Raw Materials - The Basis for the Energy Transition and the Competitiveness of Europe's Industry

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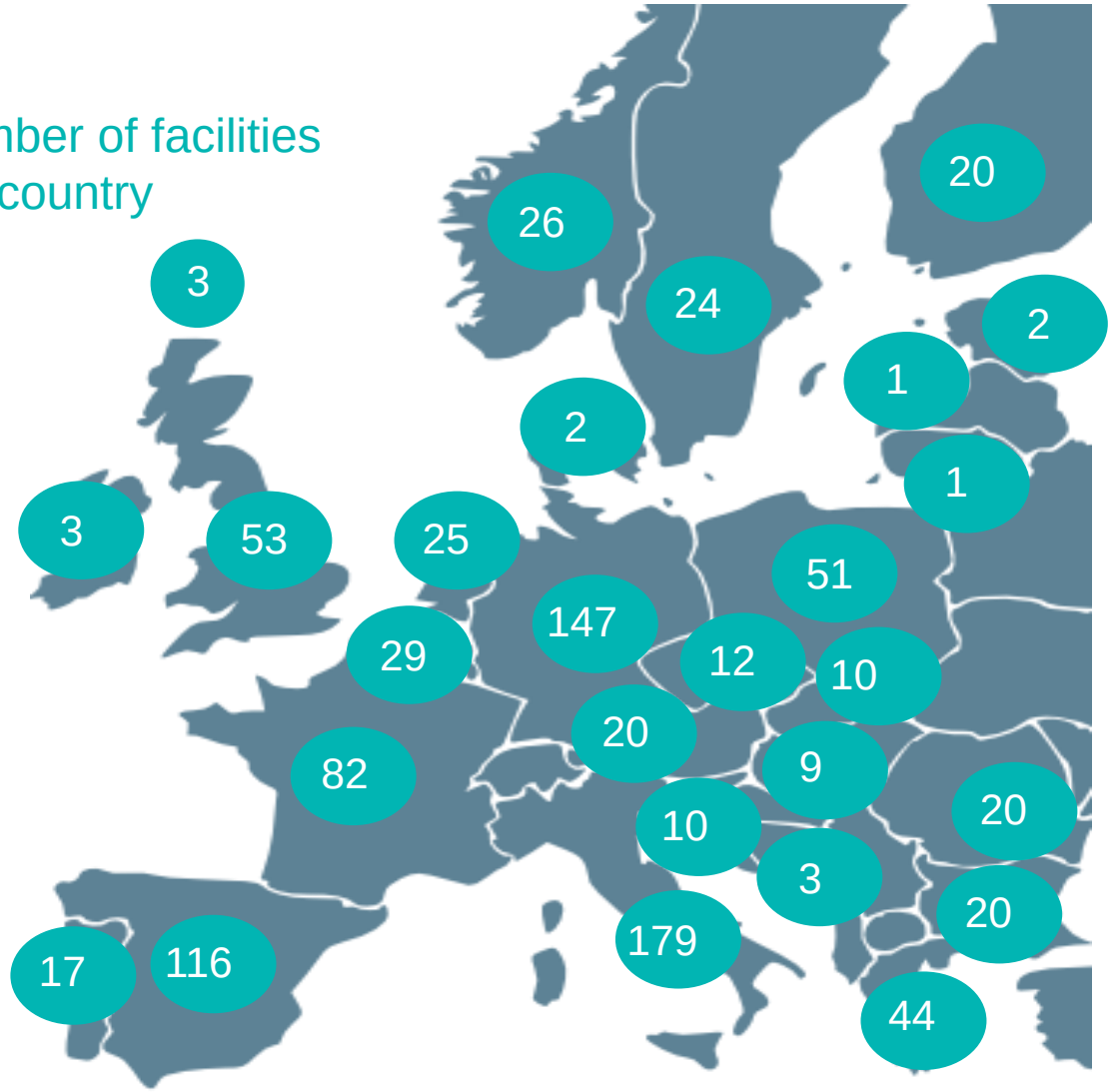
Who are we? A collective advocacy network for Europe's non-ferrous metals value chain

900+
facilities

500,000
direct jobs

13 Al Aluminium	29 Cu Copper	27 Co Cobalt	78 Pt Platinum	30 Zn Zinc
31 Ga Gallium	28 Ni Nickel	79 Au Gold	47 Ag Silver	50 Sn Tin

