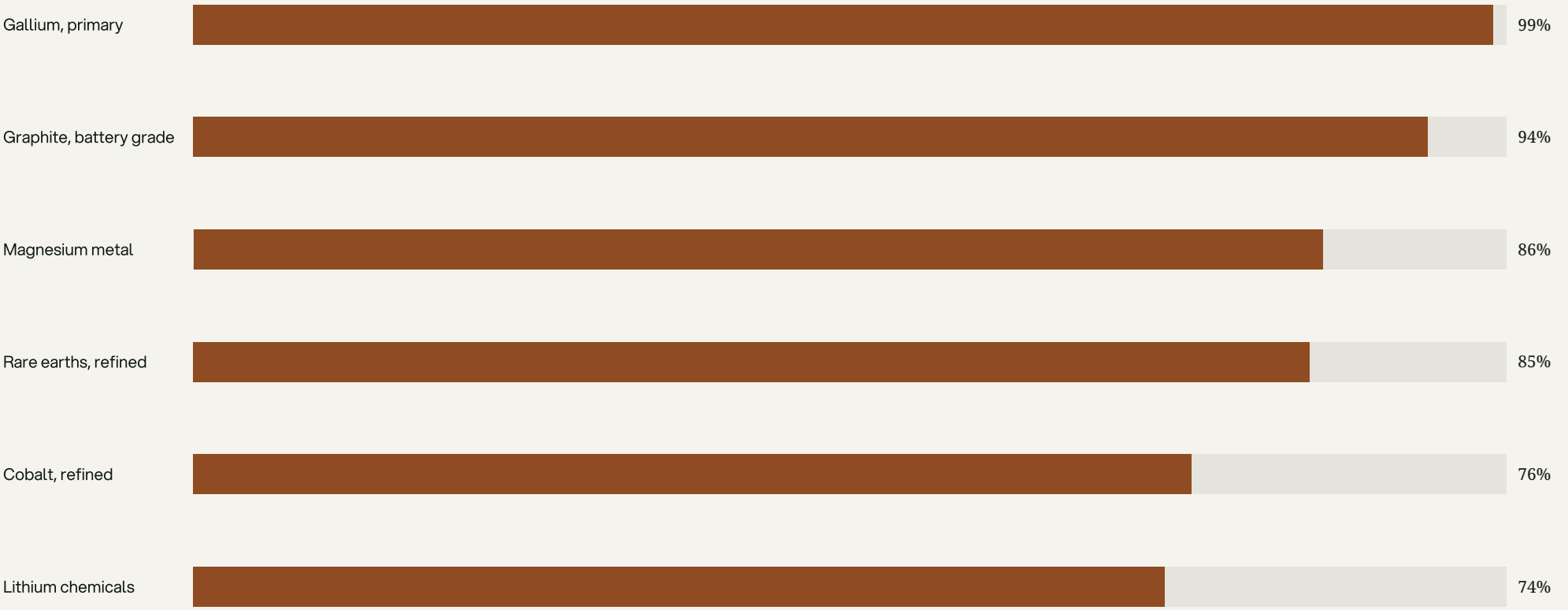
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PROCESSING

Processing is the tightest point

China's share of world processing in 2025. Almost all heavy rare earth separation takes place in China.



Source: IEA (2026), Global Critical Minerals Outlook 2026, CC BY 4.0; USGS, Mineral Commodity Summaries 2026.

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MATERIALS

How much the EU imports, and how concentrated supply is

Each dot is one material. Left to right: EU import reliance. Bottom to top: the largest share one country holds of world mining or processing.



Source: European Commission, Study on the critical raw materials for the EU (2023), averages 2016 to 2020; USGS, Mineral Commodity Summaries 2026; IEA (2026), Global Critical Minerals Outlook 2026, CC BY 4.0.

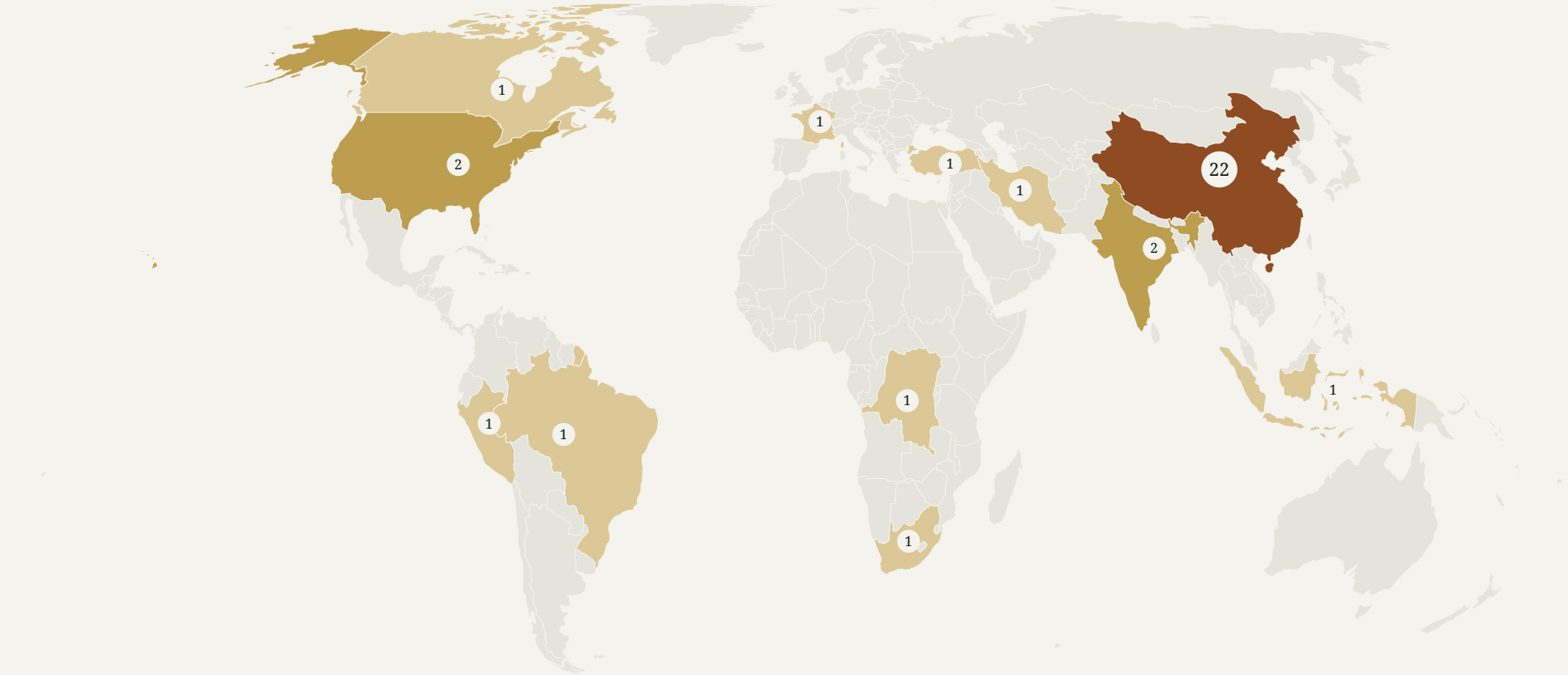
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MAP

Where the largest share sits

Number of the 35 materials for which a country holds the largest share of world mining or processing.



Source: USGS, Mineral Commodity Summaries 2026; IEA (2026), Global Critical Minerals Outlook 2026, CC BY 4.0. Map: Natural Earth.

