Disruption and opportunity

Australia and critical minerals in a changing global order

IAN SATCHWELL

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Special Report

ASPI
AUSTRALIAN STRATEGIC POLICY INSTITUTE

25 YEARS
2001–2026

About the author

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AI contributed no ideas to this report.

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Contents

Executive summary

In a world defined by accelerating geo-economic competition aimed at reducing China's control of critical-minerals markets and supply chains, Australia's critical-minerals ambitions hinge on a powerful but tenuous assumption: that the nation will evolve into a major supplier to the US—its largest investment partner and most consequential strategic ally. Yet today's market dynamics, policy fragmentation among partners and the US's own inward-looking minerals strategy mean that outcome is far from guaranteed.

What is clear, however, is that Australia enters this contest with world-leading geological endowments, a global footprint of successful mining operations, and hard-won capabilities built over more than 60 years of modern mining and processing. Australian companies aren't just domestic producers—they're global investors, operators and technology leaders. Demand for their products is only rising as the energy transition, digitisation, automation and defence modernisation accelerate.

But market opportunity alone is no longer enough. Australia's ability to convert its mineral strength into strategic advantage is being tested by volatile global prices—often shaped by market manipulation—contradictory policies among like-minded nations and rising competition from other mineral-rich nations. Domestically, high construction and energy costs, an uncompetitive company tax system, acute skills shortages, regulatory uncertainty and long approval timelines threaten to blunt Australia's competitive edge.

At the same time, commercial and security partners across Europe, Asia and North America increasingly look to Australia not only for resources but also for leadership—technical, environmental, commercial and strategic. Many countries, along with the EU, have signed agreements with Australia to build more secure, sustainable and diversified critical-minerals supply chains. Yet too many of those agreements remain dormant, overtaken by market realities or stalled by implementation hesitancy.

This report argues that Australia must now pivot from *signing* partnerships to fully *activating* them. That means prioritising the partners and markets where real supply-chain integration and volume markets are achievable. Japan and South Korea—longstanding, high-trust customers and investors—remain central. The UK and EU nations offer near-term potential for deeper integration. India presents opportunity, albeit with high transaction costs. And Canada, Australia's closest minerals peer in scale, capability and commitment to sustainable mining, should be treated not as a competitor but as a strategic collaborator in shared supply-chain development. The US is an important new market for some but not all critical minerals, while expected low volumes and policy uncertainties will require that Australia's critical-minerals output also finds customers in other nations to provide the required market scale. China, however, will remain an indispensable market for Australian minerals.

Crucially, Australia must recalibrate its approach to onshoring. While value-added processing remains desirable, policies built solely around domestic downstream ambitions risk underestimating the reality of global supply chains and overestimating Australia's cost competitiveness. The more strategic path is to position Australia as a dominant force across multi-node critical-minerals supply chains—linking Australian concentrates and intermediate products, production of Australian companies operating abroad, trusted partners' processing, manufacturing and technology ecosystems, and of course end users.

The report also assesses the impact of the current US administration's policies for minerals trade. It finds that the US remains a vital investment and trade partner across all sectors but that its geo-economic posture means Australia shouldn't expect to expand minerals supply into the US market relative to other destinations. Australia should pursue the US market and implement the 2025 minerals investment agreement, while simultaneously doubling down on markets where trade, investment and policy alignment offer a clearer pathway to scale.

To seize this moment, Australia should also restore the predictability and competitiveness of its own investment environment. That means streamlining approvals, ensuring reliable energy at competitive prices, investing in infrastructure and skills, reforming the tax system and reviving productivity growth. Without those fundamentals, even world-class geology, capability and environmental standards can't guarantee a world-class industry.

Ultimately, the choice before Australia isn't whether to be a critical-minerals superpower—it's whether to be an indispensable node in the world's most important supply chains. That requires ambition, disciplined policymaking, deeper strategic partnerships and a relentless focus on execution.

Conclusions and recommendations

Diversify outbound supply chains

Australia's critical-minerals industry is overdependent on China for processing and markets. That creates risks for Australian producers of single points of supply-chain failure disrupting offtake and exposure to economic coercion. Australian raw materials are also enabling China's continued market dominance in processing several critical minerals, creating supply risks for end-user customers, including like-minded nations.

Recommendation

The Australian Government should work with minerals companies and like-minded customer nations to diversify markets for Australia's critical minerals and begin the task of weaning the sector off its China overdependency, and at the same time helping customer nations to diversify and secure their supply chains.

Influence and activate Australia's agreements with like-minded nations and groupings

While like-minded nations have been eager to reach critical-minerals supply-chain agreements with Australia, progress has been slow in activating them to develop diverse, secure and sustainable end-to-end supply chains. The Quad and G7 have now prioritised the development of detailed action plans for new supply chains, and Australia is closely engaged in that effort. The now 30 critical minerals agreements that Australia has in place with partners are at once indicators of Australia's leading role and verge on being unmanageable. It's clear, however, that some agreements are more valuable to Australia than others, for economic, strategic and security reasons.

Recommendation

Australia should assess and prioritise the implementation of its 30 critical minerals agreements to focus on developing and expanding the most economically and strategically high-value end-to-end supply chains and seek to influence the features of multilateral action plans currently being developed to reinforce Australia's leading role in secure and sustainable supply chains and to build scale in its minerals markets.

Integrate investment support arrangements with other nations' minerals security mechanisms

Australia's like-minded customer nations have in place or in design a range of mechanisms to provide greater security of supply of critical minerals. This provides an opportunity for Australia to ensure that its leading position in minerals investment, production and trade is leveraged and reinforced, that the business case is strengthened for Australian Government investment in supply chains, and that partners' strategies to achieve greater minerals security dovetail with Australian initiatives such as finance and strategic reserves.