Number of facilities per country



Our Membership: Company Members across the full metals value chain

+ Commodities associations + National federations + Associate members

3 key facts about non-ferrous metals production in Europe

Electro-intensive

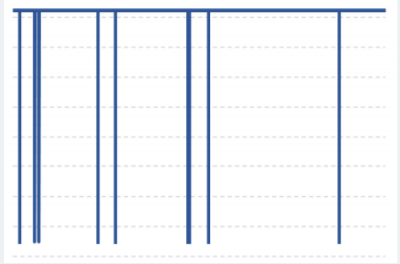
One of Europe's most electro-intensive industries

- Al Aluminium — Electricity = ***38%*** of production costs
- Zn Zinc — Electricity = ***40%*** of production costs
- Si Silicon — Electricity = ***35-40%*** of production costs

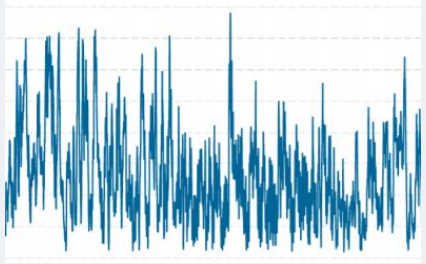
We are baseload consumers

Vs.

Aluminium smelter hourly consumption profile in a year



Wind hourly production profile in a year



European production is being replaced by imports with higher carbon footprint

Tonnes of CO_2**

China **20**

Europe **7**

Price-taker

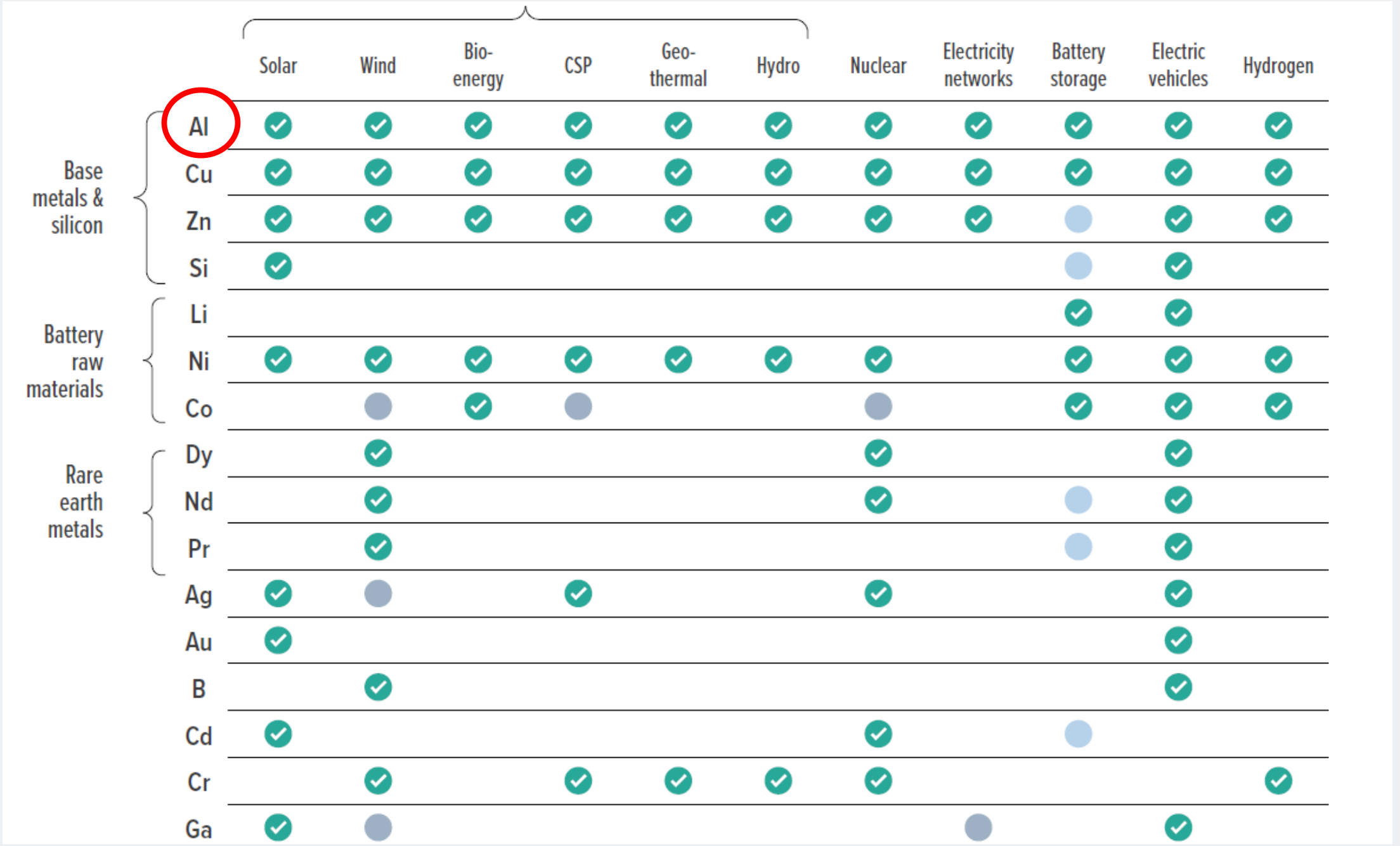
As price-takers, we cannot pass on any regulatory costs to the customer

