



Nyrstar

Resources for a Changing World

**Building the Critical Minerals and Metals Narrative
in a Volatile Geopolitical Environment**

PB 2025 – June 27 2025



About Nyrstar

- International producer of **critical minerals and metals** essential for a **low carbon future**
- **Leading position in zinc and lead** and employing approximately 4,000 people
- Nyrstar has mining, smelting and other operations located in **Europe, the U.S. and Australia**
- **Corporate Office** is based in Budel-Dorplein, the Netherlands
- Nyrstar's operating business is **wholly owned by Trafigura**, one of the world's leading independent commodity trading and supply chain logistics companies

Our European Operations are Fully Committed to a Resilient European Region

- **Nyrstar Stolberg (Aachen area, Germany)**
 - One of the **world's most advanced**, clean and energy efficient lead smelters
 - **Lead and lead alloys**, silver doré, sulphuric acid and copper by-products
- **Budel (NL), Balen (BE) and Aubay (FR) zinc smelters**
 - **Highly electrified** with unique degree of **process flexibility**
 - Ready for the next step: Nyrstar '**Virtual Battery**'

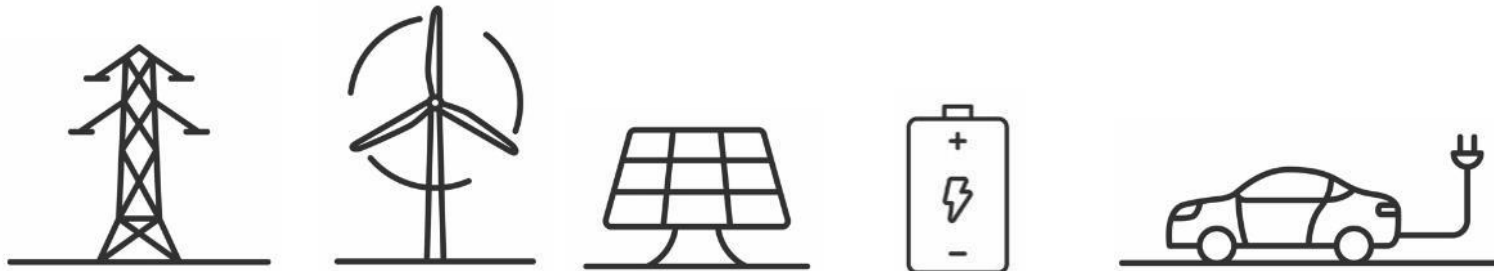


Lead and Zinc are Key Enablers for the Energy Transition, High Tech Applications and our Regional Security

- Secure supply chain with regional **raw material security**
- Enabling **EU electrification**, battery storage and low carbon goals
- Carriers for **minor, critical, strategic** minerals and metals
- Essential for **high tech** applications and EU **security and defence**

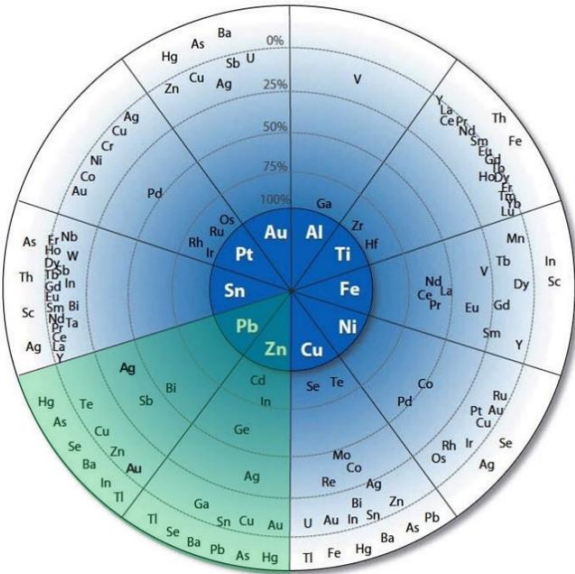


	Energy storage Lead batteries are used as energy storage to support grid flexibility.		Defence Lead has more than 20 critical applications in the aerospace and defence sector. Lead batteries are used in over 80 different types of military aircraft , and most NATO countries use 6T AGM products in military vehicles, tanks, APCs, and larger military vehicles.* * Lead Matters; US-A-CBI internal communications
	Undersea transmission cables High-voltage undersea electricity transmission cables all rely on internal lead-sheathing.† † European Wire & Cable Association, September 2022		Data centers Lead batteries are used as back-up batteries in data centers.
	Nuclear Every nuclear reactor uses lead-based batteries for backup of vital systems. This means lead batteries back up 23% of EU electricity generation . † Council of the European Union Infographic, 2020		Transportation Virtually every vehicle on the road relies on a lead battery. That's over 340 million vehicles in Europe alone.‡ ‡ Vehicles on European Roads, ACEA, February 2024