Recommendation

Australia should utilise its leadership, alongside Canada, as one of the two largest producers of primary critical-minerals products, and one of the two largest investors in global exploration and mining, to ensure that its position in minerals supply chains is strengthened and that like-minded industrialised nations and groupings tailor their minerals security strategies to directly engage with Australian minerals companies to facilitate their investment.

Honour the letter and spirit of priority agreements

Several critical minerals cooperation agreements that Australia has entered into and for which supply-chain cooperation is proceeding have been cherrypicked to be only partially activated. What's missing in nearly all cases is Australia's involvement, as a global mining leader, in developing supply chains from other nations to its agreement partners. That behaviour ignores both the letter and spirit of many agreements, letting down not only Australia's agreement partners but also the many Australian-based minerals companies that operate around the world.

Recommendation

Australia should activate its dormant commitments to work with critical-minerals partners and assist resource-rich developing nations to contribute to secure and sustainable supply chains that require volumes of minerals that in many cases are beyond output solely from Australia and its minerals production peer, Canada.

Streamline Australia's domestic project-approval processes

While not all delays to minerals projects in Australia are due to inefficient government processes, it's essential that governments contribute to speed-to-market by streamlining domestic project-approval processes to enable market-responsive growth of minerals and energy exports. Lengthy, duplicative and uncertain assessment processes have a significant impact on project viability.

Recommendation

The federal and state governments should continue to seek to enhance Australia's competitiveness through better coordinated and more efficient approvals processes not only to ensure that our relative ranking doesn't deteriorate as other nations improve performance but also to seek to drive down absolute development times.

Bring energy to market at adequate volumes and competitive prices

Longstanding energy policy stagnation and incoherence between levels of Australian governments to assure east coast gas supplies, and technically and economically viable pathways for the energy transition, pose serious threats to the delivery of cost-competitive energy for the manufacturing sector. Reliable, competitively priced gas and electricity supplies are fundamental to sustaining Australia's economic activity, particularly for export-exposed resources processing.

Recommendation

The federal and state governments must work together to bring new gas supplies to market and ensure that electricity is available at volumes and costs that enable mineral processing in Australia to be competitive and to attract new investment.

Ensure future availability of resources professionals

Without skilled professionals, the resources sector can't sustain itself. Yet, with universities struggling to maintain courses in resources disciplines in the face of declining undergraduate numbers, the entry of new professionals into the industry is declining, while the existing workforce is ageing. There's an urgent need to reverse the decline in the availability of technical expertise within the minerals industry. This isn't just an economic problem; it's a strategic threat to both Australia and its minerals customer nations.

Recommendation

Increasing government and industry funding for university degree courses in geosciences, engineering and related minerals disciplines—through close cooperation among government, industry and universities—will help to develop the next generation of skilled professionals and reduce Australia's growing dependence on foreign expertise.

Enhance infrastructure to improve efficiency and reliability

Australia's regional infrastructure, on which critical-minerals projects and other resources operations rely for inputs, outputs and efficient operation, is often inadequate and unreliable, particularly in the face of natural disasters. Community infrastructure is also often inadequate to deliver the living standards that today's workforces and their families demand. Several government policy papers have highlighted the needs and proposed solutions. Plans include the *Australian Infrastructure Plan 2021, the Critical Minerals Strategy 2023–2030, and the Northern Australia Action Plan 2024–2029.*

Recommendation

The federal and state governments must implement the actions and recommendations of relevant plans and strategies to lift the efficiency and reliability of regional infrastructure, including community infrastructure, to enable the resources sector to operate to maximum efficiency and deliver reliably into supply chains.

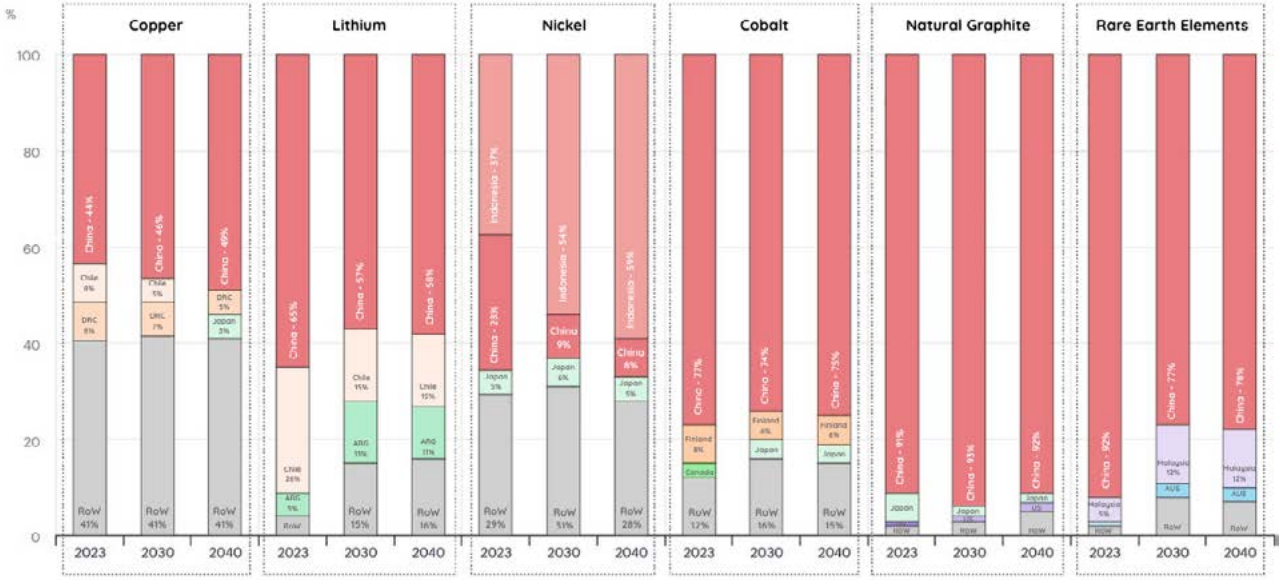
Introduction

While the rest of the world was asleep, China built vertically integrated supply chains for critical minerals vital to defence, digital transformation and the global energy transition. That was a deliberate strategy and is ongoing. China has increasingly used its supply-chain dominance of key minerals to exert its geopolitical and geo-economic will. When first faced with evidence of China's intentions, however, the sleeping world simply rolled over, allowing Beijing's market dominance to grow.