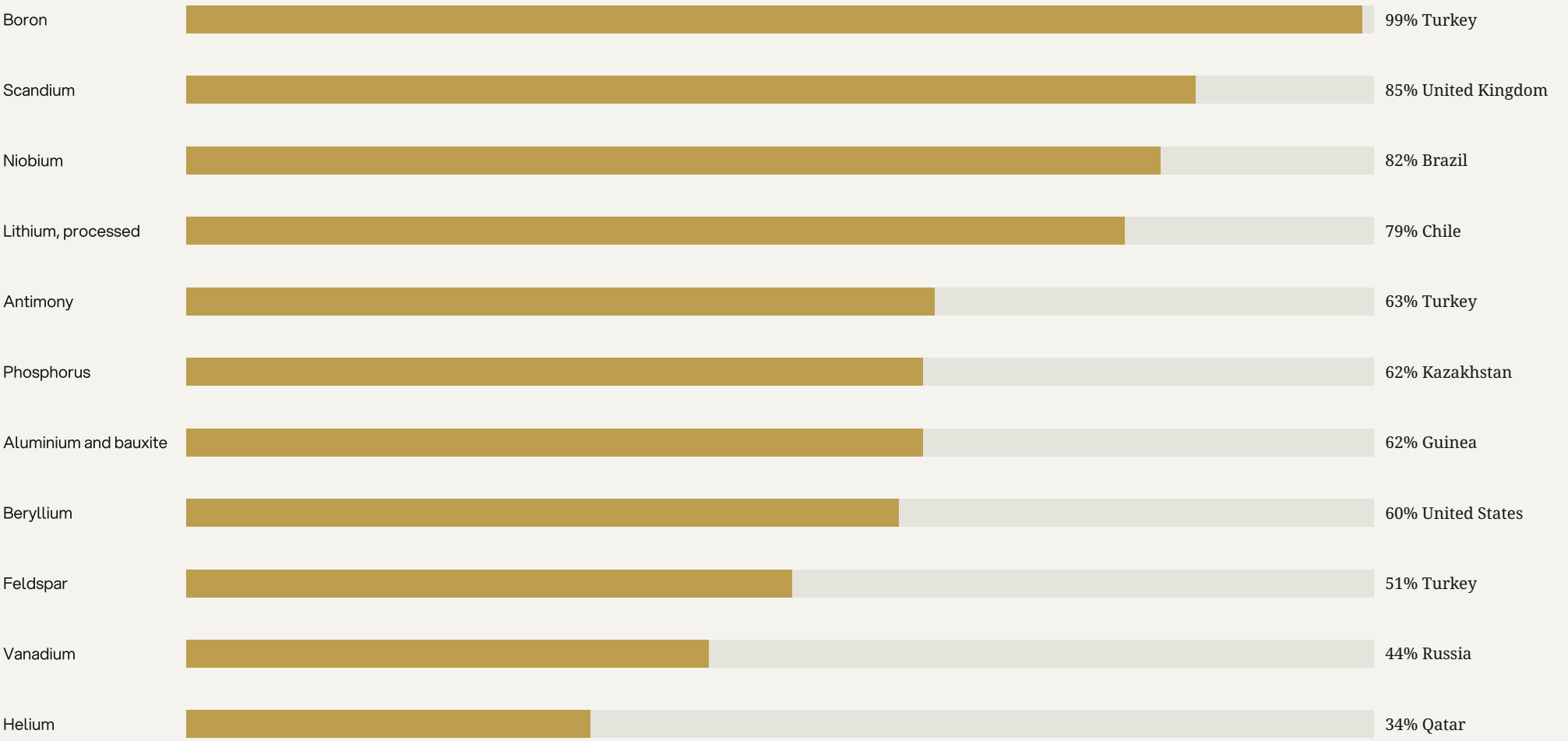
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SINGLE SUPPLIERS

Not only China

The largest single non-EU source of EU supply for each material, share of EU supply, 2016 to 2020.



Source: European Commission, Study on the critical raw materials for the EU (2023), averages 2016 to 2020.

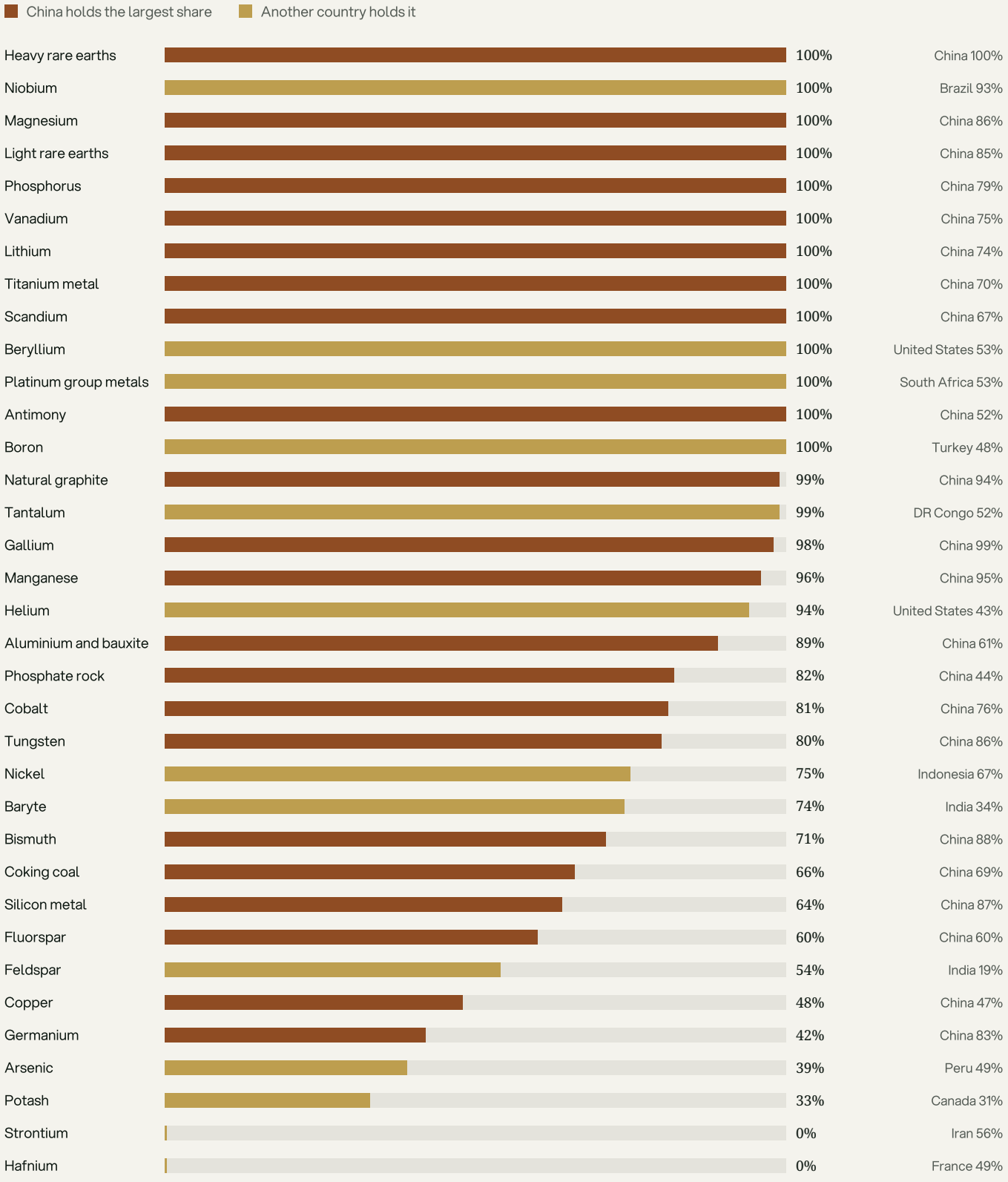
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MATERIALS

EU import reliance for 35 materials

Net imports as a share of EU consumption, 2016 to 2020. Labels give the country with the largest share of world mining or processing.



Source: European Commission, Study on the critical raw materials for the EU (2023), averages 2016 to 2020; USGS, Mineral Commodity Summaries 2026; IEA (2026), Global Critical Minerals Outlook 2026, CC BY 4.0.