The Opportunity: Industrial Metals are Carriers of Critical Minerals and Metals

- Nyrstar **processes complex raw materials in Europe** from all over the world
- In parallel with the primary production of zinc and lead, **other metals are also recovered and refined**
- Nyrstar is exploring opportunities to produce (additional) **critical minerals and metals (such as Sb, Ga and Ge)**



EUROPEAN CRITICAL RAW MATERIALS ACT

March 2023

The EU is aiming to ensure a secure and sustainable supply of critical raw materials for Europe's industry.

WHY?

Critical raw materials are needed for the **green and digital transitions** as well as for defence and space

To enhance our **long-term competitiveness**

To maintain our **open strategic autonomy** in a fast-changing and increasingly challenging geopolitical environment

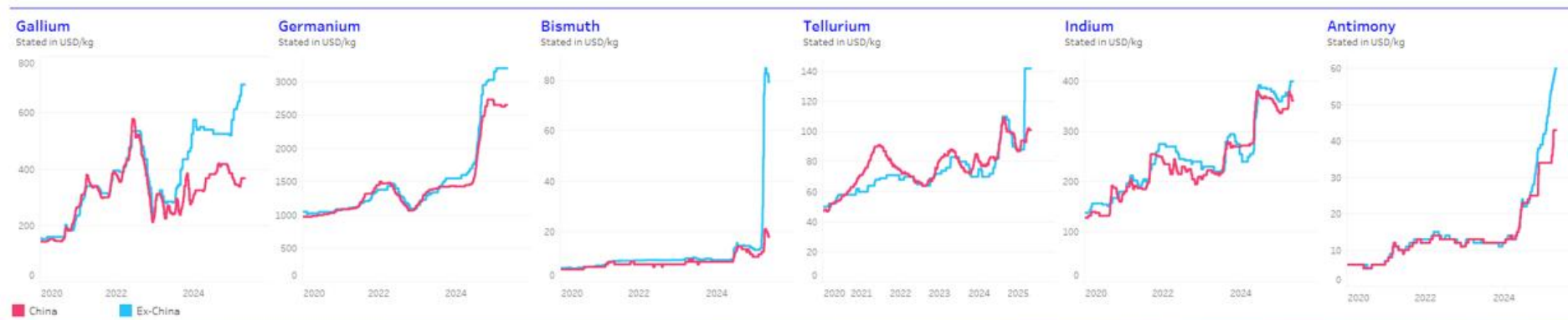
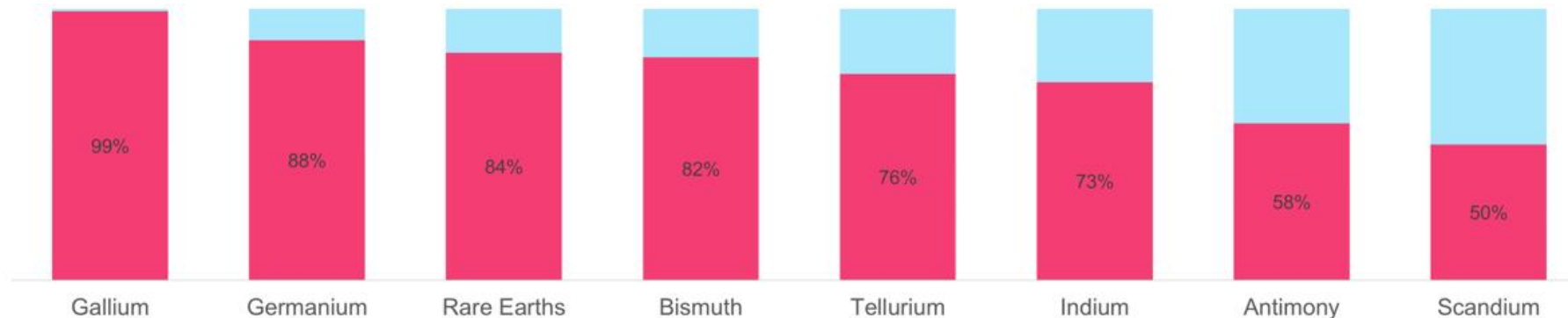
Nyrstar European Elements Overview