In 2026, China dominates supply chains and controls much of the processing capacity for key critical minerals ranging from lithium to rare earths (see Figure 1 and Figure 2). This is an existential threat not only to advanced manufacturers, which are vulnerable to withdrawal of supply for geo-economically coercive reasons, but also to nations that depend on China-dominated minerals supply chains and for which the threat of supply manipulation has become a core security vulnerability.

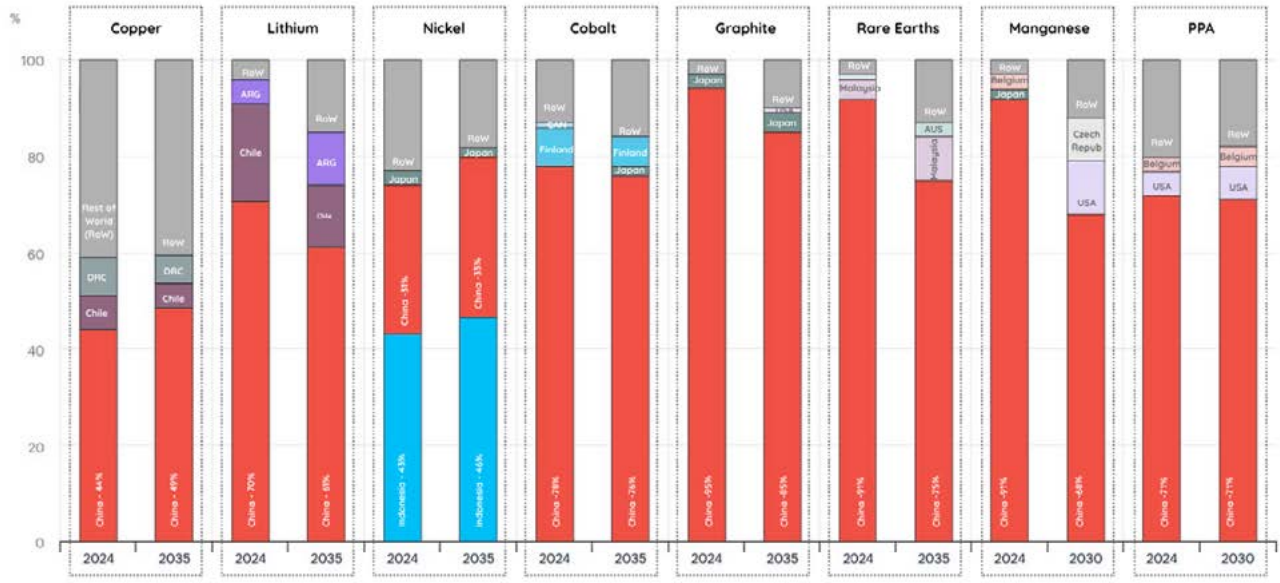
For net supplier nations like Australia, China's supply-chain dominance is being used to manipulate markets to keep new supply sources from being developed. Australia's dependence on China as its largest market for minerals also creates growing risks. China, as the world's largest processor of minerals, is an essential part of global supply chains originating in Australia, leaving our minerals producers vulnerable to supply-chain disruption and economic coercion.

Figure 1: Geographical distribution of *mined or raw material* production for key energy-transition minerals, 2023 to 2040



Source: 'Geographical distribution of refined material production for key energy transition minerals in the base case, 2023–2040', International Energy Agency (IEA), 2024, online.

Figure 2: Geographical distribution of *refined* material production for key energy-transition minerals, 2023 to 2040



Source: 'Geographical distribution of refined material production for key energy transition minerals in the base case, 2023–2040', International Energy Agency (IEA), 2024, online.

In the urgency of current action on critical minerals by the US, Australia and other like-minded nations, it's sobering to remember that it was only in 2015, well after China had played its hand in 2010 by cutting off rare-earths supply to Japan, that the US Government stood by while Molycorp, the only rare-earths producer in the country, went bankrupt, largely as a result of low prices caused by market manipulation.[1]

Then, in 2020, the US Administration waved through the sale of a cobalt project in the Democratic Republic of the Congo by US company Freeport McMoran to China Molybdenum Co., further concentrating China's dominance of cobalt supply chains.[2]

Australia isn't without responsibility. Successive governments, rightly cautious about intervening directly in minerals markets or company decisions, have presided over an environment in which multiple critical-minerals projects have failed, and several promising proposals have been unable to secure final investment decisions. As far back as 1997, a commercially struggling gallium refinery in Western Australia closed for good, taking with it a proposed co-located rare-earths operation, based on monazite, which is a by-product of heavy mineral sands production in that state.[3] Only in 2025 were firm steps taken to re-establish gallium production and establish a monazite-based rare-earths refinery in Australia.[4] [5]

In 2003, Australia's first vanadium mine and processing plant, also in Western Australia, was shut down after just three years of operation of what was planned as a 30-year project.[6]

Then, in 2015, the Abbott government reduced funding for the forward-thinking Australia's Mining for Development Initiative that supported resource-rich developing countries to enter responsible global minerals markets and deliver positive local outcomes, economically, environmentally and socially.[7]

Many of those emerging mining nations are now being engaged by Australia's like-minded minerals customers such as the US, South Korea, Japan, the UK and the EU, which are seeking to develop new, secure and sustainable supply chains.

