s 33(a)(iii)

s33(a)(iii) & s33(b)

s33(a)(iii) & s33(b)

s33(a)(iii), 33(b), 34(3)

s33(a)(iii), 33(b), 47C

s33(a)(iii), 34(3), 47C

s33(a)(iii), 33(b), 34(3), 47C

s33(a)(iii), 33(b), 47C

s33(a)(iii), 33(b)

s33(a)(iii), 33(b), 47C

s33(a)(iii)

s33(a)(iii)

~~PROTECTED CABINET~~

SENATOR THE HON DON FARRELL
Minister for Trade and Tourism
Special Minister of State

THE HON MADELEINE KING MP
Minister for Resources
Minister for Northern Australia

MS25-000573

The Hon Anthony Albanese MP
Prime Minister
Parliament House
Canberra ACT 2600

Dear Prime Minister

At the 2025 G7 Leaders' Summit, it is likely you will be asked to agree to join Canada's proposed *G7 Critical Minerals Action Plan* (the CMAP; s33(b) The CMAP seeks to increase cooperation amongst signatories on critical minerals issues, particularly standards, capital and innovation.

s33(a)(iii)

We do not expect to have a final draft statement until we are invited. We therefore seek your agreement for Australia to join the CMAP based on the current s33(b) , and if its subsequent finalisation aligns with our proposed mandate at Attachment B.

The current s33(b) of the CMAP aims to address the most pressing critical minerals issues through s33(b) :

s33(b)

s33(a)(iii)
s33(b)

s33(a)(iii)

The CMAP is expected to continue for 2 years, s33(a)(iii)

The s33(b) of work align with our domestic policy of diversifying critical minerals supply

chains. This work leverages our global leadership on critical minerals issues, including through the International Energy Agency's Critical Minerals Working Party.

s33(b), s47C It advances efforts to level the playing field through standards and increase the global competitiveness of our sector. s33(a)(iii), s34(3)

s33(a)(iii) and could be managed through existing activities and programs.

s33(a)(iii)

s 47C
s33(a)(iii)

s33(a)(iii)

s 47C

Our position ensures Australia will remain engaged in subsequent implementation efforts, including a potential roadmap for s33(b) We will seek your agreement prior to any further commitments informed by an assessment of its alignment with Australia's interests.

Yours sincerely

DON FARRELL
/ / 2025

MADELEINE KING
/ / 2025

Enc – s33(a)(iii), s47C
Attachment B: Australia's Proposed Mandate

CC: Treasurer, the Hon Dr Jim Chalmers MP
The Hon Richard Marles MP, Minister for Defence
Senator the Hon Katy Gallagher, Minister for Finance
Senator the Hon Penny Wong, Minister for Foreign Affairs
The Hon Chris Bowen MP, Minister for Climate Change and Energy
Senator the Hon Tim Ayres MP, Minister for Industry and Innovation, Minister for Science

From:	Marcelo, Ray
To:	Coleman, Laurence; S 47F
Subject:	FW: Nyrstar - The Economic and Strategic Importance of Multi-Metals Processing - Mandala Report [SEC=OFFICIAL]
Date:	Wednesday, 28 May 2025 10:49:29 AM
Attachments:	250521 Mandala - Nyrstar - Economic importance of multi metals - Report.pdf FINAL Mandala Report Release 260525.pdf

OFFICIAL

Hi Laurence, S 47F

For info see the Nyrstar release and report from Mandala. We're getting TPs from the department and trying to line up a meeting with Trafigura's executive Jiri Zrust next week.

Ray

OFFICIAL

From: S 47F @nyrstar.com>
Sent: Wednesday, 28 May 2025 10:21 AM
To: S 47F @pm.gov.au>; Marcelo, Ray <S 47F @industry.gov.au>
Subject: Nyrstar - The Economic and Strategic Importance of Multi-Metals Processing - Mandala Report

CAUTION - This email originated from outside of the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi S 47F Ray
As mentioned previously, we commissioned Mandala earlier this year to complete a report into Multi-metals Processing in Australia.
The report was completed in March but see attached the final version we intend to release publicly in coming days.
The report underscores the critical role that lead and zinc refining play in securing Australia's long-term economic and strategic interests, with a particular focus on the importance of our smelters in Port Pirie and Hobart.
Also attached is a our press release we plan to issue Thursday.
Let me know if any questions and look forward to discussing with you again shortly.
S 47F

S 47F
Regional Head Corporate Affairs (Au)
M: +S 47F
nyrstar.com

From: Coleman, Laurence
To: S 47F
Subject: FW: Nyrstar - The Economic and Strategic Importance of Multi-Metals Processing - Mandala Report
Date: Wednesday, 28 May 2025 11:28:00 AM
Attachments: 250521 Mandala - Nyrstar - Economic importance of multi metals - Report.pdf
FINAL Mandala Report Release 260525.pdf

See below/attached FYI. Nyrstar plan to release tomorrow.
LC

From: S 47F @nyrstar.com>
Sent: Wednesday, 28 May 2025 10:22 AM
To: Minister King <S 47F @industry.gov.au>; Coleman, Laurence
S 47F @industry.gov.au>
Subject: Nyrstar - The Economic and Strategic Importance of Multi-Metals Processing - Mandala Report

Hi Laurence
As discussed previously with S 47F , we commissioned Mandala earlier this year to complete a report into Multi-metals Processing in Australia.
The report was completed in March but see attached the final version we intend to release publicly in coming days.
The report underscores the critical role that lead and zinc refining play in securing Australia's long-term economic and strategic interests, with a particular focus on the importance of our smelters in Port Pirie and Hobart.
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Let me know if any questions and look forward to discussing with you again shortly.
S 47F

S47F
Regional Head Corporate Affairs (Au)
M: S 47F
nyrstar.com

MANDALA

The economic and strategic importance of multi-metals processing

Commissioned by Nyrstar

MAY 2025

Contents

MANDALA

This document is intended for general informational purposes only. The analysis in this report was commissioned by Nyrstar Australia and prepared by Mandala. All data and information is as of 25 March 2025.

Mandala is an economics research and advisory firm. Mandala specialises in combining cutting-edge data and advanced analytical techniques to generate new insights and fresh perspectives on the challenges facing businesses and governments.

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Note: All dollar figures are Australian dollars unless indicated otherwise.

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Executive summary

Mandala was commissioned by Nyrstar to provide an independent summary of the significance of lead and zinc refining in Australia. This report finds that Australia's existing capabilities are a gateway to domestic critical minerals processing, but fundamental shifts in the global industrial policy landscape are undermining Australia's current and future processing capabilities.

Australia's existing lead and zinc capabilities are a gateway to critical minerals processing

Australia has the largest reserves of lead and zinc globally and an established refining capability, ranking as the third largest exporter of refined and intermediate lead and the second largest exporter of refined zinc in the world.

Nyrstar is Australia's major lead and zinc producer, with two multi-metals smelters: Nyrstar Port Pirie and Nyrstar Hobart. Both facilities are core pillars of the local industrial base and the Australian economy, contributing $1.7 billion gross value added in 2024 and supporting 6,648 full time equivalent jobs across the country.

Lead and zinc refining is an essential precursor to capturing and processing five critical minerals: antimony, bismuth, tellurium, germanium, and indium. Nyrstar Port Pirie is Australia's only producer of refined lead with critical minerals extraction capacity.

Securing a stable supply of critical minerals is increasingly important

Lead, zinc and critical minerals processing is concentrated in China. Australia has the opportunity to become a valuable trading partner in global supply chains as governments look to diversify critical mineral supplies and reduce vulnerabilities to market interventions, including China's recent ban on antimony and germanium exports to the US. For example, the European Union and other regions have introduced import guardrails for critical minerals to limit dependencies on single markets.

Fundamental shifts in global industrial policy have undermined domestic processing

Lead and zinc smelters around the world are operating in challenging economic conditions.

China's industrial policy interventions have established integrated supply chains across lead and zinc production and manufacturing, linking metals refining to the manufacture of finished goods. This downstream vertical integration allows for cross-subsidisation across the value chain, with additional government subsidies supporting loss-making activities. Overall, these policy interventions have supported China to capture a disproportionately high percentage of the minerals processing supply chain compared to their domestic mineral reserves.

Backed by strong government policy, Chinese smelters are refining more of the by-product metals available from feedstock and are driving competition for high quality feedstocks at higher payable rates. At the same time, declining treatment charges are further eroding smelter operating margins around the world.

Maintaining lead and zinc refining capabilities outside of China will become increasingly challenging. If other countries exit lead and zinc smelting, China could achieve monopoly power in this market and maintain majority control of the global supply of associated critical minerals.

Protecting Australia's minerals processing capability is in the national interest

Australia's lead and zinc smelting capabilities are fundamental to Australia's ambition to leverage its high-quality mineral deposits and become a leading exporter of value-added critical minerals. Maintaining a robust domestic industry has economic, strategic, security, industrial, and societal benefits.