Metals priced globally by London Metals Exchange

Electricity costs vary from country to country

=

Automatic competitive disadvantage on global market


Solar
Wind
Bio-energy
CSP
Geo-thermal
Hydro
Nuclear
Electricity networks
Battery storage
Electric vehicles
Hydrogen
Base metals & silicon
Al
Cu
Zn
Si
Battery raw materials
Li
Ni
Co
Rare earth metals
Dy
Nd
Pr
Ag
Au
B
Cd
Cr
Ga

Europe's energy transition = Massive increase in metals demand by 2050

Base metals

Al	Aluminium	+33%
Cu	Copper	+35%
Si	Silicon	+50%

Top transition uses:

EVs · Solar · Electricity networks

Battery materials

Ni	Nickel	+103%
Co	Cobalt	+331%
Li	Lithium	+3,500%

+ Manganese & Graphite

Top transition uses:

EVs · Battery storage

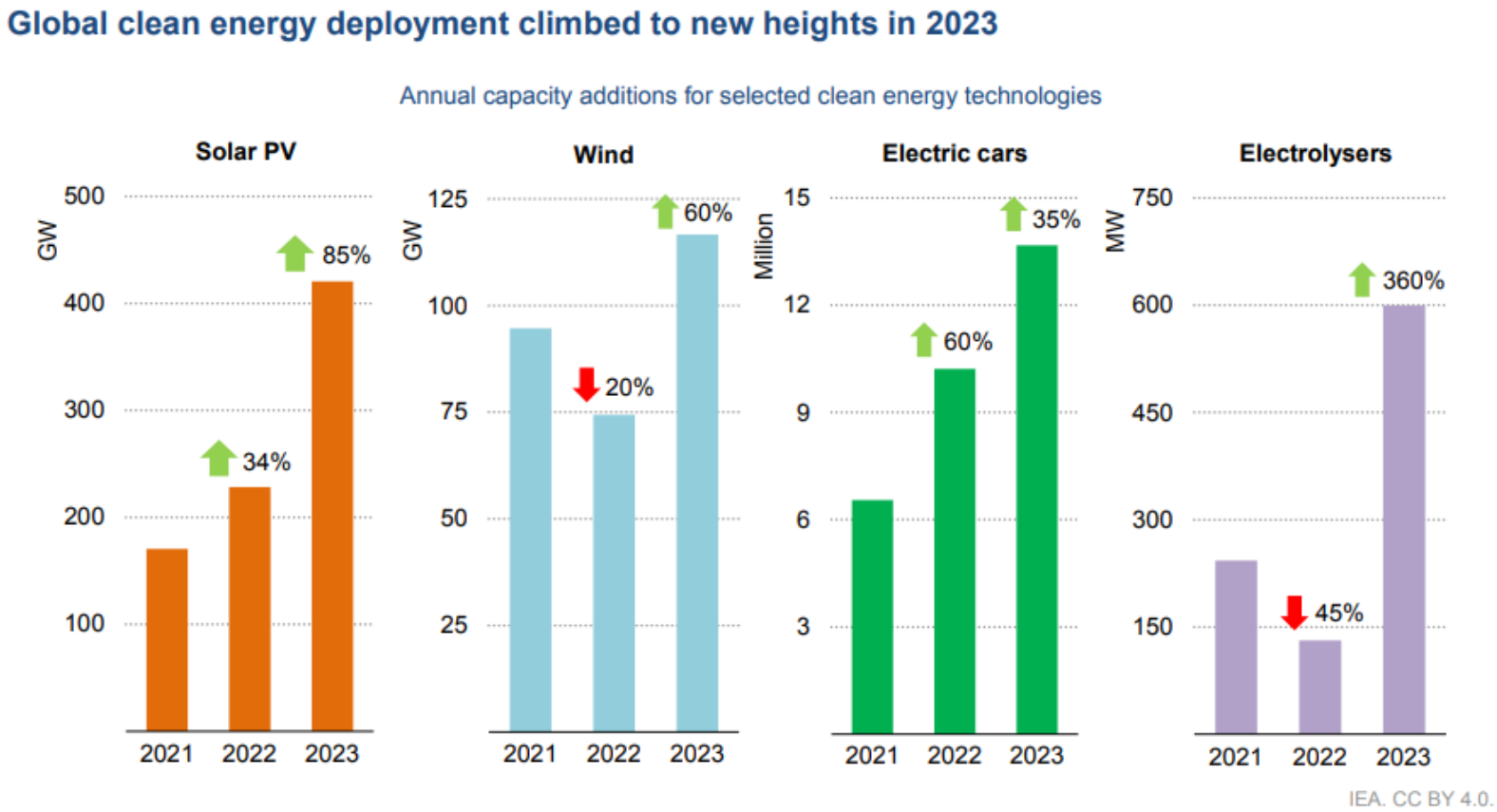
Rare earths

Pr	Praseodymium	+587%
Dy	Dysprosium	+827%
Nd	Neodymium	+2,666%

Top transition uses:

EVs · Wind

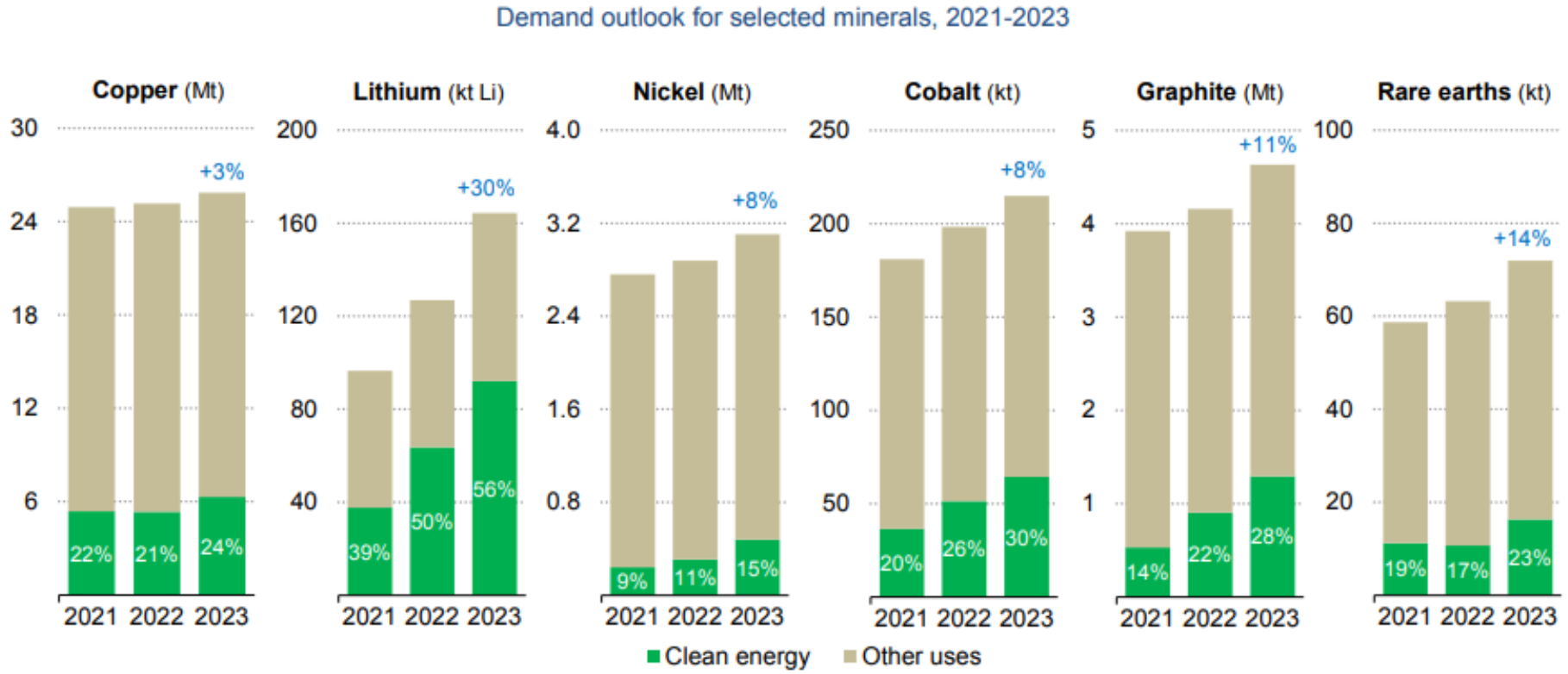
The energy transition is powered by metals – as demand for low carbon applications increases...