	Yearly input at Nyrstar Europe (t/y)	Current valorisation	Recovery after project execution	product	Main applications
Lead (Pb)	120.000	>90%	>95%	pure metal	Rechargeable batteries, shielding
Zinc (Zn)	700.000	>90%	>95%	pure metal	Galvanising steel, die-casting
Silver (Ag)	450	>90%	>95%	Doré	electronics, jewellery
Gold (Au)	1	>90%	>95%	Doré	electronics, jewellery
Iron (Fe)	85.000	0%	>75%	Fe-oxide Fe-ore	Construction, manufacturing, ...
Sulfur (S)	420.000	>90%	>95%	H2SO4 acid	Fertilisers, chemical industry
Germanium (Ge)	15	0%	60%	Ge concentrate	Night vision, optical fibers, chips
Indium (In)	200	20%-30%	60%	pure metal	ITO (touchscreens) nuclear control rods
Antimony (Sb)	1.000	20%	60%	PbSb and concentrate	Fire retardants, lead alloys
Tin (Sn)	300	0%	50%	Sn-concentrate	alloys, ITO
Bismuth (Bi)	100	>50%	>50%	Bi-crust	Medicine, Low toxicity replacement of F
Tellurium (Te)	20	0%	0%	na	CdTe solar, Thermoelectrics
Selenium (Se)	40	0%	0%	na	Glass, electronics, ...
Copper (Cu)	7.500	>75%	>80%	Cu cement and matte	Electrical conductor
Manganese (Mn)	2.500	50%	75%	MnSO4 and MnO2	Rechargeable batteries, steel
Cobalt (Co)	80	0%	75%	Co concentrate	Rechargeable batteries, ceramics, steel
Nickel (Ni)	80	0%	50%	Ni concentrate	Rechargeable batteries, steel
Cadmium (Cd)	3.000	30%	30%	pure metal	Rechargeable batteries
Arsenic (As)	2.500	0%	0%	Stabilised cake	GaAs electronics, pesticides

The Challenge: China has Significant Share of Refined Critical Metals Production

China has several strategies, **significantly supporting its domestic smelting and refining**, to meet demand for critical minerals and metals

- **Industrial metals**, China is short mine supply on shore but has built out substantial smelting capacity, pushing smelter industry globally in overcapacity and collapsing Treatment Charges
- **Battery metals**, where China doesn't have on shore, it has built smelting and refining offshore
- **Minor metals**, China is completely dominant in refining and is securing supply of industrial metals, as ores for these metals are carriers of minor metals



Our proposition

Nyrstar has significant ambitions....

- To (further) increase the flexibility of our (Zn) production processes → **Nyrstar virtual battery**
- And add additional production capacity for critical minerals and metals → **Antimony and Germanium for Europe**

We need the ‘**Clean Industrial Deal**’ to compete with other regions and realize these ambitions

1. **A long term, stable and coordinated** energy policy
2. **An equal level playing field within Europe** and with other global regions
3. **Competitive energy costs** (taxes / commodity- / grid costs) are crucial in order to enable investments
4. For **Critical Raw Materials**:
 1. ‘Standard’ trade remedies (e.g. antidumping) will not be effective
 2. China is not ‘dumping’, but is depleting raw materials from all over the world → “reverse dumping”
 3. Some forms of direct subsidies / CFD’s or price guarantees will be necessary

Without a an economically viable regional lead and zinc value chain, no access to the critical minerals and metals that come with it.... A stable and effective industrial policy will enable European (metals) industry – including Nyrstar – to advance investments in even more sustainable and responsible operations, further (in)direct carbon emission reductions and critical materials production