Despite signing multiple agreements with like-minded net consumer nations such as the US and Japan, and with its minerals investment peer, Canada, to help resource-rich developing nations build secure and sustainable supply chains, Australia's minerals economic diplomacy with many of the emerging suppliers has withered.

Multiple recent cases of economic coercion and commercial interference—in markets, producer jurisdictions and company operations—have finally galvanised like-minded nations to act with urgency to build more diverse and secure critical-minerals supply chains. The hope is that past inaction has delivered its necessary lessons, and that strategic missteps won't be repeated.

China's coercive practices and strategic objectives in minerals are the primary threat but not the only risk. Recent US tariffs and abrupt trade measures have disrupted markets and unsettled even close allies. This report examines those risks alongside others, including weak sustainability performance, regional instability and natural disasters.

By 2024, Australia—like Canada and its like-minded partners—had sharpened its focus on supply-chain resilience. Australia's Critical Minerals Strategy 2023–2030 set out an ambitious agenda to expand domestic production and processing and integrate into partner-nation supply chains.[8] The October 2025 joint US–Australia announcement of support for seven Australian projects, plus an eighth later, underscored the strategic stakes, even as the financial commitments remain unconfirmed and highly conditional.[9]

Australia's policy inconsistency, however, remains a major challenge, both operationally and in terms of messaging to the Australian public and the private sector. Chinese investment is restricted in some projects yet welcomed—via concessional loans and equity—in others. Ageing smelters, largely outside the critical-minerals domain, continue to receive public support, sometimes justified by tenuous side-stream opportunities. And despite Future Made in Australia's emphasis on downstream processing, the government has taken equity in at least one critical-minerals producer that won't process its product domestically. That investment is discussed later in this report.

This 2026 report builds on ASPI's 2024 *Reclaiming leadership* report on Australia and the global critical-minerals race,[10] updating policy developments across Australia and partner nations, assessing the fast-evolving geo-economic landscape and offering expanded conclusions and recommendations. It draws on contemporary research, industry analysis and government policy statements to map the next phase of global critical-minerals competition—and Australia's place within it.

Critical and strategic minerals: what are they?

The term 'critical minerals' is usefully described by Geoscience Australia as those minerals that are essential for the functioning of modern technologies, economies or national security,[11] and there's a risk that supply chains could be disrupted.

Critical minerals underpin the global energy transition, the digital and artificial intelligence (AI) revolutions, and modern defence and advanced manufacturing. Their growing strategic importance reflects a simple reality: supply shortages now directly threaten national security and economic resilience.

Supply-chain risks are diverse—geopolitical coercion, market manipulation, natural disasters and domestic regulatory delays are among them. Japan learned this acutely in 2010 when China abruptly cut rare-earth exports after a maritime incident. In 2025, global manganese prices surged 30% after cyclone damage halted shipments from Groote Eylandt in the Northern Territory.[12] Slow permitting and uncertain commercial sanctioning continue to impede investment in the new mines and processing plants needed to increase and diversify supply. This report examines such risks and outlines strategies to mitigate them.

While like-minded nations define critical minerals similarly, their lists diverge (see Table 1, Table 2, Table 3). Net consumer nations, such as Japan and the US, prioritise minerals essential to manufacturing, producing expansive lists—Washington's 2025 list identifies 60 critical minerals, up from 50 in the previous 2022 list.[13] Supplier nations such as Australia base their lists on resource endowment and global demand, while countries like Canada, with both major manufacturing and primary mineral production, blend supply and demand drivers in devising their lists. Those differences help explain why Australia lists high-purity alumina but not aluminium, copper or zinc, and why Canada lists uranium while Australia does not.

Table 1: Alignment of Australia's critical-minerals list with other countries' lists

Australian Critical Mineral List (31)[a]		Alignment with International Critical Mineral Lists							Australian Supply		Global Supply[k]				Major Uses[l]
		US (60)[b]	Canada (34)[c]	EU (34)[d]	UK (34)[e]	India (30)[f]	Japan (31)[g]	RoK (33)[h]	Geological Potential[i]	Operating Mines[j]	#1 Producer		#1 Refiner		
REE	Rare Earth Elements	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	2		61.0%		92.1%	Magnets, batteries and energy storage, defence and aerospace systems, elecontrics and communications etc
27 Co	Cobalt	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	5		65.0%		77.2%	Rechargeable battery electrodes in lithium-ion batteries, electric vehicles, superalloys, pigments, catalysts and magnets
31 Ga	Gallium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	0		98.7%		98.7%	Semiconductors
3 Li	Lithium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	8		43.0%		70.2%	Lithium-ion batteries in electric vehicles and mobile devices
73 Ta	Tantalum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	0		~40%		45.5%	Materials and electronic components (resistors, semiconductors, alloys etc) that need to withstand high temperatures and harsh environments
74 W	Tungsten	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	3		>80%		44.3%	Wear-resistant metals for jet engines, ammunition, mining and cutting equipment
23 V	Vanadium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	0		~60%		59.0%	Strengthens steel, flow batteriers
6 C	Graphite	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Moderate	0		82.0%		95.2%	Lubricants, lithium-ion batteries, lubricants, fuel cells
51 Sb	Antimony	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Moderate	1		~48%		74.0%	Ammunition, bearings, castings, lead-acid batteries and flame retardants
83 Bi	Bismuth	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Moderate	0		>80%		~80-90%	Nontoxic metals, atomic research and some medical apps
41 Nb	Niobium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Unknown (Moderate)	0		~90%		~90%	Strengthens steel, superalloys in aeronatuics and energy industries, lenses, MRIs
78 Pt	Platinum-Group Elements	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Moderate	0		~70%		~70%	Catalytic converters, aerospace alloys, chemical refining and petroleum processing
14 Si	Silicon	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	0		~70%		84.8%	Silicon wafers fundamental to semiconductors
49 In	Indium	Yes	Yes	No	Yes	Yes	Yes	Yes	Moderate	0		~70%		70.4%	Flat-panel displays and touchscreens
12 Mg	Magnesium	Yes	Yes	Yes	Yes	No	Yes	Yes	High	0		~95%		95.0%	Metal alloys used by aerospace, automotive and electronics industries
28 Ni	Nickel	Yes	Yes	Yes	No	Yes	Yes	Yes	High	13		52.0%		42.9%	Stainless steel and rechargeable batteries
22 Ti	Titanium	Yes	Yes	Yes	No	Yes	Yes	Yes	High	0		~35%		68.8%	Pigments, metal alloys, including airplanes, spacecraft and military vehicle armor
32 Ge	Germanium	Yes	Yes	Yes	No	Yes	Yes	No	High	0		~60%		73.9%	Fiberoptics, semiconductors and night vision
52 Te	Tellurium	Yes	Yes	No	Yes	Yes	Yes	No	Unknown (Moderate)	0		~75%		76.5%	Solar cells, strengthen steel/copper, microchips and laser diodes
25 Mn	Manganese	Yes	Yes	Yes	No	No	Yes	Yes	High	3		~30%		~95%	Steel production and batteries