Sources: IEA (2024), Clean Energy Market Monitor – March 2024, and IEA (2024), Global EV Outlook 2024.

… so does the demand for metals

Demand for key energy transition minerals continued to grow strongly in 2023, propelled by the expansion of clean energy technologies



Notes: Rare earths include the four magnet elements: neodymium, praseodymium, dysprosium and terbium. Demand for clean energy applications includes consumption for low-emissions power generation, EV and battery storage, grid networks and hydrogen technologies.

In parallel, production in Europe is being curtailed rather than being reinforced...

Slovalco will stop primary aluminium production

Hydro's majority owned Slovalco aluminium facility in Slovakia has decided to close the primary aluminium production at the plant. The closure will be completed by the end of September 2022.

NEWS › ENERGY AND CLIMATE

Europe's impossible choice: Which industries should survive the green transition?

One German aluminum factory decided to go green and close its smelter. The EU faces a similar choice, with Europe's future at stake.

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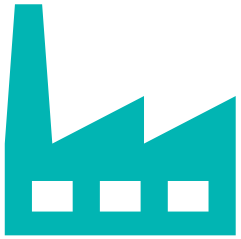
Critical Raw Materials Act: 2030 benchmarks for raw materials supply chain

The EU should extract at least **10%** of its strategic raw materials domestically



The EU should process at least **40%** of its strategic raw materials domestically

The EU's recycling capacity should be able to produce at least **25%** of EU consumption for each strategic raw material

The EU should not be dependent on one single third country for imports for more than **65%** of imports of any strategic raw material

Base Metals & Silicon: Existing EU capacity mostly already exceeds 2030 benchmarks

	2030 Europe supply projection (max)			Diversification	
CRITICAL RAW MATERIALS ACT GOALS →	MINING *(>10% GOAL)*	PROCESSING *(>40% GOAL)*	RECYCLING *(>15% GOAL)*	MINING *(<65% TOP IMPORTER)*	PROCESSING *(<65% TOP IMPORTER)*
Cu Copper	40%	85%	55%	20% (Chile)	20% (Chile)
Zn Zinc	50%	100%	40%	20% (Peru)	-
Al Aluminium	3%	43%	45%	65% (Guinea)	20% (Russia)
Si Silicon		73%	4%*		40% (Brazil)