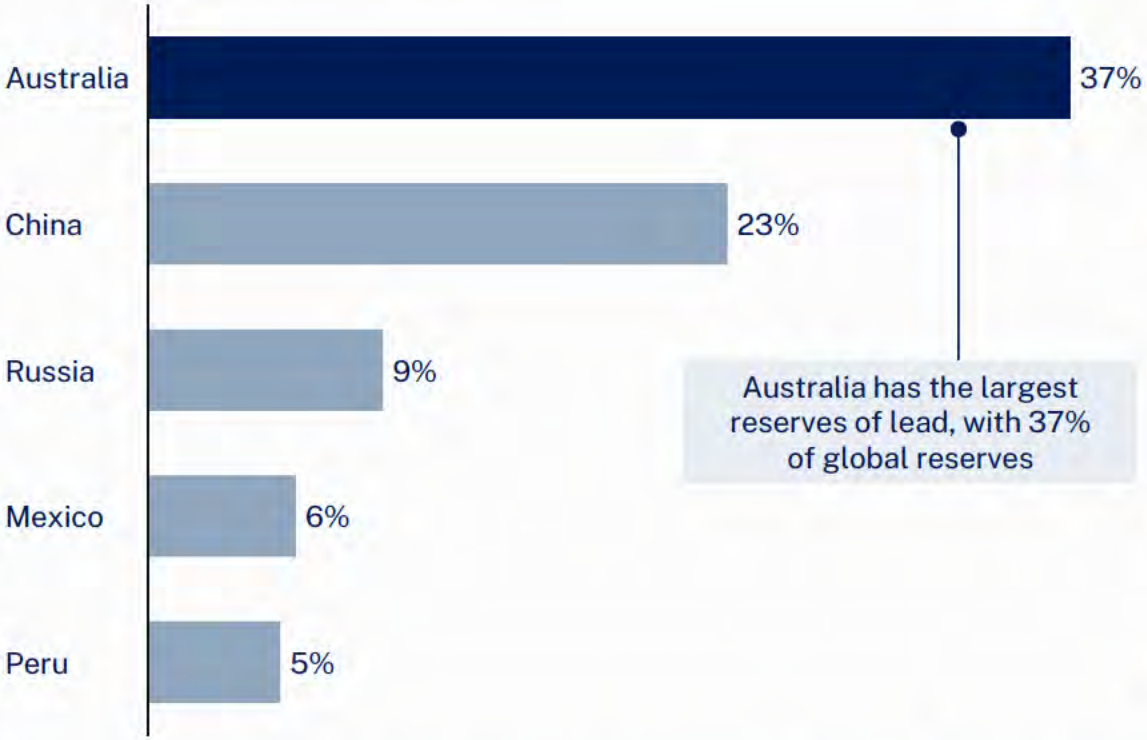
Should Australia's existing multi-metals smelting capabilities falter or shut down, rebuilding this infrastructure would require impractical levels of cost and delay. This includes the likely collapse of local skills pipelines, particularly for metals manufacturing workers.

Government support is required to protect Australia's natural advantages in minerals processing and ensure lead, zinc, and associated critical minerals are refined and processed domestically, long into the future.

Australia has the largest reserves of lead and zinc globally, providing a significant long-term opportunity to move downstream in both supply chains

Top five countries for lead reserves by volume

% of global reserves, 2024



Top five countries for zinc reserves by volume

% of global reserves, 2024

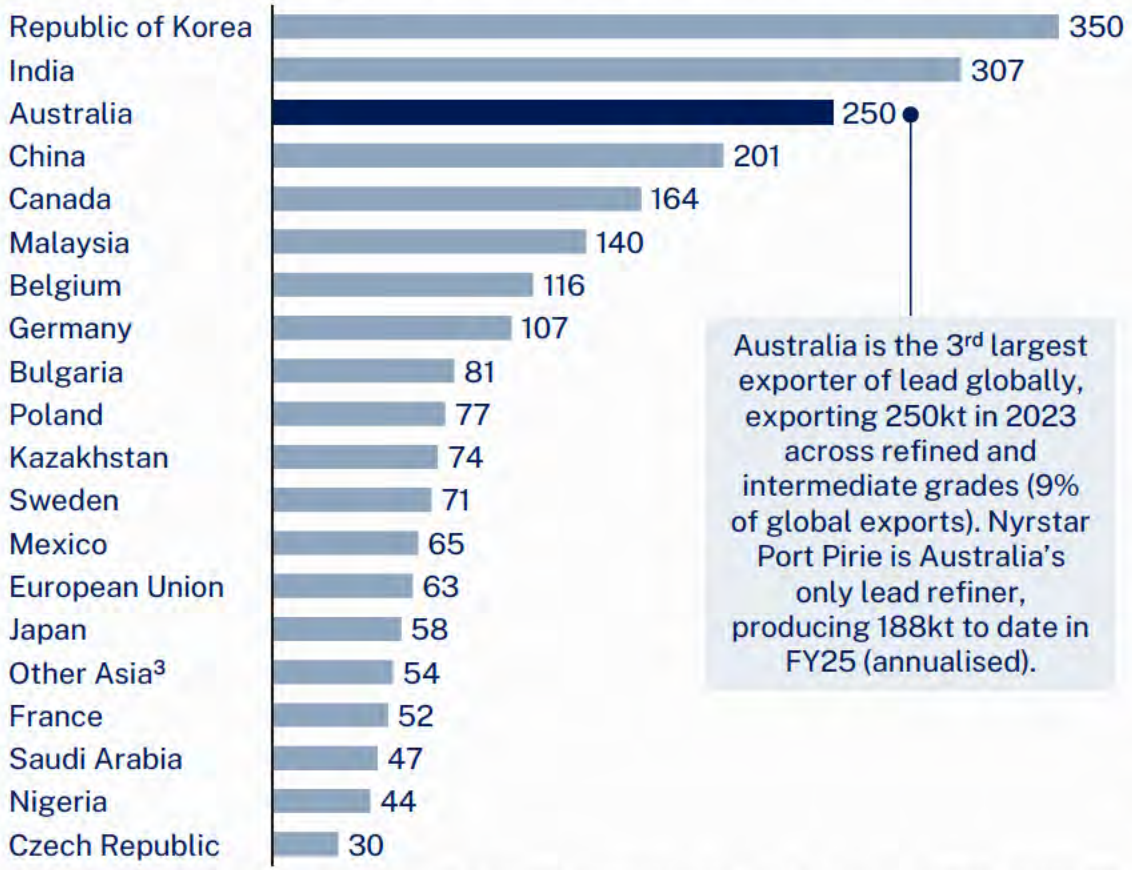
Australia has some of the richest mineral resources in the world – providing a strong foundation to move downstream in mineral supply chains and a significant long-term opportunity to protect and develop sovereign capability in processing and manufacturing

Source: Department of Industry, Science and Resources (2023), *Critical Minerals Strategy;* Department of Industry, Science and Resources (2025), *Minerals;* USGS (2025) Zinc, (2025) Lead, (2025) Antimony, (2025) Bismuth, (2025) Germanium; (2025) Tellurium, (2025) Indium; Mandala analysis.

Moving down the value chain, Australia is the third largest exporter of lead and second largest exporter of refined zinc globally

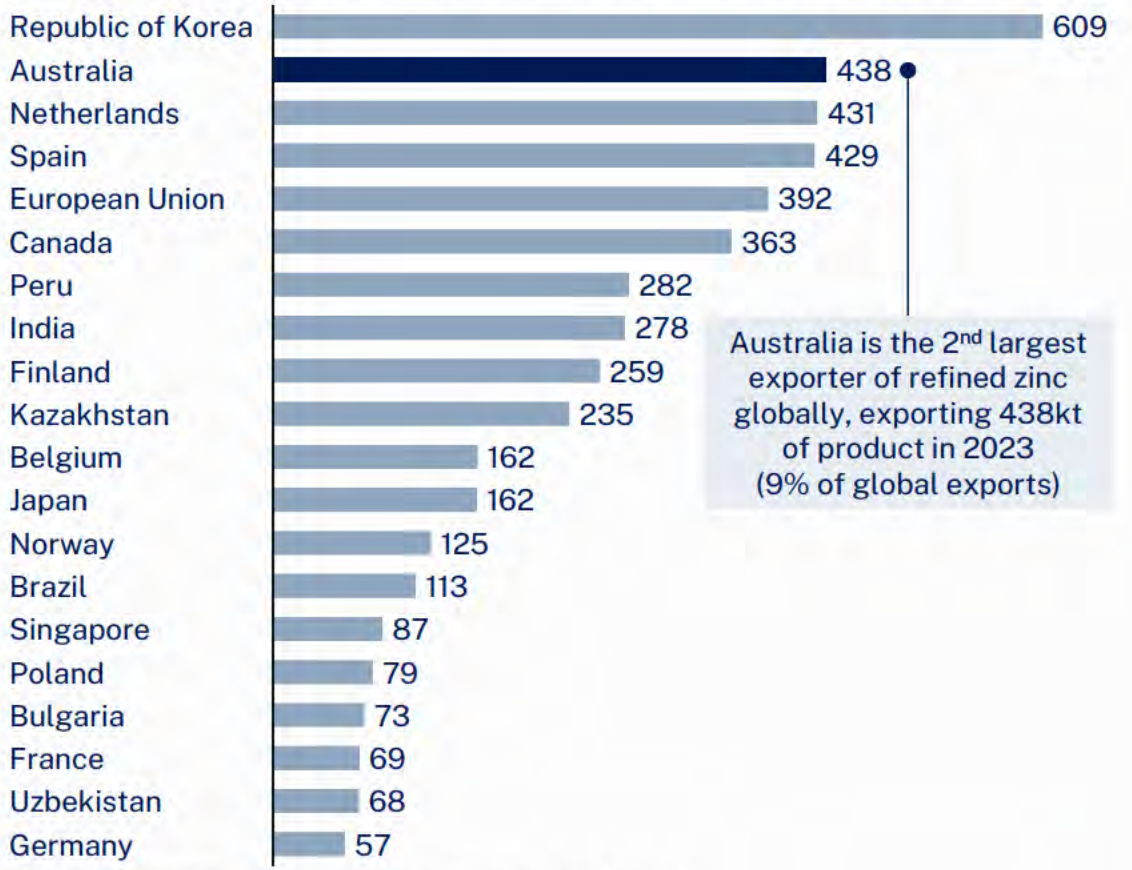
Lead exports by country

Kilotonnes (kt), top 20 exporters of refined and intermediate lead,[1] 2023



Zinc exports by country

Kilotonnes (kt), top 20 exporters of refined and intermediate zinc,[2] 2023



1 Refined lead defined as WITS product codes relating to unwrought lead: 780110, 780199, 780191; 2 Refined zinc defined as WITS product codes relating to unwrought zinc: 790111, 790112, 790120; 3 Other Asia not elsewhere specified (nes) as defined by the World Bank.
Source: World Bank WITS (World Integrated Trade Solution) (2023) *Trade Statistics by Product (HS 6-digit)*; Nyrstar data.