Australian Critical Mineral List (31)[a]		Alignment with International Critical Mineral Lists							Australian Supply		Global Supply[k]				Major Uses[l]
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27 Co	Cobalt	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	5		65.0%		77.2%	Rechargeable battery electrodes in lithium-ion batteries, electric vehicles, superalloys, pigments, catalysts and magnets
31 Ga	Gallium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	0		98.7%		98.7%	Semiconductors
3 Li	Lithium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	8		43.0%		70.2%	Lithium-ion batteries in electric vehicles and mobile devices
73 Ta	Tantalum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	0		~40%		45.5%	Materials and electronic components (resistors, semiconductors, alloys etc) that need to withstand high temperatures and harsh environments
74 W	Tungsten	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	3		>80%		44.3%	Wear-resistant metals for jet engines, ammunition, mining and cutting equipment
23 V	Vanadium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	0		~60%		59.0%	Strengthens steel, flow batteriers
6 C	Graphite	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Moderate	0		82.0%		95.2%	Lubricants, lithium-ion batteries, lubricants, fuel cells
51 Sb	Antimony	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Moderate	1		~48%		74.0%	Ammunition, bearings, castings, lead-acid batteries and flame retardants
4 Be	Beryllium	Yes	No	Yes	No	Yes	Yes	No	Moderate	0		100%		~60-70%	Metal alloys for aerospace and defence
72 Hf	Hafnium	Yes	No	Yes	No	Yes	Yes	No	Moderate	0		~40%		~40-45%	Nuclear control rods, semiconductors and aerospace
40 Zr	Zirconium	Yes	No	No	No	Yes	Yes	Yes	High	0		~30%		38.0%	Ceramics, nuclear reactors, aerospace heat shields and engine components
42 Mo	Molybdenum	No	Yes	No	No	Yes	Yes	Yes	Moderate	1		~40%		81.0%	Alloys, industrial applications, catalyst in petroleum and chemical processes
24 Cr	Chromium	Yes	Yes	No	No	No	Yes	Yes	Moderate	0		~40%		42.1%	Stainless steel
21 Sc	Scandium	Yes	Yes	Yes	No	No	No	No	High	0		~65%		~50-70%	Strengthen metal alloys, fuel cells and high-intensity lighting
34 Se	Selenium	No	No	No	No	Yes	Yes	Yes	Unknown (Moderate)	0		~20%		~30-40%	Electronics, pigments, glass, rubber
9 F	Fluorine	Yes	No	Yes	No	No	Yes	No	Moderate	0		~60%		~60%	Semiconductor manufacture and solar photovoltaic cells.Synthetic materials/plastics, iron/steel, ceramics and glass
75 Re	Rhenium	Yes	No	No	No	Yes	Yes	No	Unknown (Moderate)	0		~50%		~50%	High-performance jet engines and gas turbines
33 As	Arsenic	Yes	No	Yes	No	No	No	No	Moderate	0		~60%		~60%	Semiconductors
HPA	High Purity Alumina	No	No	No	No	No	No	No	High	0		~60%		~60%	Used in electronics and lithium-ion

a Australia Critical Minerals List: Geoscience Australia, 'Critical minerals at Geoscience Australia, Australian Government, 26 March 2025, online.
b US Critical Minerals List: US Geological Survey, 'About the 2025 List of Critical Minerals', US Government, 6 November 2025, online.
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i Australian geological potential: Geoscience Australia, 'Critical minerals at Geoscience Australia, Australian Government, 26 March 2025, online.
j '2025 preliminary tables', Geoscience Australia, online.
k Global supply figures: The figures marked with '~' are indicative estimates derived using AI-assisted synthesis from the following sources: IEA Critical Minerals Data Explorer; IEA, 'Global critical minerals outlook 2024'; and *Reuters* reporting on global critical-minerals production and processing concentration. Where IEA public data wasn't directly extractable, additional high-confidence *Reuters* explainer material (including reporting on China's export controls and associated market dominance figures for selected minerals) was used to support the estimates. IEA refining share figures are taken from the IEA 'Share of top refining country for 20 energy-related minerals' chart (where available, noting manganese is measured as high-purity manganese sulphate). For minerals not covered by the IEA chart, 'dominant refiner' and percentage are indicative estimates derived from US Geological Survey reporting and reputable market analysis, reflecting global processing/refining concentration in the most recent year for which there was publicly available data.
l Major uses: US Geological Survey, 'About the 2025 List of Critical Minerals', US Government, 6 November 2025, online.