50%
OFFLINE

13 Al Aluminium + 30 Zn Zinc + 14 Si Silicon

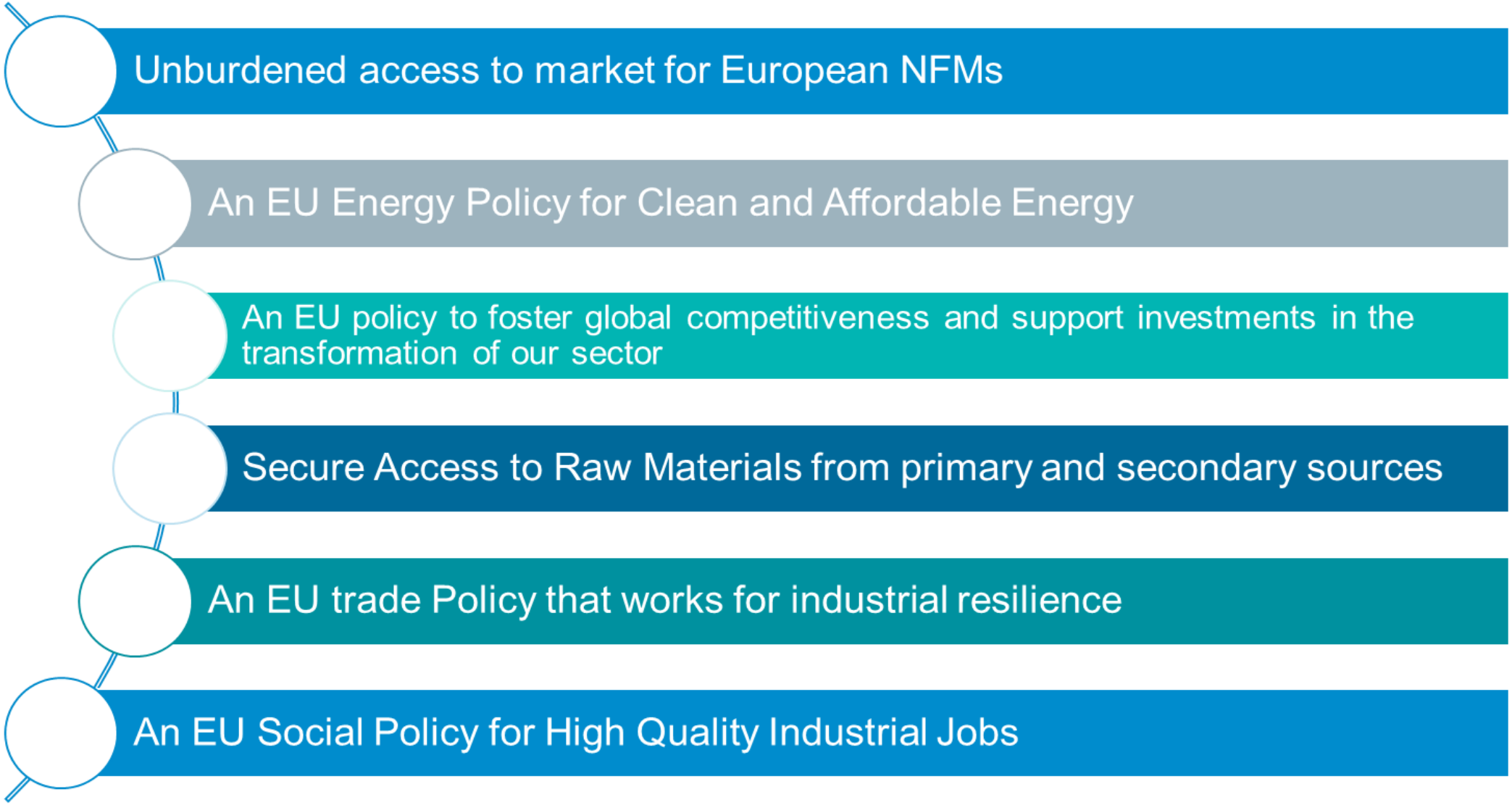
Europe needs to bring

~~20~~ CURTAILED

facilities back online

*Silicon is also already widely recycled today within aluminium alloys

What we need to thrive: concrete policy measures to address the needs of the non-ferrous metal industry



Looking beyond our borders - Risks

1

Foreign dominance in key strategic areas is already leading European sectors to supply crises and creating further risks in the next decade. E.g., China covers more than half of the global production of processed minerals and metals and is the major EU supplier of several critical raw materials

2

Protracted EU vulnerabilities, in the long run, could also give our competitors a huge advantage over supplies of many metals required for low-carbon applications, including batteries, hampering EU industrial capacity & the EU Green Deal

3

Europe should take action to secure its own long-term supply sources and refining capacity through domestic and global investment coupled with action to address trade distortions

Looking beyond our borders – Opportunities and actions

Reduce strategic dependencies

- Establish **Raw Materials Partnerships**
- Ensure access to new markets for metal
- Reduce **tariffs** at the border
- Safeguard the **security of supply** and developmental benefits

Safeguard industrial base

- Ensure strong **trade defence** measures and other trade tools (anti-coercion, foreign subsidies)
- Safeguard EU businesses from unfair practices of non-market economies (e.g. China).

EU-US relationship

- Re-assess the EU-US cooperation
- Continue talks on a **Critical Minerals Agreement**
- Try to use the Trade and Technology Council (TTC) to reduce trade tensions.

THANK YOU

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