Valuable critical minerals can be extracted as by-products from lead and zinc refining

Lead and zinc are core inputs into many products we rely on daily. Zinc is required to galvanise (protect) steel, which is used in the production of wind turbines, cars, electrical appliances, and buildings. Lead is widely used in car batteries, ammunition, and electrical cables.

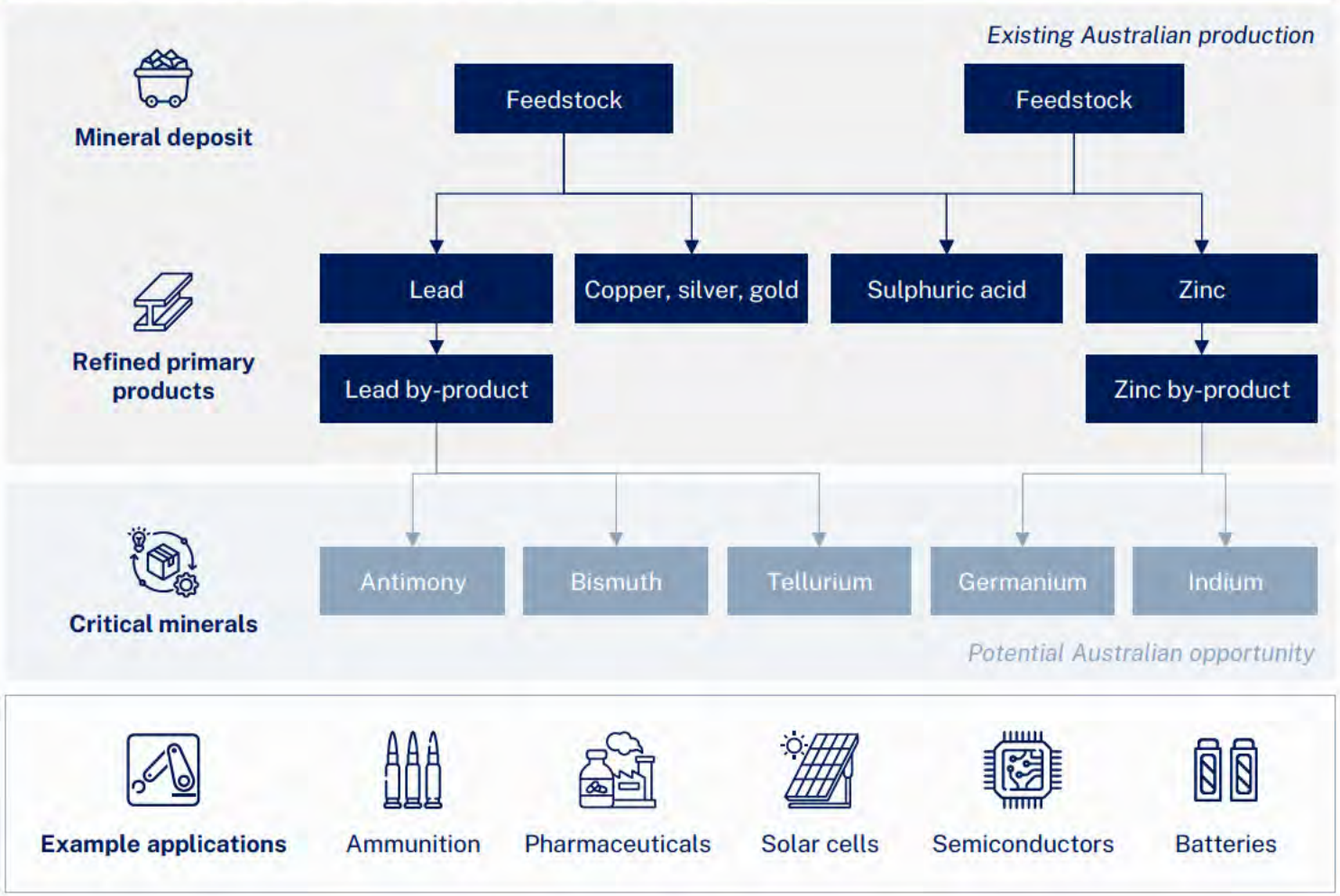
Australia has an established lead and zinc refining capability. Recently, the value of by-products from this refining process has been recognised. In fact, five of Australia's registered critical minerals are produced as by-products of lead and zinc. These critical minerals are antimony, bismuth, tellurium, germanium, and indium.

Strategically important sectors like energy, transport, defence, and advanced manufacturing rely on the critical minerals derived from zinc and lead refining. For example, antimony is required to make ammunition and flame retardants, and germanium is a key input into semiconductor manufacturing. Other critical minerals are essential for the net-zero transition, including indium for batteries and tellurium for solar cells.

Australia currently has limited refining capabilities for critical minerals but could leverage existing lead and zinc refining facilities, with investment in proven engineering, to bring forward this capability. For example, lead processing is an essential precursor to extracting and refining antimony. Australia could acquire an antimony refining capability quickly through the upgrade of existing lead smelters.

Source: Geoscience Australia (2024) *Critical Mineral By-product potential.*

Illustrative overview of lead and zinc processing outputs

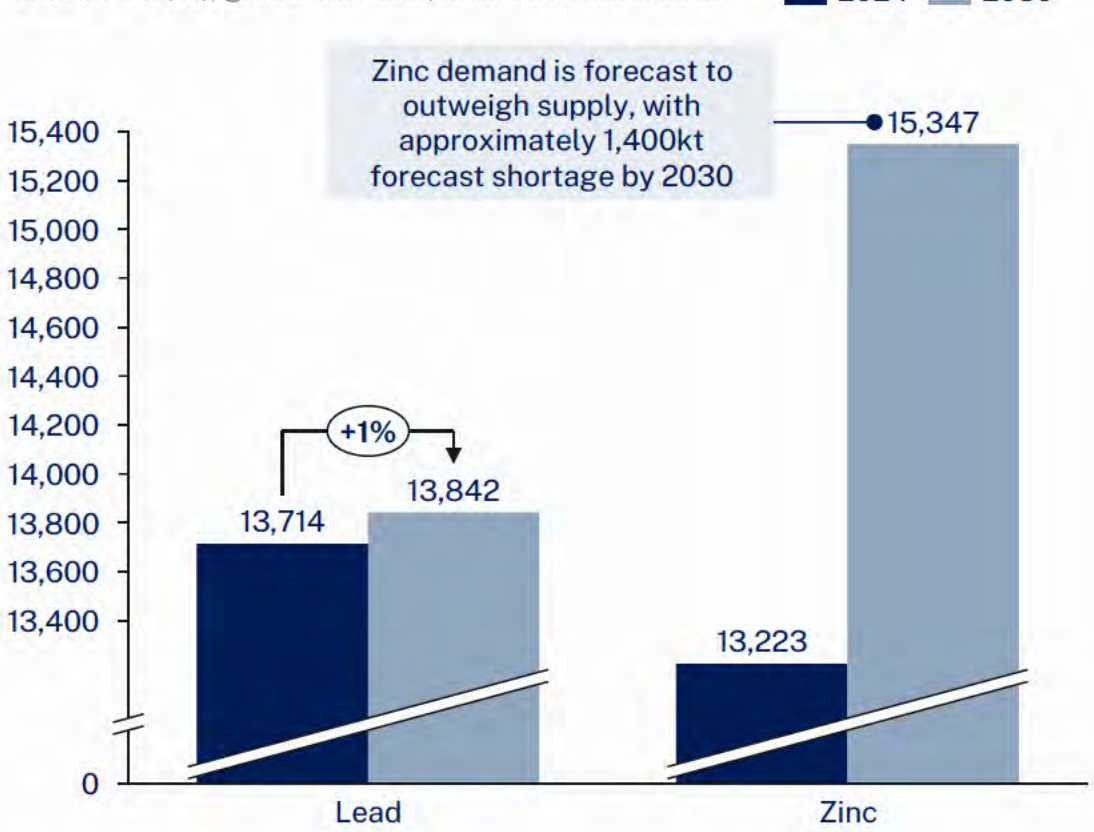


Source: European Commission (2023) *Study on the Critical Raw Materials for the EU 2023*; SCRREEN (2023) *Critical Raw Materials 2023*; Patel & Karamalidis (2021) *Germanium: A review of its US demand, uses, resource, chemistry, and separation technologies*; Perpetua Resources (2021) *Antimony: A Critical Metalloid for Manufacturing, National Defence and the Next Generation of Energy Generation and Storage Technologies*; IEA (2021) *The Role of Critical Minerals in Clean Energy Transitions*; Mandala analysis.