Table 2: Alignment of Australia's strategic materials list with other countries' lists

Australian Strategic Materials List[a]		Alignment with International Critical Mineral Lists							Australian Supply		Global Supply[k]				Major Uses[l]
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29 Cu	Copper	Yes	Yes	Yes	No	Yes	No	Yes	High	25		~27%		~44%	Electricity distribution, electrical equipment and devices,wind turbines,solar panels, electromagnets, electric vehicles
50 Sn	Tin	Yes	Yes	No	Yes	Yes	No	Yes	Moderate	2		~27%		~59%	Cans, circuit board components, corrosion-resistant metal coatings
13 Al	Aluminium (Bauxite)	Yes	Yes	No	Yes	No	No	Yes	High	0 (9)		~66%		~60%	Transportation, packaging, construction materials, electrical transmission lines, machinery etc
30 Zn	Zinc	Yes	Yes	No	Yes	No	No	Yes	Moderate	14		~39%		~50%	Galvanised steel, die-casts, brass, chemicals, cosmetics, pharmaceuticals, electrical equipment
15 P	Phosphorus	No	Yes	No	Yes	Yes	No	No	Unknown (Moderate)	0		~46%		~70%	Element for plant and animal nutrition - used as fertilizers for food crops around the world

a Australia Critical Minerals List: Geoscience Australia, 'Critical minerals at Geoscience Australia, Australian Government, 26 March 2025, online.
b US Critical Minerals List: US Geological Survey, 'About the 2025 List of Critical Minerals', US Government, 6 November 2025, online.
c Canada Critical Minerals List: 'Canada's critical minerals', Canadian Government, 5 May 2025, online.
d EU Critical Minerals List: 'Fifth list 2023 of critical raw materials for the EU', European Commission, 2023, online.
e UK Critical Minerals List: Department for Business and Trade, 'Critical minerals technical annex', UK Government, 23 January 2026, online.
f India Critical Minerals List: Hemanth, 'Critical minerals of India: complete guide, status, policy (2025)', *Mine to Metal*, 16 April 2025, online.
g Japan Critical Minerals List: 'Japan', *MineralPrices.com*, 2026, online.
h Republic of Korea Critical Minerals List: 'Critical Mineral List in Korea', International Energy Agency (IEA), 8 December 2023, online.
i Australian geological potential: Geoscience Australia, 'Critical minerals at Geoscience Australia, Australian Government, 26 March 2025, online.
j '2025 preliminary tables', Geoscience Australia, online.
k Global supply figures: The figures marked with '~' are indicative estimates derived using AI-assisted synthesis from the following sources: IEA Critical Minerals Data Explorer; IEA, 'Global critical minerals outlook 2024'; and *Reuters* reporting on global critical-minerals production and processing concentration. Where IEA public data wasn't directly extractable, additional high-confidence *Reuters* explainer material (including reporting on China's export controls and associated market dominance figures for selected minerals) was used to support the estimates. IEA refining share figures are taken from the IEA 'Share of top refining country for 20 energy-related minerals' chart (where available, noting manganese is measured as high-purity manganese sulphate). For minerals not covered by the IEA chart, 'dominant refiner' and percentage are indicative estimates derived from US Geological Survey reporting and reputable market analysis, reflecting global processing/refining concentration in the most recent year for which there was publicly available data.
l Major uses: US Geological Survey, 'About the 2025 List of Critical Minerals', US Government, 6 November 2025, online.

Table 3: Alignment of Australia's rare-earth elements list with other countries' lists

Australian Rare Earth Elements(REE)[a]		Alignment with International REE Lists							Australian Supply		Global Supply[k]				Major Uses[l]
		US[b]	Canada[c]	EU[d]	UK[e]	India[f]	Japan[g]	RoK[h]	Geological Potential[i]	Operating Mines[j]	#1 Producer		#1 Refiner		
58 Ce	Cerium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	25		~60%		~60%	Catalytic converters, ceramics, glass, metallurgy, polishing
66 Dy	Dysprosium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	2		~98%		~98%	Permanent magnets, data storage devices, lasers
68 Er	Erbium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	0		~70%		~85%	Fiber optics, optical amplifiers, lasers, glass colorants
63 Eu	Europium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	14		~70%		~80%	Phosphors, nuclear control rods
64 Gd	Gadolinium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	Unknown[m]		~70%		~85%	Medical imaging, permanent magnets, steel
67 Ho	Holmium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	Unknown[m]		~85%+		~85%	Permanent magnets, nuclear control rods, lasers
57 La	Lanthanum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	Unknown[m]		~70%		~70%	Chemical catalysts, metallurgy, batteries
71 Lu	Lutetium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	Unknown[m]		~85%+		~85%	Medical imaging, electronics, some cancer therapies
60 Nd	Neodymium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	Unknown[m]		~80%		~80%	Permanent magnets, medical and industrial lasers, production of rubber
59 Pr	Praseodymium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	Unknown[m]		~80%+		~80%	Permanent magnets, batteries, aerospace ealloys, chemical refining, petrol processing
61 Pm	Promethium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	Unknown[m]		~100%*	K*	K*	Batteries, luminous paint, lighting source
62 Sm	Samarium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	Unknown[m]		~70%+		~70%	Permanent magnets, nuclear reactors, cancer treatments
21 Sc	Scandium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	~2		~70%+		~90%+	Strengthen metal alloys, fuel cells, high-intensity lighting
65 Tb	Terbium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	~1		~85%+		~90%	Permanent magnets, fiber optics, lasers, solid-state devices
69 Tm	Thulium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	~1		~80%+		~85%	Lasers, x-ray devices, metal alloys, nuclear reactor components
70 Yb	Ytterbium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	Unknown[m]		~80%+		~85%	Catalysts, lasers, metallurgy
39 Y	Yttrium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High	~1		~90%+		~90%+	Lighting and display technologies, high-performance metal alloys