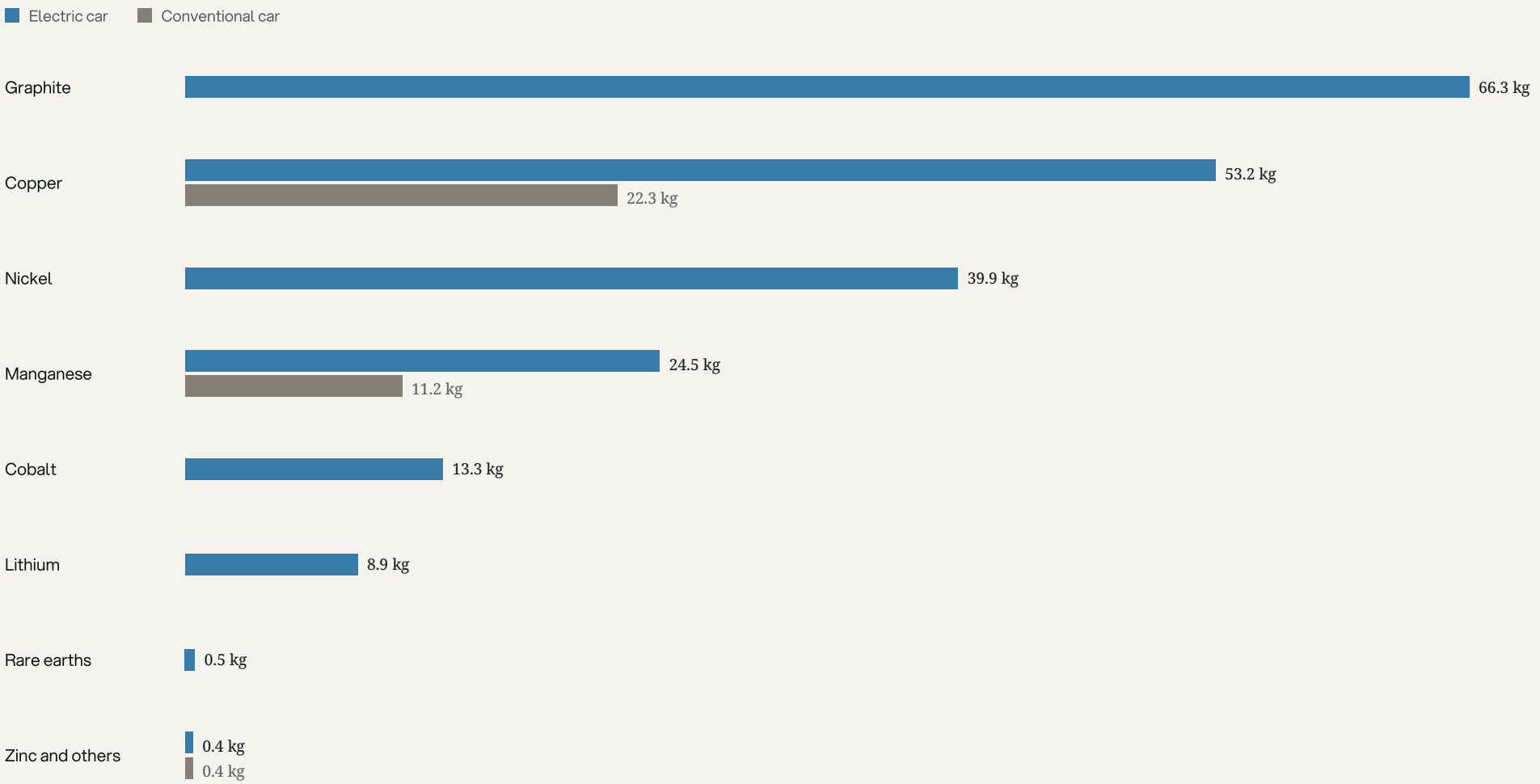
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PRODUCTS

An electric car holds six times the minerals of a conventional car

Kilograms per vehicle. Electric car with a 75 kWh NMC 622 battery: 207 kg; conventional car: 34 kg. Steel and aluminium not included.



Source: IEA (2021), Minerals used in electric cars compared to conventional cars, CC BY 4.0. This is a work derived by Hercinia from IEA material; it is not endorsed by the IEA.

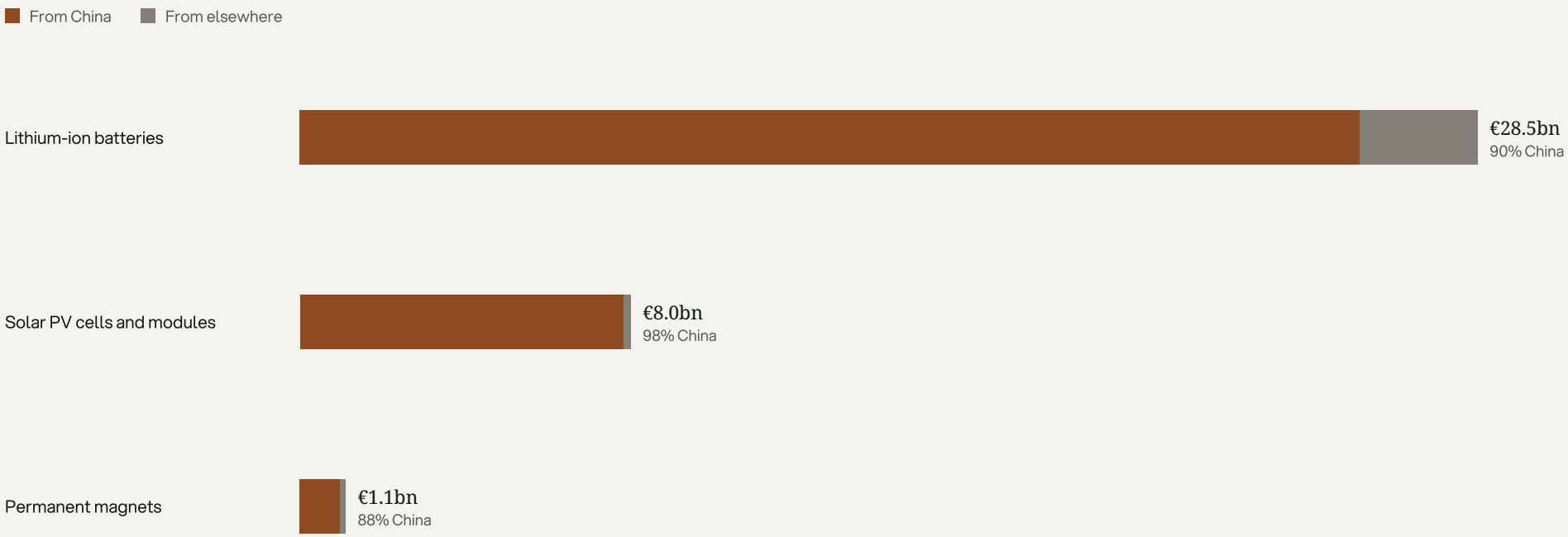
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WHAT EUROPE SPENDS

€37.6bn for three products, 91.7% of it from China

EU imports in 2025, €bn, by origin. Batteries already fitted in imported vehicles and devices are not counted.



Source: Eurostat Comext DS-045409, extra-EU imports 2025, summed by Hercinia. Eurostat is not responsible for this use of its data.

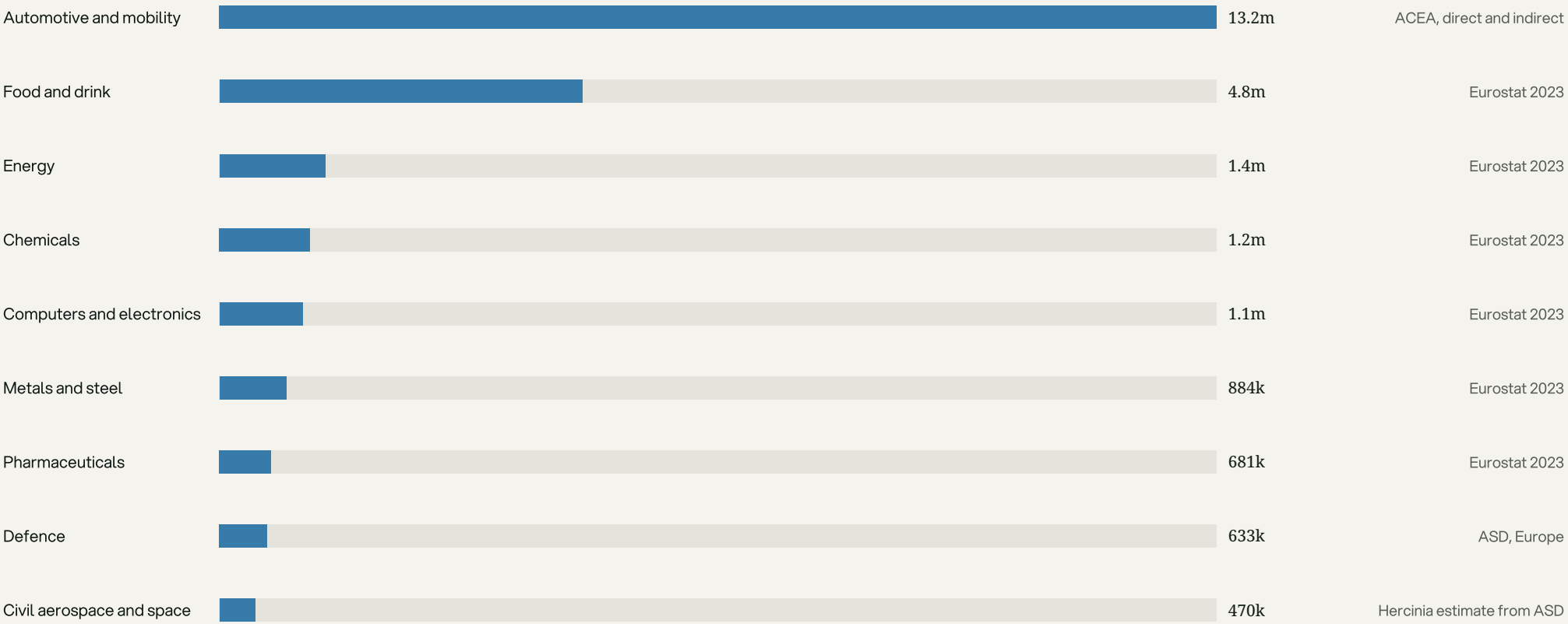
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INDUSTRIES

The industries that run on these materials

Jobs in the EU. ACEA and ASD use their own scope and are not comparable with Eurostat business statistics.