Strong growth fundamentals in lead, zinc, and associated critical minerals markets are supporting demand including 130% growth in antimony demand by 2030

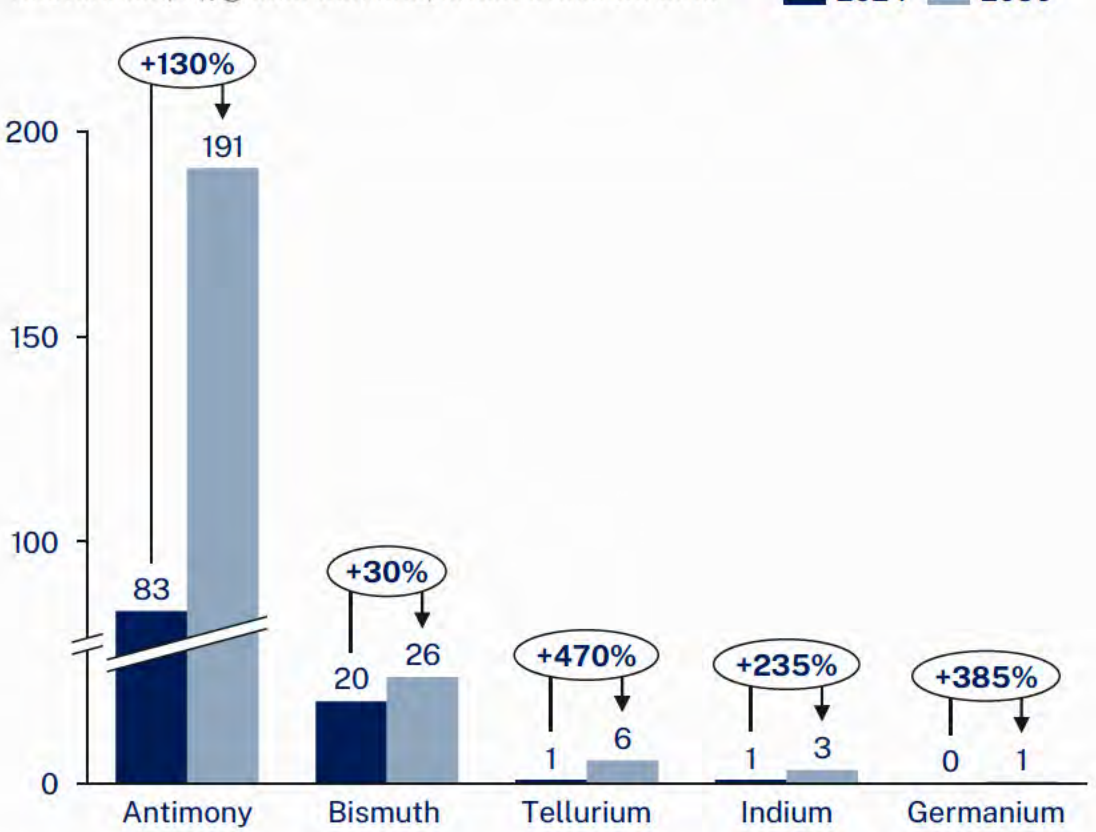
Refined lead and zinc forecast demand

Kilotonnes (kt), global demand, latest available data[1]



Critical minerals forecast demand

Kilotonnes (kt), global demand, latest available data[1]



1 Current 2023 or 2024 mine production for antimony and refinery production for indium, tellurium, and bismuth from USGS. Current germanium refinery production based on a 2016-2020 average from SCRREEN. Bismuth demand forecasted with a historical 2016-2020 growth rate of 4-5%. Antimony demand forecasted as an additional 18kt per year to 2030. Tellurium, indium, and germanium based on an average of forecasts for all applications from Watari et al. 2 USD converted to AUD.

Source: Nyrstar market data; USGS (2024) *Antimony*, (2024) *Bismuth*, (2024) *Indium*, (2024) *Tellurium*; SCRREEN (2023) *Germanium Factsheet;* Watari et al. (2020) *Review of critical metal dynamics to 2050 for 48 elements*; SCRREEN (2023) *Antimony Factsheet*; Perpetua Resources (2021) *Antimony: A Critical Metalloid for Manufacturing, National Defence and the Next Generation of Energy Generation and Storage Technologies;* SCRREEN (2020) *Bismuth Factsheet*; Mandala analysis.

1 Australia's existing zinc and lead capabilities are a gateway to critical minerals processing

2 **Securing a stable supply of critical minerals is increasingly important for Australia**

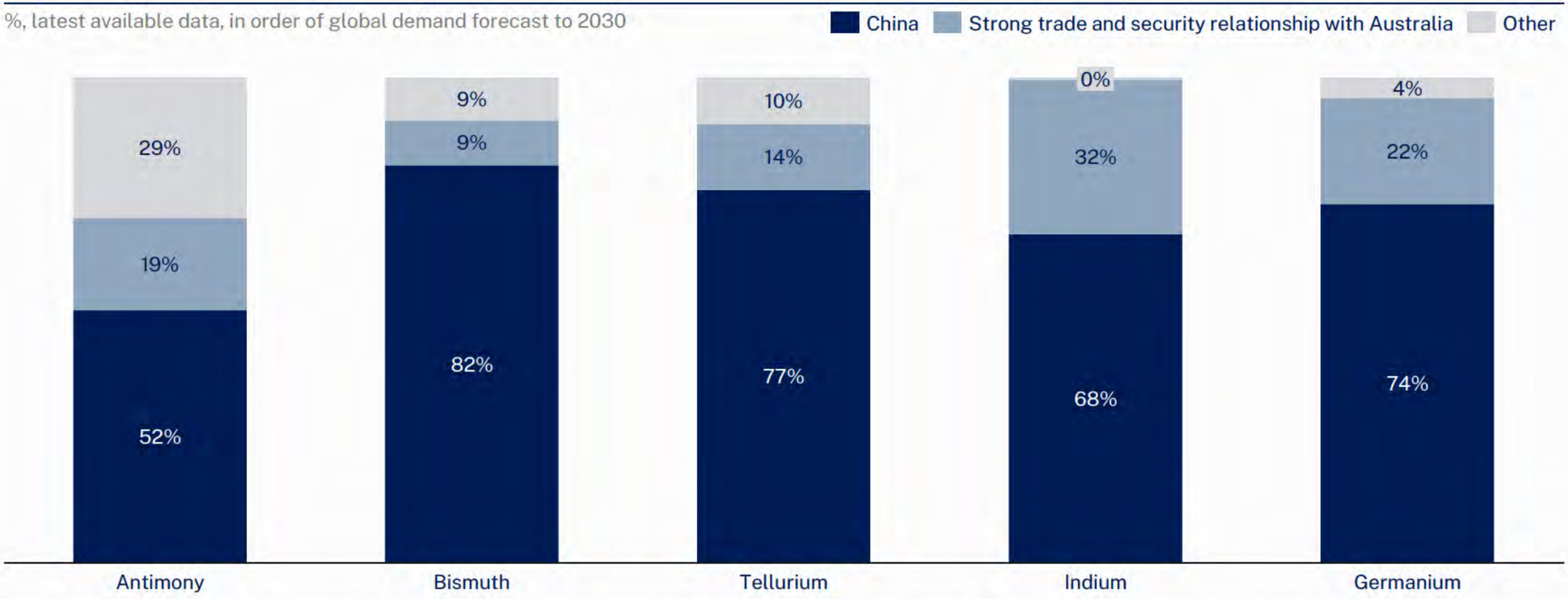
3 Fundamental shifts in global industrial policy have undermined the viability of domestic minerals processing

4 Appendix

Critical minerals processing is highly concentrated, with China producing between 52% to 82% of the global supply

Proportion of global production by source region

%, latest available data, in order of global demand forecast to 2030



Notes: 2023 production for germanium, bismuth, indium, and tellurium, 2016-2020 average production for antimony. Countries or regions defined as having a strong trade and security relationship with Australia: Belgium, Canada, Europe, France, Japan, South Korea, Sweden, Thailand, and the United States. Other includes Bolivia, Bulgaria, Kazakhstan, Laos, Myanmar, Russia, South Africa, and Uzbekistan, and Vietnam.
Sources: Nyrstar market data; USGS (2025) Bismuth, (2025) Indium, (2025) Tellurium; SCRREEN (2023) Factsheet Antimony; World Bank WITS (World Integrated Trade Solution) (2023) *Trade Data*; Mandala analysis.