a Australia Critical Minerals List: Geoscience Australia, 'Critical minerals at Geoscience Australia, Australian Government, 26 March 2025, online.
b US Critical Minerals List: US Geological Survey, 'About the 2025 List of Critical Minerals', US Government, 6 November 2025, online.
c Canada Critical Minerals List: 'Canada's critical minerals', Canadian Government, 5 May 2025, online.
d EU Critical Minerals List: 'Fifth list 2023 of critical raw materials for the EU', European Commission, 2023, online.
e UK Critical Minerals List: Department for Business and Trade, 'Critical minerals technical annex', UK Government, 23 January 2026, online.
f India Critical Minerals List: Hemanth, 'Critical minerals of India: complete guide, status, policy (2025)', *Mine to Metal*, 16 April 2025, online.
g Japan Critical Minerals List: 'Japan', *MineralPrices.com*, 2026, online.
h Republic of Korea Critical Minerals List: 'Critical Mineral List in Korea', International Energy Agency (IEA), 8 December 2023, online.
i Australian geological potential: Geoscience Australia, 'Critical minerals at Geoscience Australia, Australian Government, 26 March 2025, online.
j '2025 preliminary tables', Geoscience Australia, online. The operating mines statistics reflect an approximate number from current fully-commercial projects, taking into account that REEs are mostly always alongside each other, making individual statistics difficult to account.
k Global supply figures: The figures marked with '~' are indicative estimates derived using AI-assisted synthesis from the following sources: IEA Critical Minerals Data Explorer; IEA, 'Global critical minerals outlook 2024'; and *Reuters* reporting on global critical-minerals production and processing concentration. Where IEA public data wasn't directly extractable, additional high-confidence *Reuters* explainer material (including reporting on China's export controls and associated market dominance figures for selected minerals) was used to support the estimates. IEA refining share figures are taken from the IEA 'Share of top refining country for 20 energy-related minerals' chart (where available, noting manganese is measured as high-purity manganese sulphate). For minerals not covered by the IEA chart, 'dominant refiner' and percentage are indicative estimates derived from US Geological Survey reporting and reputable market analysis, reflecting global processing/refining concentration in the most recent year for which there was publicly available data.
k* As promethium is not mined from ore in commercial volumes, there are no official percentages available for this element. However, the US does produce 100% of the synthetic promethium produced today through nuclear reactors at research or isotope facilities.
l Major uses: US Geological Survey, 'About the 2025 List of Critical Minerals', US Government, 6 November 2025, online.
m Unknown: REEs are mined and reported as mixed concentrates rather than as individual elements; element-specific identification occurs at the processing stage, not at individual mines.

Despite variation, there's strong overlap across national and EU critical-minerals and strategic-materials lists. As partners seek to build integrated supply chains, greater harmonisation of classifications would better align cooperation in supply chains, from exploration through to end use. Australia's 2023 introduction of a 'strategic minerals' category[14] reflects this shift toward minerals—such as copper and aluminium—central to the energy transition and recognised by several consumer nations as 'critical'.

Increasingly, however, the distinction between 'critical' and 'non-critical' minerals is blurring. Australian Government interventions to sustain lead, zinc, copper and aluminium smelters and refineries highlight how decisions on industrial policy often extend beyond formal frameworks. Many industry experts now expect a pivot towards broader, whole-of-minerals policy frameworks, particularly as some countries' critical-minerals lists have grown larger than the set of minerals not included.

Maintaining Australia's minerals success

Australia's endowments of minerals, plus coal and liquefied natural gas (LNG), have underpinned its success in building a world-class minerals and energy industry.

Mineral and energy products make up two-thirds of Australia's exports of goods, and their production generates 11% of gross domestic product (GDP).[15] Australia's own resources endowments and the success of Australian minerals companies at home and abroad has enabled the Australian Stock Exchange (ASX) to be ranked first globally in metals and mining capital raisings and initial public offerings, raising A$50 billion in the five years to 2024. By mid-2024, market capitalisation for all resources had reached A$873 billion or 26% of total ASX market capital.[16] The mining sector attracts by far the highest level of inbound foreign direct investment (FDI) of any industry: the stock of FDI was measured by the Australian Bureau of Statistics at A$392 billion in 2023, or one-third of total inbound FDI across all sectors.[17] Australia's outbound mining FDI stock of A$195 billion is an impressive 50% of the level of inbound mining FDI and 27% of all Australian direct investment in other countries.

To build on the comparative advantages of diverse mineral resources and develop competitive advantages in minerals production has required sustained effort over more than 60 years of modern mining and processing. That has included:

- large amounts of capital from both domestic and foreign sources and a strong market for mining equities
- investment by the Australian federal and state governments in pre-competitive geoscience to provide data to attract investment by private-sector explorers
- cooperative investment by the minerals industry and governments in infrastructure and services to support the minerals industry and its communities
- federal and state government policies, regulations and processes—including coordination—that are conducive to private-sector minerals investment
- the development of technologies to enable the efficient discovery, development, processing and transport of mineral products
- strong education and training sectors covering minerals-related disciplines
- the industry's ability to attract and retain skilled workforces
- the growth of a strong mining equipment, technology and services sector to provide inputs to the minerals sector that are rich in knowledge and technology
- the formation of clusters of capability in several cities that bring together the wide range of skill sets needed to discover, develop and market mineral resources.