Source: Eurostat structural business statistics 2023; ACEA (automotive, direct and indirect); ASD (defence; civil aerospace is Hercinia's estimate).

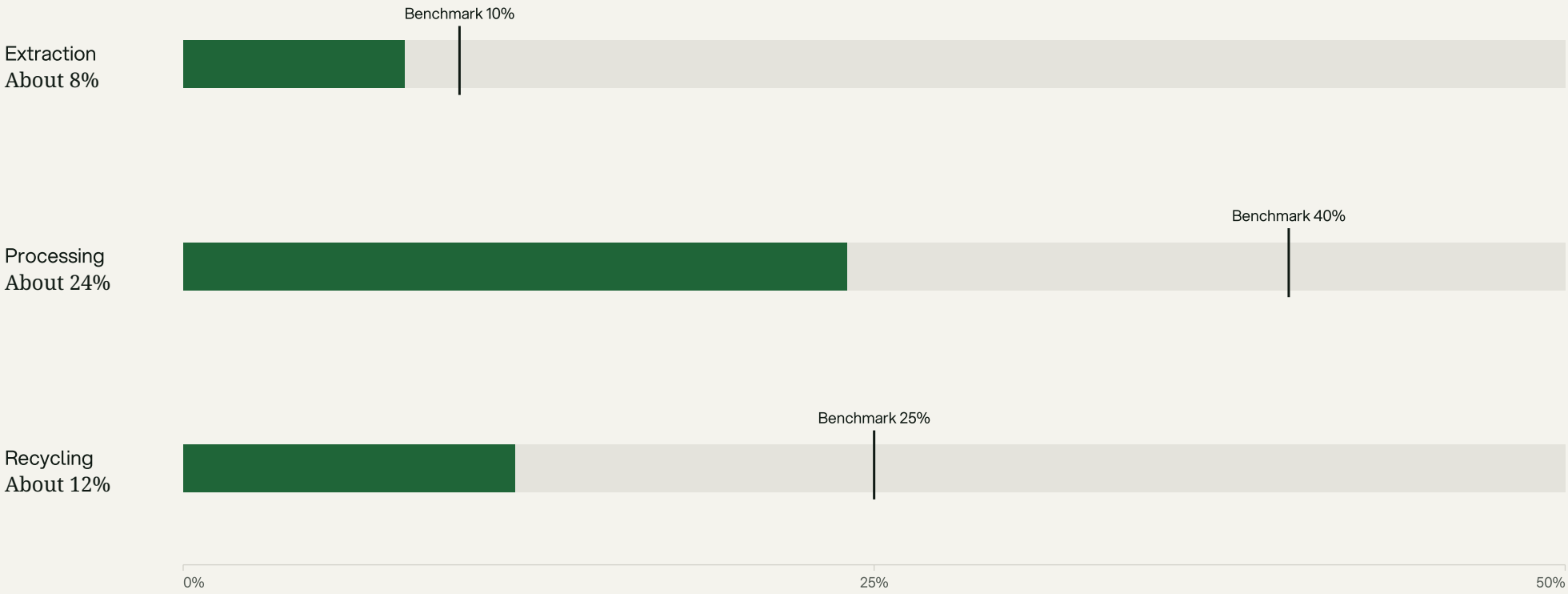
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THE 2030 GAP

Europe is behind on all three capacity benchmarks

EU capacity as a share of EU consumption, averages 2016 to 2020, against the Critical Raw Materials Act benchmarks for 2030.



Source: European Court of Auditors, Special report 04/2026, Figure 5 (EU capacity 2016 to 2020).

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EUROPE'S OWN SUPPLY

What Europe could supply itself by about 2040

Known European deposits plus recycling, as a share of EU demand. Hercinia's assessment from the cited sources; resources are not reserves.

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More than 50% of EU demand

- Aluminium and bauxite
- Arsenic
- Boron
- Copper
- Feldspar
- Gallium
- Hafnium
- Lithium
- Magnesium
- Potash
- Scandium
- Silicon metal
- Strontium
- Tungsten

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10% to 50%

- Antimony
- Baryte
- Bismuth
- Cobalt
- Coking coal
- Fluorspar
- Heavy rare earths
- Light rare earths
- Manganese
- Nickel
- Phosphate rock
- Platinum group metals
- Tantalum
- Titanium metal
- Vanadium

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Under 10%

- Beryllium
- Germanium
- Helium
- Natural graphite
- Niobium
- Phosphorus

Source: SCRREEN factsheets and USGS 2026 (EU demand, known deposits); European Court of Auditors, Special report 04/2026, Figure 5 (EU capacity 2016 to 2020).

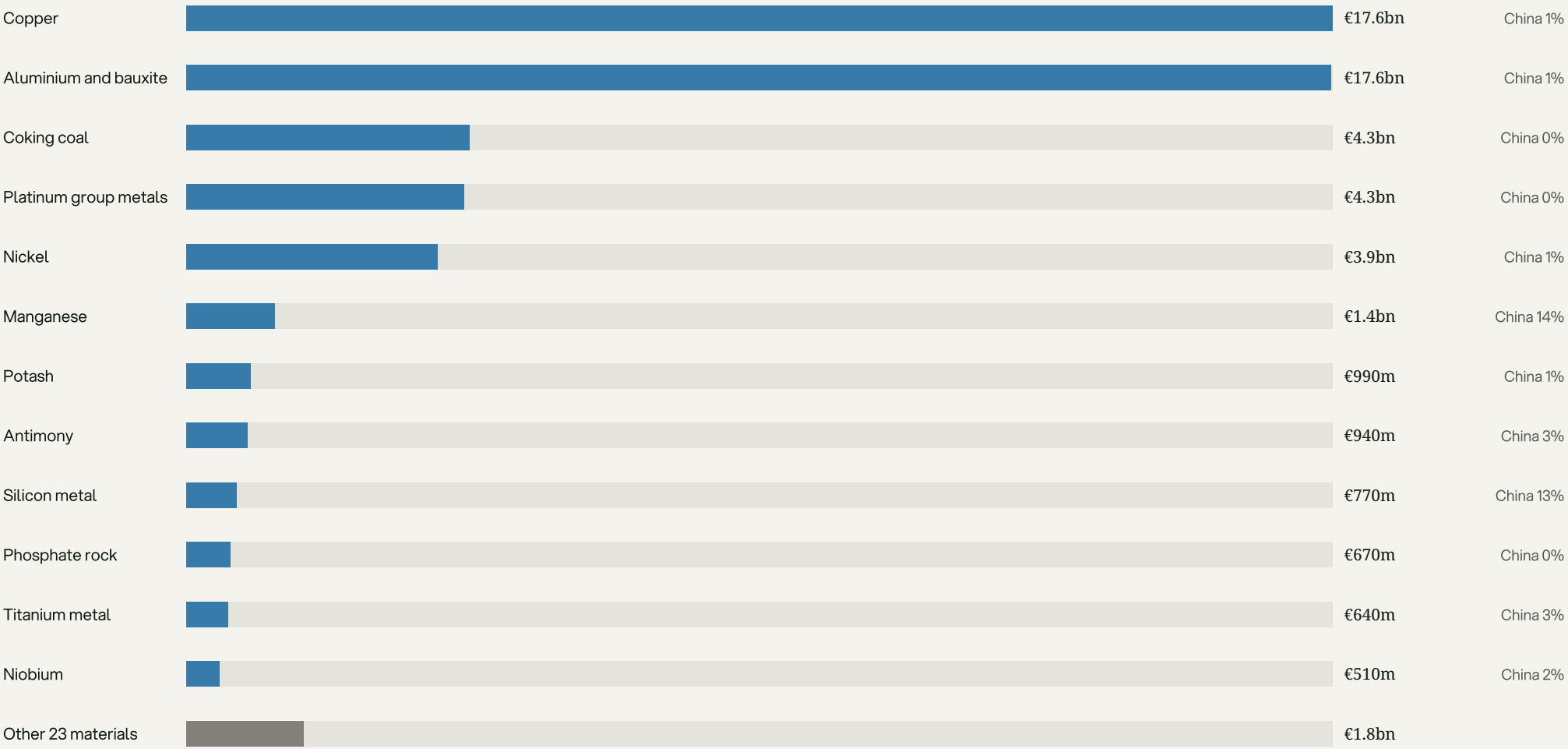
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WHAT EUROPE SPENDS

The EU spent €55.3bn on critical raw material imports in 2025

Extra-EU imports by the EU-27 in raw and refined forms, €bn. Copper and aluminium make up 63.5%. The note gives China's share of each bill.