Australia could become a valuable trading partner in diverse supply chains

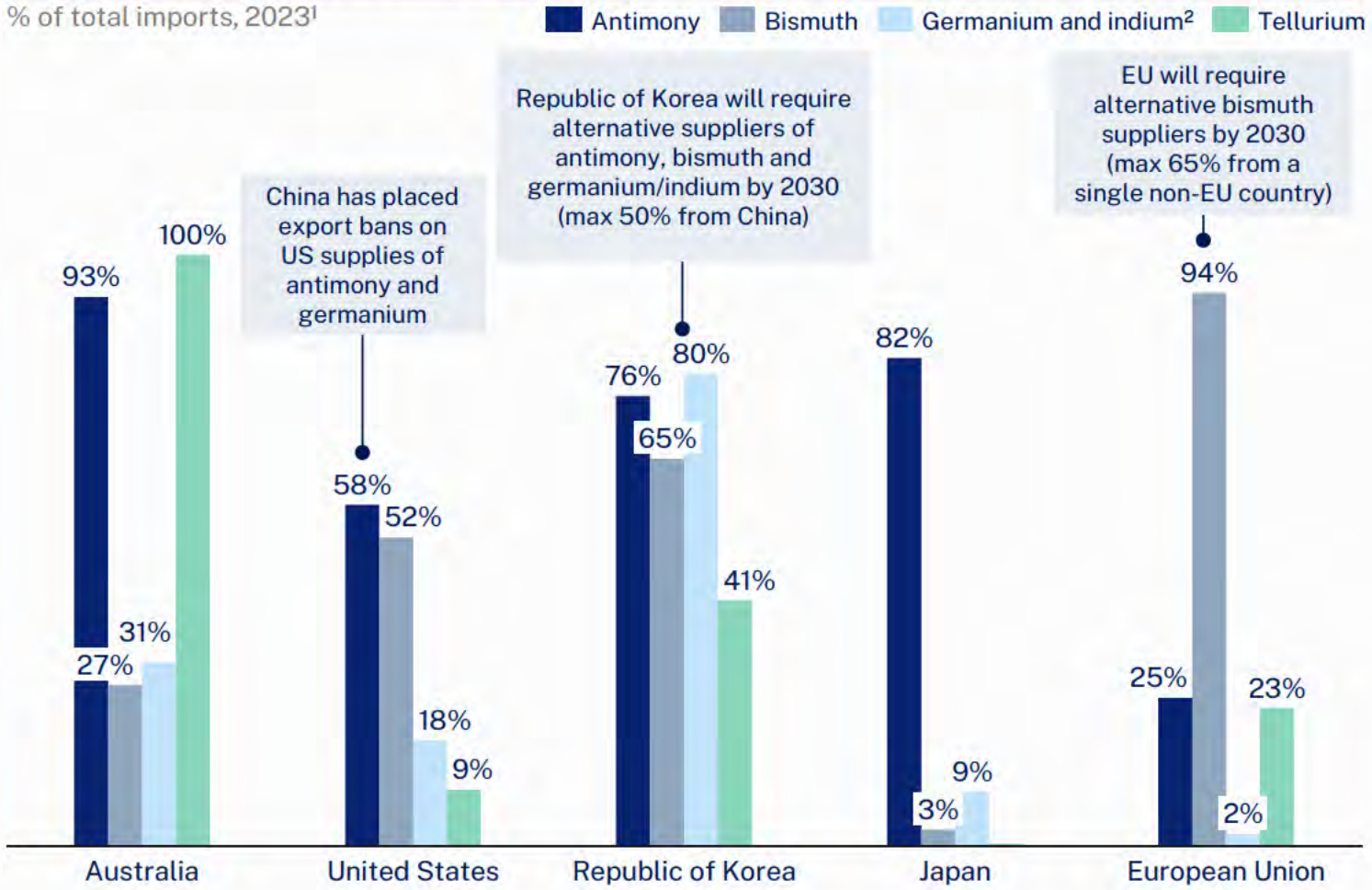
Australia and other nations are highly reliant on China for refined critical minerals and are vulnerable to supply chain disruption. For example, 100% of Australia's tellurium imports were sourced from China in 2023. Tellurium is used to manufacture metals, glass and ceramics, electronic products, and solar cells.

The US placed restrictions on the export of semiconductors to China in 2024. In response, China banned antimony exports to the US – affecting 58% of the US' antimony imports (based on 2023 data). Antimony has key defence applications, particularly in ammunition manufacturing. Given the US has limited domestic capabilities (one smelter and no operational mining), it will have to source antimony from multiple smaller producers. The second and third largest suppliers of antimony to the US in 2023 were Thailand and Belgium (9% and 8% of imports respectively). The second largest antimony producer globally is Tajikistan (25% of production).

Supply chain diversification has become a priority for governments around the world, with many countries introducing maximum import guardrails to limit dependencies on a single market. Australia is well placed to meet global demand for value-added critical minerals given its high mineral reserves and existing processing capabilities, including a lead refinery with critical minerals extraction capacity.

Note: Listed policies as of March 2025.
Source: Australian Government (2023) *Critical Minerals Strategy 2023 – 2030*; Center for Strategic and International Studies (2024) *China's Antimony Export Restrictions: The Impact on U.S. National Security*; IEA (2024) *European Critical Raw Materials Act*; Department of Health and Aged Care (2024) *Tellurium and its inorganic compounds: Evaluation statement*.

Proportion of refined critical mineral imports sourced from China



1 Data refers to the following International Harmonized System product codes: Unwrought antimony and powders (811010), antimony oxides (282580), Bismuth above and below 99.99% (810601, 810690), Germanium, indium and others (811292, 811299), Tellurium and boron (280450). Imports with data gaps aligned with USGS. 2 Germanium and indium grouped as minerals are grouped in WITS data.
Source: World Bank WITS (World Integrated Trade Solution) (2023) *Trade Data*; S&P Global (2025) *China responds to US restrictions with export ban on select critical minerals;* USGS (2025) *Bismuth*; Mandala analysis.

1 Australia's existing zinc and lead capabilities are a gateway to critical minerals processing

2 Securing a stable supply of critical minerals is increasingly important for Australia

3 Fundamental shifts in global industrial policy have undermined the viability of domestic minerals processing

4 Appendix

Nyrstar is one of Australia's major lead and zinc producers and a key local employer

Nyrstar owns and operates two multi-metals smelters in Australia: Nyrstar Port Pirie, a multi-metals recovery plant producing refined lead and silver and Nyrstar Hobart, which primarily produces refined zinc. Both facilities are core pillars of the local industrial base and some of the few remaining employers of metals manufacturing trades. For example, Nyrstar employs almost 20% South Australia's engineering production workers (who refine, treat, and produce metal) and 25% of engineering production workers in Tasmania.

Nyrstar Port Pirie produces all of Australia's refined lead exports and half of Australia's total lead exports. The smelter is one of the world's largest primary lead smelting facilities, and the third largest silver producer. Nyrstar Port Pirie is also Australia's only producer of refined lead with critical minerals extraction capacity. The smelter employs 909 full time equivalent employees (FTE) workers and spent $351 million in South Australia in 2024, generating $682 million of gross value added.

Nyrstar Hobart produces 60% of Australia's refined zinc exports. The smelter employs 566 FTE workers and spent $293 million in Tasmania in 2024, generating $514 million of gross value added.

Overall, Nyrstar generated $1.7 billion in gross value added across the Australian economy in 2024 and supported 6,648 jobs.

Source: Nyrstar (2023) *Australia's opportunity in the energy transition;* Lawrence Consulting (2025) *Economic Impact of Nyrstar Australia 2024;* Lightcast (2024) *Labor Insights,* ABS (2021-22) *Input-Output tables,* ABS (2021) *Census;* Mandala analysis.

Nyrstar's economic impact in 2024

Total impact of Nyrstar Australia

$1.7b	Gross value added across the economy (0.1% of Gross National Product)
6,648	Full time equivalent jobs supported nationwide (0.05% of total employment)

Nyrstar Port Pirie

100% of Australia's refined lead exports

909	Full time equivalent employees
449	Suppliers in South Australia
$682m	Annual gross value added in South Australia

Nyrstar Hobart

60% of Australia's refined zinc exports

566	Full time equivalent employees
304	Suppliers in Tasmania
$514m	Annual gross value added in Tasmania

Source: Lawrence Consulting (2025) *Economic Impact of Nyrstar Australia 2024.*

Protecting Australia's minerals processing capability is in the national interest

Domestic lead and zinc smelting capabilities are fundamental to Australia's ambition to become a leading exporter of value-added critical minerals and metal compounds. This is because lead and zinc smelting is an essential precursor to processing critical minerals.

Fundamental shifts in global industrial policies have undermined the earnings viability of Australian smelting activities, delaying or deterring investment decisions in new processing activities. This is driven by a deterioration of operating margins and the markets' failure to price in the value of national security and sovereignty.

Australia's smelters play an important role in the domestic industrial base as a customer of domestic mines, a supplier of high-quality refined products to downstream manufacturers, and a key pillar of local economies. Maintaining and developing Australia's minerals processing capability has nationwide benefit – supporting local communities while unlocking opportunities in global supply chains. This is a core component of Australia's economic resilience.

Should Australia's capabilities falter or shut down, rebuilding would require impractical levels of cost and delay. This includes the likely collapse of local skills pipelines, particularly for metals manufacturing workers. A lack of alternative employment opportunities would likely force workers to exit the industry.

The role of lead, zinc, and associated critical minerals processing in Australia's national interest

Economic	Australia has a world-leading resources industry and the opportunity to provide a stable source of in-demand minerals, but the viability of domestic operations is being affected by external market failures
Strategic	Australia has high levels of reserves, but critical minerals are mainly processed overseas, with processing heavily concentrated in a single market
Security	Lead and zinc smelting is an essential precursor to capturing and processing five critical minerals used in defence, energy, transport, and advanced manufacturing
Industrial	Domestic smelters play an important role as a customer of Australian mines, a supplier of high-quality refined products to downstream manufacturers, and a key pillar of the local industrial base
Societal	Domestic processing supports local jobs, businesses and supply chains in major regional centres such as Hobart and industrial areas such as Port Pirie

Source: Mandala analysis.