Source: Eurostat Comext DS-045409, extra-EU imports 2025, summed by Hercinia. Eurostat is not responsible for this use of its data.

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PUBLIC MONEY

Public money for critical raw materials

€bn. The bars cover different instruments and periods: read each with its period and status, and do not add them up.



Source: Hercinia compilation from the European Commission, EIB, KfW, Euler Hermes (UFK), the French and Italian governments, CEZ, IFRI, US Department of Defense and JOGMEC; links in the data file. Converted at ECB reference rates of 27 October 2026.

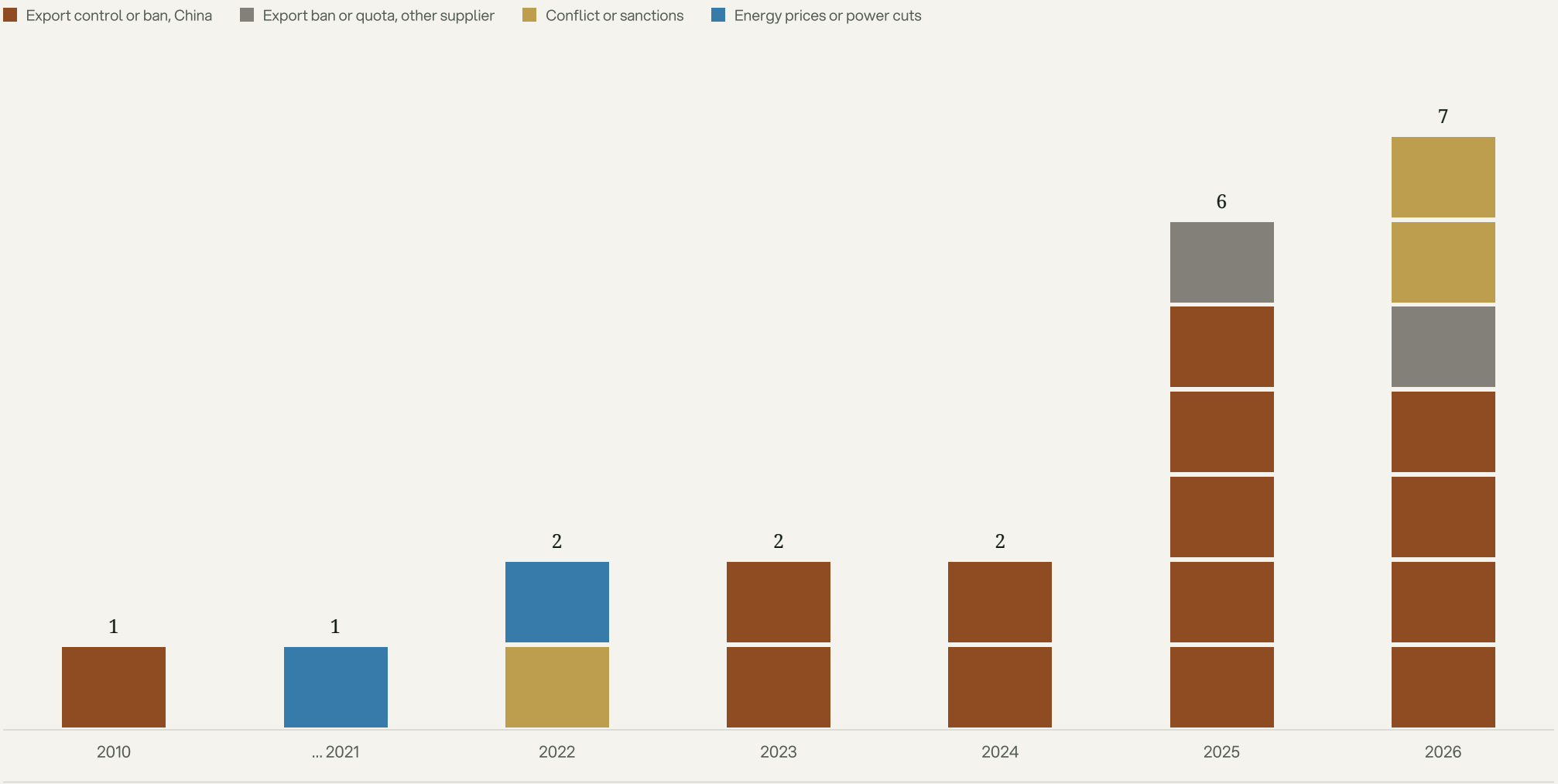
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DISRUPTIONS

Most cuts came in 2025 and 2026

Cuts in supply that reached European or allied industry, by year and cause. 2026 data to 27 October.



Source: Hercinia, Europe's Critical Materials Atlas, disruption record, with the primary source for each event in the data file.

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EXPORT CONTROLS

China's export controls on critical materials since 2023

Status as of 30 October 2026. No notice extending the October 2025 suspension has been published.

DATE	WHAT	MEASURE	STATUS
Jul 2023	Gallium and germanium	Licences with end-use details	in force
Oct 2023	Graphite	End-user licences from December 2023	in force
Sep 2024	Antimony	Licences; Chinese shipments fell 97% in a month	in force
Dec 2024	Gallium, germanium, antimony to the US	Ban on sales to the United States	suspended until 27 Nov 2026
Feb 2025	Tungsten, tellurium, bismuth, molybdenum, indium	Licences	in force
Apr 2025	Seven rare earths and magnets	Licences: samarium, gadolinium, terbium, dysprosium, lutetium, scandium, yttrium	in force
Oct 2025	Announcements 55 to 58, 61 and 62	Five more rare earths, superhard materials, battery and anode materials, equipment, technology, 0.1% rule for foreign-made products	suspended until 10 Nov 2026
Dec 2025	Phosphate fertiliser	Halted; DAP and MAP still halted in September 2026	in force
May 2026	Sulphuric acid	Exports halted until the end of 2026	in force
Jul 2026	Helium	Temporary export ban, Announcement No. 29 of 2026	in force
Jul 2026	Dual-use items	14 EU entities put on the export control list	in force

Source: MOFCOM and GACC announcements, including No. 70 of 2025 and No. 29 of 2026; USGS 2026; IEA 2026; CIRS; Fastmarkets.