Chinese industrial policy is reshaping global smelting economics

As smelters around the world face declining profitability and challenging market conditions, maintaining smelting capabilities outside of China will become increasingly challenging without deliberate investment. This is because Chinese smelters can withstand loss-making activities longer than their peers.

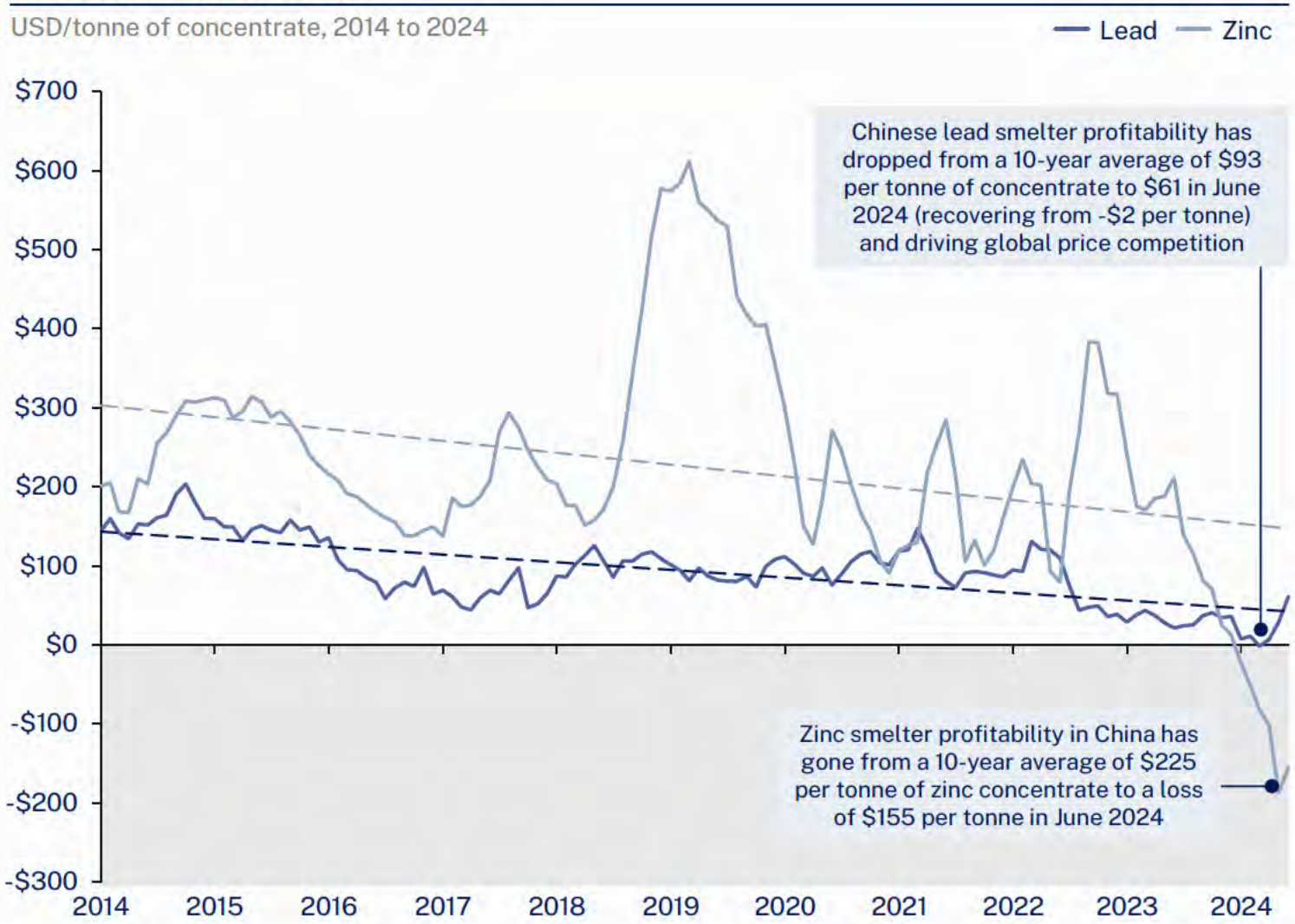
China's lead smelter profitability dropped to US$61 per tonne of concentrate in 2024 from a 10-year average of US$93, and zinc smelter profitability was negative at -US$155. However, Chinese smelters are increasing by-product processing which offsets eroded margins on primary metals and enables smelters to offer higher prices for feedstock. This increased competition for feedstock has driven treatment charges to their lowest in a decade, diminishing a key source of revenue. Australian smelters must match these terms but are technology-constrained in recovering by-product metals.

China's industrial policy has established vertically integrated value chains, enabling cross-subsidisation between smelting and manufacturing. China is also the largest producer of lead, zinc, and associated critical minerals globally. With unmatched economies of scale, Chinese smelters can invest in new technology and upgrades, creating a widening efficiency gap with the rest of the world.

Source: Nyrstar data; ILZSG (2024) *World Factbook 2024*; ILZSG (2025) *Review of Trends in 2024*; Nyrstar (2017) *Modeling Nyrstar*; Noranda (2021) *Zinc Smelter Revenue Model*; Wood Mackenzie (2024) *Zinc production cost trends and outlook*; Naughton (2021) *Industrial Policy in China*; Reuters (2022) *European smelter hits mean another year of zinc shortfall.*

China's smelter profitability

USD/tonne of concentrate, 2014 to 2024



Source: The foregoing chart was obtained from Global zinc and lead short-term outlook™ and Lead markets: Investment Horizon outlook™, a product of Wood Mackenzie; alongside Mandala analysis of Trafigura (2024) *The Future Outlook for World Zinc Demand.*

Government support will be required to protect Australia's current and future minerals processing capability

Policy enablers to improve competitiveness of domestic lead, zinc, and associated critical minerals processing

Enabler	Description	Example application to zinc, lead, and by-product processing
Finance	The ability of firms to access sufficient volumes of capital with appropriate risk profile	Grants, loans, guarantees (for loans or contractual commitments), and tax incentives
Feedstock	The ability of firms to access key production feedstock and coordinate relationships with suppliers	Supporting access to domestic supplies of feedstock and coordinating relationships with suppliers (particularly in domestic value chain)
Energy and infrastructure	The availability of connecting infrastructure including energy	Investments in supporting grid, port, and transport networks
Coordination and regulation	The availability of coordinated and centralised support across the value chain	Coordinating supply and demand for a more integrated domestic value chain and developing regulation to accelerate ecosystem development
Workforce	The availability of skilled employees and access to training facilities	Supporting ongoing operations to retain workers, local training programs, and pipeline development including apprenticeships

HIGHER — *Importance for sector development* — LOWER

Source: Mandala analysis.

The Australian government has supporting industries that coincide with a strong economic, strategic, security, industrial, or societal need

Precedents of direct government intervention to support Australia's strategic mining and metallurgical assets

	GLENCORE	Alcoa	GFG ALLIANCE
	Copper smelting and refining[1]	**Aluminum smelting[2]**	**Steelmaking[3]**
Context	Glencore's copper smelting and refining assets in Mt Isa and Townsville faced significant economic pressures including high fixed operational costs and increasing energy costs which impeded competitiveness against international counterparts.	Alcoa was reviewing its international smelter fleet, leading to concerns about Portland's profitability. The smelter was losing production (and income) during summer shutdowns, particularly as the smelter was unable to re-supply the grid with energy during these periods.	Whyalla Steelworks is one of two steelworks in Australia. The steelworks was running at limited capacity due to a number of maintenance and repair issues while also operating at a loss, with outstanding debts of $1.3b.
Intervention	▪ **Incentive payment:** Government designed a support strategy with Glencore with a multi-million-dollar funding agreement (details not public) to offset operational costs and facilitate necessary maintenance, extending operational life. Glencore committed $500m towards continuing operations at these facilities. ▪ **Previous funding:** $15m funding in 2016 to extend operations to 2022.	▪ **Revenue underwriting:** Government agreed to underwrite the revenue earnt by the facility from resupplying energy to the grid if closed over summer. The smelter can draw on up to $19.2m per year in subsidies for four years (between 2020 and 2025).	▪ **Immediate support:** Government forced facility into administration with $484m in support for creditors, infrastructure upgrades and operating costs (including wages). ▪ **Upgrades and infrastructure:** Government committed $1.9b for upgrades to green steel production.

Source: 1 ABC (2020) *Mount Isa copper smelter gets three more years with 'one-off' incentive from Queensland Government.* 2 ABC (2020) *Alcoa's Portland aluminium smelter subsidy secures jobs, fails green energy test*; Australian Mining (2020) *Australian Government throws Portland smelter subsidy at Alcoa.* 3 Whyalla City Council (2025) *$2.4 billion plan to secure Whyalla's future.*

1 Australia's existing zinc and lead capabilities are a gateway to critical minerals processing

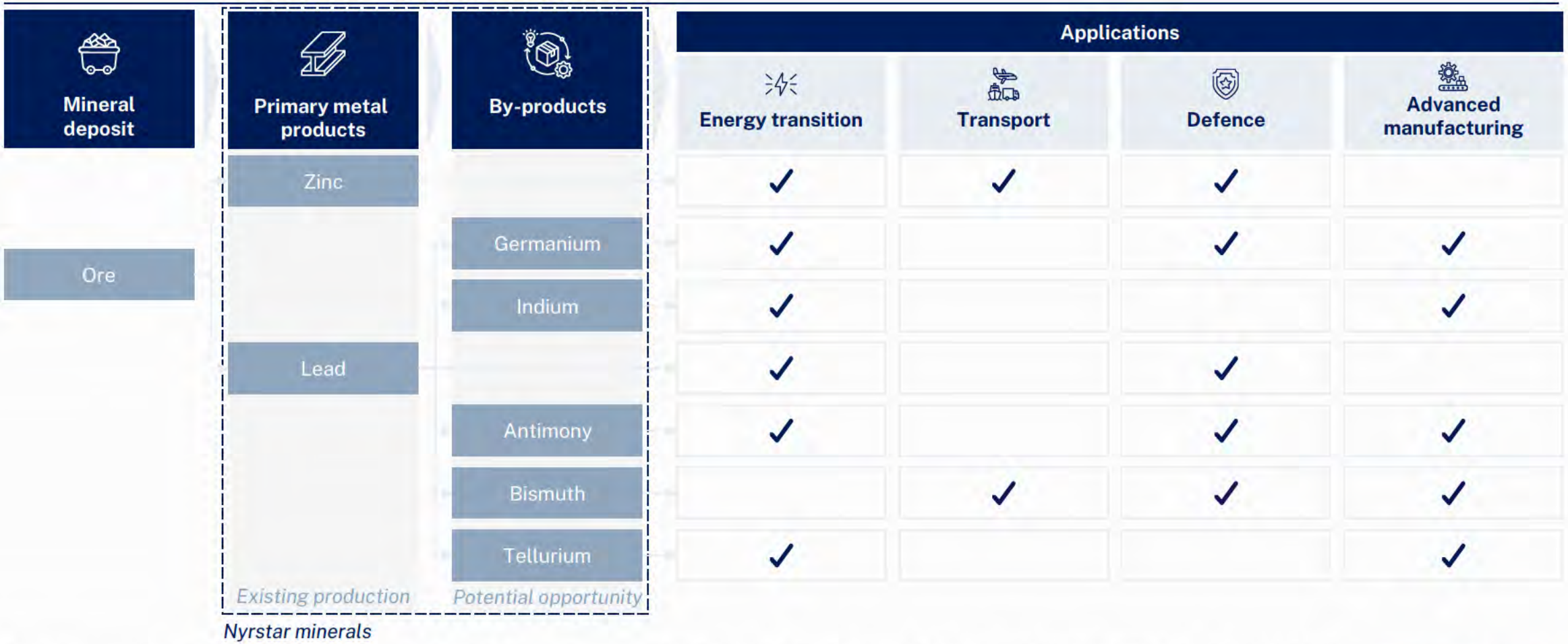
2 Securing a stable supply of critical minerals is increasingly important for Australia

3 Fundamental shifts in global industrial policy have undermined the viability of domestic minerals processing

4 **Appendix**

Zinc and lead processing can unlock valuable by-products such as germanium and antimony, all of which are required in priority sectors

Illustrative overview of minerals processing outputs and applications



Source: Geoscience Australia (2024) *Critical Mineral By-product Potential*; European Commission (2023) *Study on the Critical Raw Materials for the EU 2023*; SCRREEN (2023) *Critical Raw Materials 2023*; Patel & Karamalidis (2021) *Germanium: A review of its US demand, uses, resource, chemistry, and separation technologies*; Perpetua Resources (2021) *Antimony: A Critical Metalloid for Manufacturing, National Defence and the Next Generation of Energy Generation and Storage Technologies*; IEA (2021) *The Role of Critical Minerals in Clean Energy Transitions*; Mandala analysis.

Illustrative use case examples by mineral

Mineral	Use cases: Energy	Transport	Defence	Advanced manufacturing
Zinc	▪ Wind, hydro, and solar ▪ Batteries	▪ Electric vehicles	▪ Defence vehicles	
Antimony	▪ Solar panels ▪ Wind turbines		▪ Detonators ▪ Smoke agents ▪ Primers	▪ Flame retardants
Germanium			▪ Thermal imaging	▪ Semiconductor ▪ Satellite solar cells ▪ Fibre and infrared optics
Bismuth		▪ Rocket propellant	▪ Ammunition ▪ Rocket propellant	▪ Pharmaceuticals
Tellurium	▪ Solar cells			▪ Chemical manufacturing
Indium	▪ Batteries			▪ Semiconductors ▪ LEDs
Lead	▪ Batteries		▪ Ammunition	

Source: European Commission (2023) *Study on the Critical Raw Materials for the EU 2023*; SCRREEN (2023) *Critical Raw Materials 2023*; Patel & Karamalidis (2021) *Germanium: A review of its US demand, uses, resource, chemistry, and separation technologies*; Perpetua Resources (2021) *Antimony: A Critical Metalloid for Manufacturing, National Defence and the Next Generation of Energy Generation and Storage Technologies*; IEA (2021) *The Role of Critical Minerals in Clean Energy Transitions*; Mandala analysis.

Zinc and associated minerals have been recognised as strategically important by governments around the world

Recognition of zinc and associated minerals as critical minerals by country

Critical minerals list[2] ✓

Mineral	Australia	United States	New Zealand	United Kingdom	Canada	Indonesia	Japan	India	South Korea	Germany[3] (EU)
Antimony	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Germanium	✓	✓	✓	✓	✓	✓	✓	✓		✓
Bismuth	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Indium	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Tellurium	✓	✓	✓	✓	✓	✓	✓	✓		
Zinc	*Strategic minerals list*	✓	✓	✓	✓	✓			✓	✓

While there are variations between each country's definition of critical minerals, common criteria for all countries include:

- minerals are at risk of supply chain disruption; and
- minerals are an essential input for key priority technologies, especially those required in the energy transition.[1]

Australia also has strategic minerals which are important for key applications and technologies, but supply chains are not as vulnerable to the extent of critical minerals.

1 Some countries have additional criteria for a critical mineral. For example, it must be important for end-use applications and manufacturing value-add in Europe, have geological potential and be in-demand from strategic partners in Australia, or have production potential in Canada. 2 Australia's top 15 two-way trading partners for 2023 also include China, Singapore, Taiwan, Malaysia, Thailand, Vietnam, and Hong Kong but these countries do not have a critical minerals list. 3 Germany follows the EU critical minerals list.
Source: Australian Government DISR (2024) *Australia's Critical Minerals List and Strategic Minerals List*; Mandala analysis.


ARISTON BULKER

MANDALA

Australia's Critical Minerals Ambition at Risk Without Action, New Report Finds

UNDER EMBARGO UNTIL 29 MAY 0600

Australia, 29 May 2025 - A new report commissioned by Nyrstar has revealed that Australia's ambition to become a leading exporter of critical minerals is at risk due to the threat posed to the nation's lead and zinc refining capability, and that without direct government intervention the future of the nation's industry is increasingly uncertain.

The report, *The Economic and Strategic Importance of Multi-Metals Processing*, was produced by economics research firm Mandala and highlights that safeguarding domestic lead and zinc processing capability is in the national interest, not just economically, but strategically.

The report warns that if zinc and lead processing was lost, Australia's ability to rebuild smelting infrastructure and workforce pipelines would be near-impossible due to cost, time and skills loss.

The Mandala Report highlights the importance of lead and zinc processing, not only in delivering key industrial metals for the world, but as an essential precursor to producing critical minerals. It explains that Australia has the opportunity to leverage existing lead and zinc processing capability to produce five of Australia's registered critical minerals (antimony, bismuth, tellurium, germanium, and indium). These critical minerals are considered vital for sectors including defence, clean energy, high tech applications, transport and advanced manufacturing, and as one of the world's leading exporters of refined lead and zinc and the holder of the largest reserves of both metals globally, Australia is in a unique position to benefit.

Despite Australia's multi-metals advantage, the report warns that international industrial policy settings are distorting global markets, eroding smelter operating margins globally and undermining the commercial viability of processing domestically.

Mandala's analysis concludes that without decisive and targeted policy support to address the imbalance in global metals refining and modernise infrastructure, Australia risks falling further behind in industrial and critical minerals processing and losing its existing sovereign refining capability in lead and zinc.

The report identifies a range of policy enablers through which effective support can be deployed including those that provide the multi-metals processing industry with access to sufficient capital financing, creating affordable access to competitive domestic supplies of feedstock, and by enabling the right investments in energy and transport infrastructure.

"Australia's multi-metals infrastructure is not only a great foundation to move downstream in the critical minerals supply chain, but it is our best chance to do so," said Matt Howell, Chief Executive Officer of Nyrstar Australia.

"Our lead and zinc refining capabilities in Port Pirie and Hobart are more than just smelters, they are national assets.

"Governments, both State and Federal must work together with industry if we are to secure the future of these assets and avoid losing a once-in-a-generation opportunity to enter the global critical minerals supply chain."

Access to critical minerals is fast becoming one of the defining strategic issues for advanced economies. These minerals are essential for defence technologies, clean energy systems, high tech applications, electric vehicles, and advanced manufacturing, yet global supply remains highly concentrated. The report indicates that China currently dominates between 52% and 82% of global production for the very critical minerals that lead and zinc processing can give rise to, leaving Australia and other countries vulnerable to supply chain disruptions and geopolitical risks.