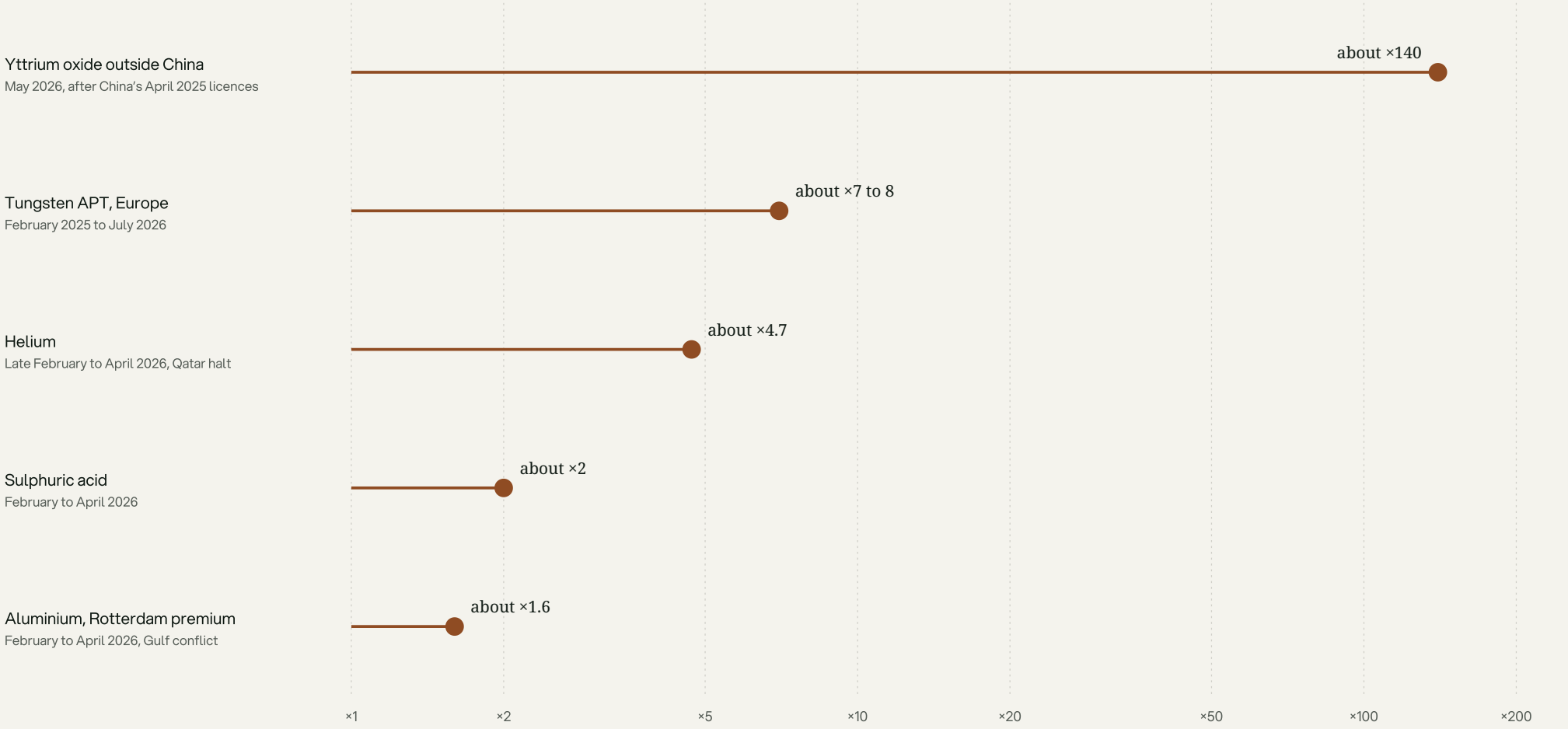
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PRICES

How far prices rose after supply was cut

Multiple of the price before the cut. Log scale.



Source: IEA (2026), CC BY 4.0; Mining Reporters; Plansee; Tech Times (secondary source for yttrium).

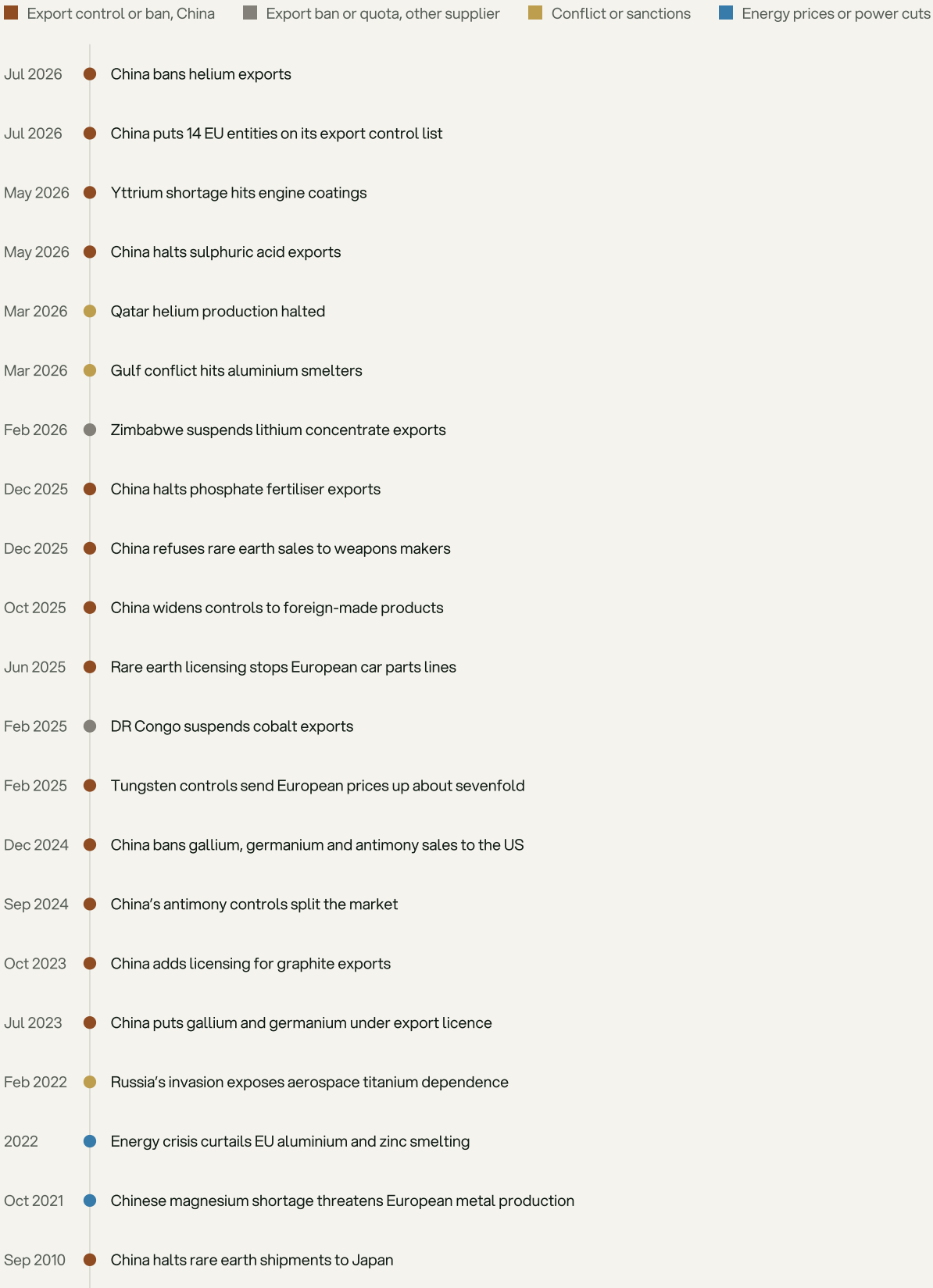
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DISRUPTIONS

When supply stopped, 2010 to 2026

Each cut in supply that reached European or allied industry. Newest at the top.



Source: Hercinia, Europe's Critical Materials Atlas, disruption record; primary sources per event in the data file.

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STOCKS

Who holds stocks of critical raw materials

Japan and the United States hold stocks. In Europe, no stockpile is confirmed as running.

WHO	MEASURE	WHAT IT HOLDS	STATUS
Japan	JOGMEC national stockpile of 34 rare metals	Generally 60 days of use, up to 180 days for high-risk minerals	operating
United States	National Defense Stockpile	US$2bn added from July 2025; cobalt, antimony, tantalum, scandium	operating
United States	Project Vault	US$12bn civilian stockpile of about 60 minerals	operating
Australia	Critical Minerals Strategic Reserve	A$1.2bn; antimony, gallium, NdPr, dysprosium and terbium first	announced
NATO, 12 allies	Joint stockpiling project, 7 July 2026	No budget, volumes or materials published	adopted
European Union	Stockpiling pilot	Italy, Germany and France reported to lead; not confirmed as running	announced
European Union	Critical Raw Materials Centre with contingency stocks	Parliament position 20 October 2026; trilogue from 4 November 2026	in negotiation
Germany	No state stockpile	Support for company stocks under review (27 August 2026)	none

Source: JOGMEC; US Department of Defense; Al Jazeera (Project Vault); Australian Government; NATO, 7 July 2026; European Parliament; German Bundestag, 21 August 2026.

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COMING UP

Dates to watch

From 30 October 2026.

DATE	WHAT HAPPENS	SOURCE
4 Nov 2026	Trilogue on the CRMA amendment and the Critical Raw Materials Centre begins	Council document ST 15112/26
10 Nov 2026	China's suspension of its October 2025 export controls ends unless extended	MOFCOM Announcement No. 70 of 2025
27 Nov 2026	China's suspension of its ban on gallium, germanium and antimony exports to the US ends unless extended	MOFCOM Announcement No. 72 of 2025
Dec 2026	Expected: third call for EU Strategic Projects; EU action plan on defence raw materials; Circular Economy Act	European Commission
9 Dec 2026	Black mass and most lithium-ion battery waste become hazardous waste in the EU	Delegated Decision (EU) 2025/934
31 Dec 2026	QatarEnergy's force majeure on LNG deliveries to Italy's Edison is set to end	Edison, 27 October 2026
1 Jan 2027	Zimbabwe bans lithium concentrate exports; US defence procurement may no longer buy Chinese tungsten	Government notices as reported
10 Jan 2027	The China-US Kuala Lumpur arrangement runs to this date	MOFCOM, 28 September 2026
24 May 2027	Deadline for the review of the EU lists of critical and strategic raw materials	JRC RMIS

Source: Council of the EU; European Commission; MOFCOM; Edison; JRC RMIS; government notices as reported.

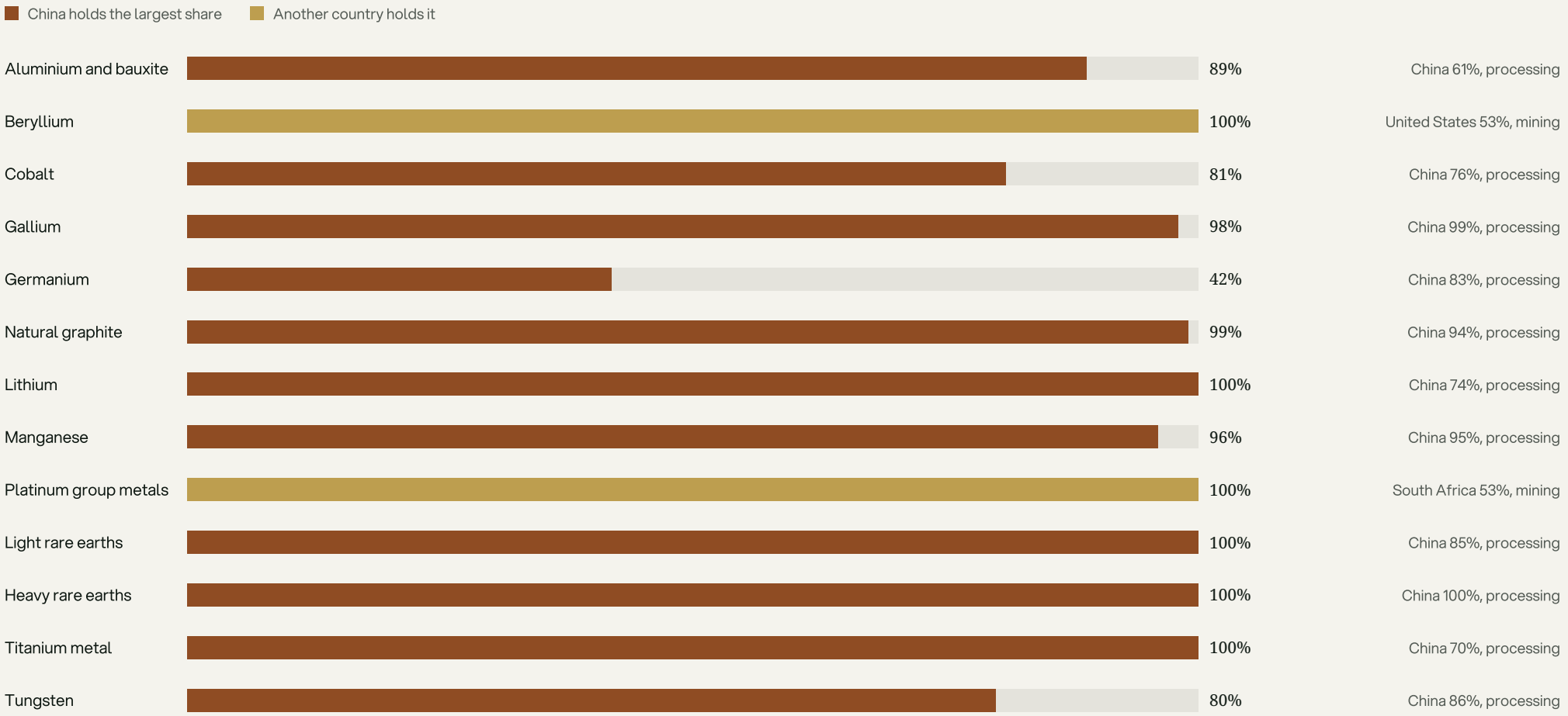
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DEFENCE

NATO's 12 defence-critical raw materials

EU import reliance, average 2016 to 2020 (bars), and the country with the largest share of world mining or processing (note). Rare earths are shown as light and heavy.



Source: NATO, list of 12 defence-critical raw materials, 11 December 2024; European Commission, Study on the critical raw materials for the EU (2023), averages 2016 to 2020; USGS, Mineral Commodity Summaries 2026; IEA (2026), Global Critical Minerals Outlook 2026, CC BY 4.0.

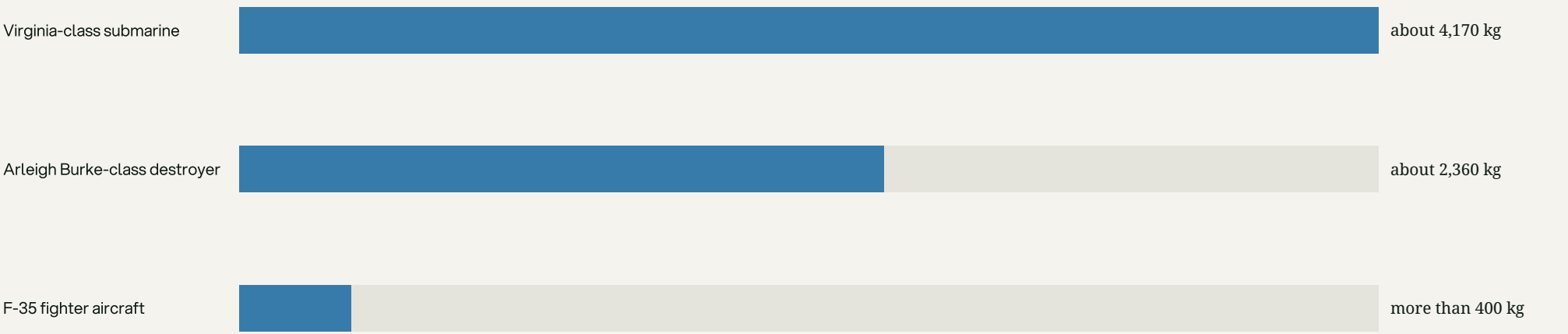
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DEFENCE

Rare earths in one defence platform

Kilograms of rare earth elements per unit. The F-35 contains more than 400 kg (900 lb).



Source: CSIS, The consequences of China's new rare earths export restrictions, 14 April 2025.

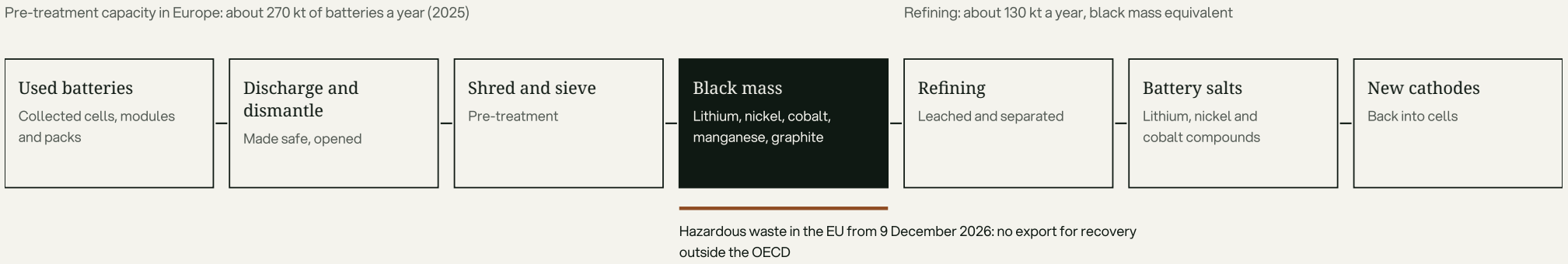
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RECYCLING

From a used battery to new battery materials

Black mass is the powder left after spent cells are discharged, shredded and sieved. From 9 December 2026 it counts as hazardous waste in the EU.