Amit Singh, Managing Director of Mandala, noted Australia would not achieve its critical minerals potential without building on the upstream processes that make their extraction possible.

“Lead and zinc refining isn’t just about producing base metals, it’s the gateway to producing the critical minerals that power our clean energy and protect our nation,” Mr Singh said.

“If Australia were to lose its lead and zinc refining capability it would be almost impossible to rebuild.

“The skills, infrastructure, and supply chains that underpin Australia’s minerals processing sector have taken decades to develop. Protecting and strengthening them would represent an investment in Australia’s economic sovereignty and its ability to participate in the industries of the future.

“Other countries are moving swiftly to secure their place in critical minerals supply chains. Australia can recognise the foundation it has established in multi-metals refining and invest in that to define a competitive new role for itself in critical minerals.”

The Mandala report also highlights how aggressive industrial policy settings have reshaped global minerals markets, distorting pricing and eroding the competitiveness of smelters worldwide. The report is clear that without decisive policy support to address this imbalance and to modernise infrastructure, Australia risks falling further behind in this strategically vital sector.

Australia’s multi-metals processing infrastructure is today anchored by Nyrstar’s facilities at Port Pirie and Hobart, together forming a strategic national asset that supports thousands of skilled jobs and regional economies. These facilities generated $1.7 billion in economic value last year and supports over 6,600 Australian jobs.

The report also provides examples of precedents for direct government intervention by the Australian government to support Australia’s strategic mining and metallurgical assets on the basis of economic, strategic, security, industrial or societal need.

To learn more, read the report [link].

ENDS

For further information, please contact:
Nyrstar Australia: s47G or media@nyrstar.com

About Nyrstar

Nyrstar is an international producer of critical minerals and metals essential for a low carbon future with mining, smelting and other operations located in Europe, the United States and Australia. Nyrstar's operating business is wholly owned by Trafigura, one of the world's leading independent commodity trading and supply chain logistics companies.

Nyrstar Australia is a national multi-metals processing and refining business, operating in Port Pirie and Hobart for over 100 years to produce lead, silver, zinc, and many other materials that are essential for the manufacture of products used by everyone, every day.

Nyrstar Australia employs over 1,300 people across processing plants in Port Pirie and Hobart that operate as two interlinked sites and play a critical role in increasing the value of the metals and minerals obtained from resources sourced from across Australia and around the world.

Visit: www.nyrstar.com

s33(a)(iii)

s33(a)(iii)

ss 33(a)(iii), 33(b), 47C, 47F

ss 33(a)(iii), 33(b), 47C, 47F

From: DLO King
To: Coleman, Laurence; DLO King
Subject: RE: Talking Points - Perth USAsia [SEC=OFFICIAL]
Date: Monday, 19 May 2025 4:54:35 PM
Attachments: MB25-000183.docx
Attachment A - Talking points.docx
image001.png
image002.jpg

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s47F OFFICIAL

Absolutely – please see attached.

Thank you

S 47F
Departmental Liaison Officer
The Hon Madeleine King MP
Minister for Resources
Minister for Northern Australia
Phone S 47F | **Email** DLOKing@industry.gov.au
industry.gov.au ABN 74 599 608 295

Our purpose is to help the government build a better future for all Australians through enabling a productive, resilient and sustainable economy, enriched by science and technology.

We are collaborative, innovative, respectful and we strive for excellence.

OFFICIAL

From: Coleman, Laurence <S 47F @industry.gov.au>
Sent: Monday, 19 May 2025 4:49 PM
To: DLO King <DLOKing@industry.gov.au>
Subject: RE: Talking Points - Perth USAsia [SEC=OFFICIAL]

s47F OFFICIAL

Thanks is this available in a word doc?

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s47F OFFICIAL

From: DLO King <DLOKing@industry.gov.au>
Sent: Monday, 19 May 2025 4:43 PM
To: Coleman, Laurence S 47F @industry.gov.au>
Cc: DLO King <DLOKing@industry.gov.au>
Subject: Talking Points - Perth USAsia [SEC=OFFICIAL]

~~OFFICIAL~~

Hi LC

Please find attached talking points for tomorrow's Lunch with the Perth USAsia Centre.

Thank you

S 47F
Departmental Liaison Officer
The Hon Madeleine King MP
Minister for Resources
Minister for Northern Australia
Phone S 47F | **Email** DLOKing@industry.gov.au
industry.gov.au ABN 74 599 608 295

Our purpose is to help the government build a better future for all Australians through enabling a productive, resilient and sustainable economy, enriched by science and technology.

We are collaborative, innovative, respectful and we strive for excellence.

Acknowledgement of Country
Our department recognises the First Peoples of this Nation and their ongoing cultural and spiritual connections to the lands, waters, seas, skies, and communities.
We Acknowledge First Nations Peoples as the Traditional Custodians and Lore Keepers of the oldest living culture and pay respects to their Elders past and present. We extend that respect to all First Nations Peoples.

Connection to Country, 2021 by Shaenice Allan

~~OFFICIAL~~

Australian Government

Department of Industry, Science and Resources

PDR ID MB25-000183

EVENT SUMMARY
Minister for Resources
Roundtable with Perth USAsia Centre

Event and purpose	Roundtable discussion with Perth USAsia Centre
Date	Tuesday 20 May 2025
Time	12:30pm – 2:00pm
Location	Senate Room, The University of Western Australia
Speakers	The Hon Madeline King MP, Minister for Resources and Minister for Northern Australia Moderator: Dr Kate O'Shaugnessy, Research Director, Perth USAsia Centre
Issues/sensitivities	*If asked: Will the Critical Minerals Strategic Reserve be used in Australia's response to US tariffs?* • The Reserve will be a strategic asset for Australia. Governments across the globe are looking to build economic resilience, and our Reserve is a part of that. • Australia shares the US' ambition to address risks associated with supply chain concentration. o We both want to counter the threat posed by price manipulation, overcapacity, and export restrictions. *If asked about United States-Ukraine Critical Minerals deal* • Global demand for critical minerals is expected to increase significantly in the years ahead, with significant gaps in prospective global supply. • Australia offers a stable market with a deep, long-term relationship with the United States, we are well positioned to continue to meet the US' significant critical minerals' demand and ambitions.

See attachments:	**Attachment A:** Talking points

Clearing Officer:	Donna Looney Matthew Deady	Head of Division A/g General Manager, Trade, Americas, Europe and India Branch	Ph: S 47F Ph: S 47F Mob: S 47F
Contact Officer:	S 47F	Manager, US and Canada Section	Ph: S 47F Mob: S 47F
For Parliamentary Services' use only. Date Submitted to the Minister's office in PDMS:			19/5/2025

Attachment A

Talking points

Overarching Comments:

- Australia is committed to remaining a safe investment destination and reliable energy security partner while transitioning to net zero.
    - scaling up Australia's clean energy industries will strengthen global clean energy supply chains and underpin our ongoing role as a reliable energy supplier.
- Australia has shared interests with regional partners, in supporting diversified minerals supply chains which are essential to both our countries' economic security and net zero ambitions
    - Australia is well positioned to further this objective given our critical natural endowments and skilled workforce.
- Australia is in a strong position to work with our international partners, especially those within the region, in building resilient, and stable critical mineral supply chains, required for the energy transition.
    - Collaboration is vital to mitigating against supply chain volatility.
- Australia has quality mineral endowments and the right policy settings to encourage and support exploration, mining and production that present investment opportunities.

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International engagement on critical minerals

- The Critical Minerals Strategy (CMS), in line Australia's FMA agenda, plans to increase investment from, and collaboration with, likeminded partners to grow Australia's downstream processing capability
    - reducing the international market concentration that challenges both Australian and strategic partners within the region.
- Australia is committed to global critical minerals engagement including through participation in key multilateral forums (IEA, CCMM) and international critical minerals partnerships.

  - Australia's strong bilateral partnerships with key trading partners (The US, European Union, Germany, France, India, Japan, UK, Canada and the Republic of Korea (RoK)) present strong opportunities for growth in our domestic sector, collaboration and investment.

- Australia's world-leading environmental, social and governance standards are a key value proposition - particularly for committed international investment partners looking for secure, long-term returns on their critical minerals investments.

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From: Looney, Donna
To: Coleman, Laurence
Cc: s47F ; Quinn, Meghan; Jeremenko, Robert; DLO King; s47F
Subject: Slides for International Strategy discussion today 14.00 AWEST/16.00 AEST[SEC=PROTECTED, CAVEAT=SH:CABINET]
Date: Monday, 19 May 2025 2:00:50 PM
Attachments: image001.png
image002.png
image003.jpg
Strategic Partnerships Overarching - Resources.pptx

~~s47PROTECTED~~

Hi Laurence

Slides attached for the discussion this afternoon.

S 33(a)(iii)

Thanks

DL

If using assistive software, the message ends here. Email signature below.

Donna Looney
Head of Division
International Strategy and National Security

Disability and Wellness Network Champion
Department of Industry, Science and Resources
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industry.gov.au ABN 74 599 608 295
Supporting economic growth and job creation for all Australians | We are collaborative, innovative, respectful and strive for excellence

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Connection to Country, 2021 by Shaenice Allan

S 33(a)(iii) & s33(b)

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S 33(a)(iii) & s33(b)

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