Source: Commission Delegated Decision (EU) 2025/934, applies from 9 December 2026; Fraunhofer ISI (2025), Recycling capacities for lithium-ion batteries will exceed demand in Europe for the time being.

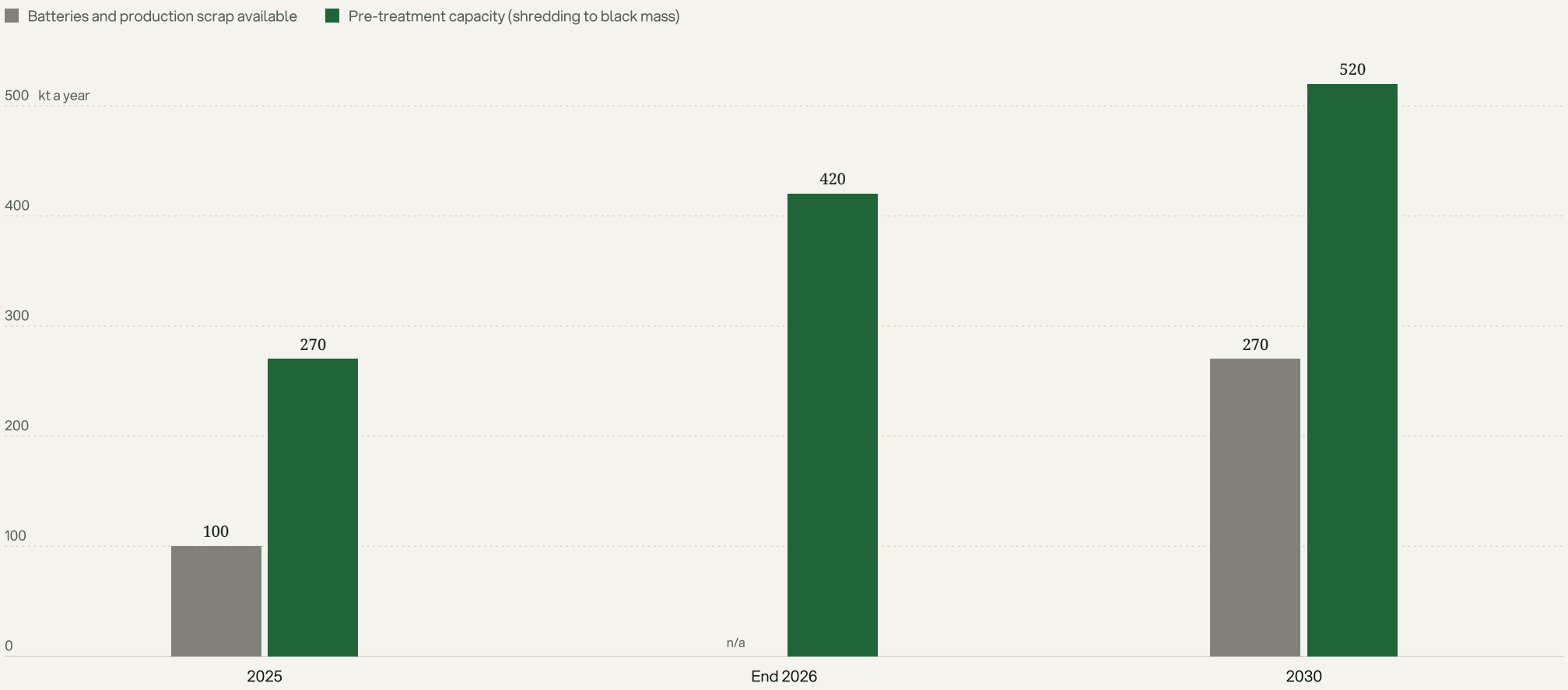
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RECYCLING

Europe has more shredding capacity than batteries to shred

Battery recycling in Europe, kt of batteries a year; figures for end 2026 and 2030 are forecasts. Plants run below capacity, and in mid-2025 Europe was a net exporter of black mass.



Refining: nameplate capacity of about 130 kt of black mass a year in 2025. One tonne of batteries gives about 400 kg of black mass.

Source: Fraunhofer ISI (2025), Recycling capacities for lithium-ion batteries will exceed demand in Europe for the time being.

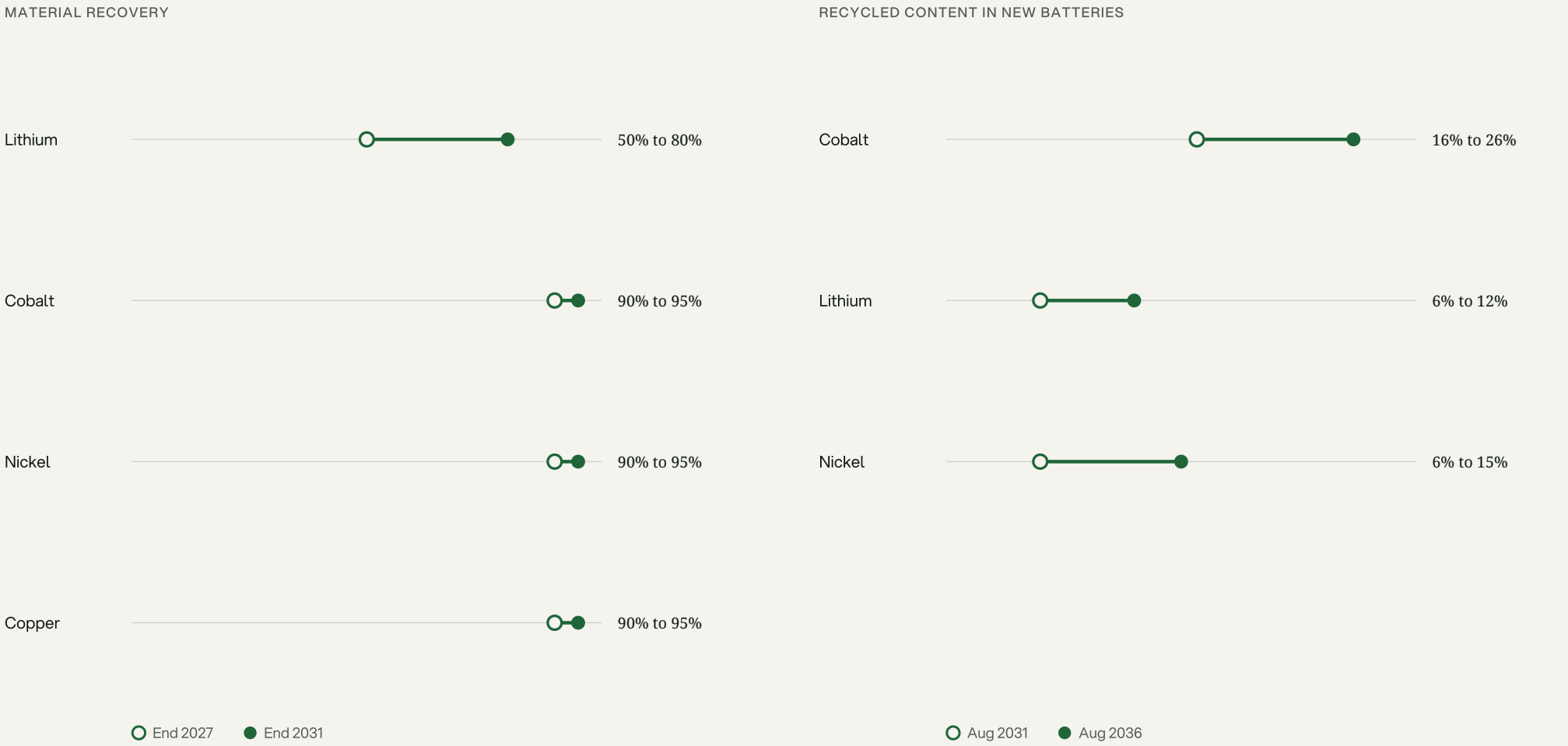
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BATTERY REGULATION

What the EU asks of battery recycling

Left: targets for recovery of materials from waste batteries, by the end of 2027 and 2031. Right: minimum recycled content in new batteries, from August 2031 and 2036 (lead 85% in both).



Source: Regulation (EU) 2023/1542 on batteries, Article 8 and Annex XII.

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