In recent years, however, those strengths haven't been enough on their own to enable timely commercial decisions to proceed with several critical-minerals projects in Australia. In some cases, advantages have been eroded due to lack of attention at home and by international competition. Market manipulation and global overproduction resulting in volatile and low prices are two factors that have made it difficult to achieve commercial sanctioning of new projects. Those factors are difficult to counter.

Directly within the control of Australian governments, however, are domestic investment environments, which have become more complex and uncertain and in some respects have deteriorated. By contrast, operating environments in some other jurisdictions with critical-minerals potential and production are becoming more attractive for investment.

Market dynamics for critical minerals

Rising critical-minerals demand

There are various short-, medium- and long-term estimates of demand and prices for critical minerals. Minerals required for the global energy transition are the largest category of critical minerals by volume and value. Other categories with lower volume and less certain forecasts are minerals for the digital revolution (for example, for semiconductors), for advanced manufacturing and for defence applications. For each use, there are both rising demand and a need to diversify supply sources.

Many critical minerals have multiple applications, including for both 'critical' and 'non-critical' uses such as zircon alloys in high-temperature applications and zircon as a whitener in ceramic toilet bowls.

The most bullish estimates for energy-transition minerals have come from the International Energy Agency (IEA), which in 2021 predicted overall demand growth by 2040 for minerals required for the global energy transition of two to four times 2021 production.[18] The IEA refined demand and supply estimates in its *Global critical outlook 2025*, adjusting principally for changes in demand.[19]

In 2035, expected supply is projected to lag demand considerably for all of the IEA's basket of energy-transition minerals except rare earth elements (REEs), for which supply is expected to meet demand. The supply problem for rare earths isn't production capacity, but the fact that China dominates supply and has demonstrated its willingness to depress prices or, conversely, withhold supply for geopolitical and geo-economic reasons. The IEA estimates that in 2024 China produced nearly 60% of mined REEs, 94% of refined REEs and 93% of permanent magnet production using REEs.[20] Until Australia's Lynas Rare Earths produced two separated heavy rare earths oxides in mid-2025,[21] China was the monopoly producer of those materials, which are required for the manufacture of very high-performance permanent magnets.

For the other minerals in the energy-transition basket, the IEA forecasts primary supply relative to demand in 2035 to be:

- copper 70%
- lithium 61%
- nickel 85%
- cobalt 86%
- graphite 85%.

The IEA has projected that global demand for critical minerals required for the energy transition far exceeds what existing and announced projects can supply, making the development of new sources essential. Copper and lithium supply is expected to be in shortfall by 30% and 40%, respectively, by 2035. That supply gap underpins agreements among like-minded nations to partner not only with established producer nations like Australia and Canada, but also with emerging producer nations that are developing countries to build secure, sustainable supply chains. While demand for energy-transition minerals has surged, some short-term trajectories—most notably for lithium and nickel—have recently softened due to strong supply, lower than projected demand growth, or both. Nonetheless, companies continue to invest strongly in lithium, if not nickel, based on expectations of long-term growth aligned with IEA forecasts.

Even where demand–supply gaps are narrow, industrialised nations such as the US, Japan, South Korea and several European nations are pursuing diversified supply to strengthen resilience and meet environmental, social and governance (ESG) expectations for supply chains, notwithstanding the US currently eschewing the term 'ESG'. Rare earths offer a prominent example of diversification efforts, although not the only one. Yet geographical concentration remains severe: the IEA expects mining of several key minerals to stay highly concentrated—and even become more so for copper, nickel and cobalt—while China will continue to dominate refining. By 2035, it's forecast to supply more than 60% of refined lithium and cobalt, and 80% of graphite.

Demand forecasts for non-energy-transition minerals are smaller but strategically significant. China's 2010 ban on rare-earths exports to Japan curtailed advanced manufacturing there, and the US defence-industrial base relies on tiny but vital volumes of minerals such as antimony and gallium. China's willingness to withhold supply, and its repeated manipulation of mineral markets and prices to suppress competitors, magnify those risks. Concentrated supply-chain nodes also create single points of failure that have been repeatedly demonstrated.

To mitigate those vulnerabilities, the world needs more diversified critical-minerals supply—across exploration, mining, processing and inputs to advanced manufacturing. Yet, as the next section outlines, building those new supply chains from Australia, as well as elsewhere, remains a formidable challenge. Not least is attracting the large budgets needed to explore for minerals and the huge amount of capital to establish new mining and processing capacity. The IEA estimates the amount of new investment required in the next decade at between A$750 billion and A$900 billion, which is comparable to the market capitalisation of the whole Australian resources sector.

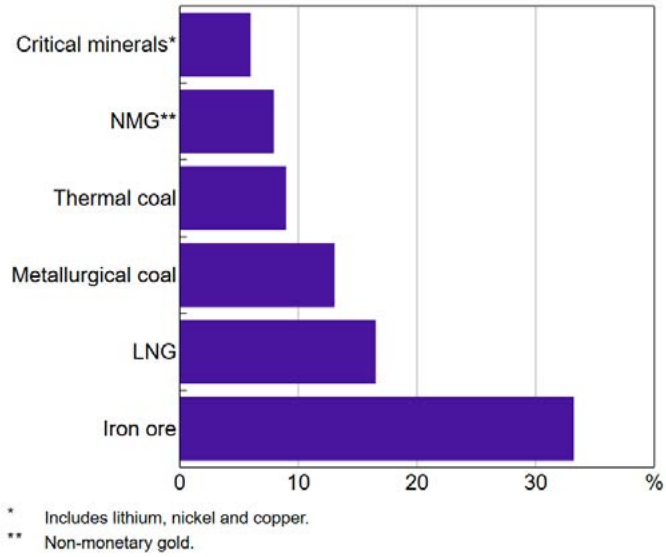
Perspective on the economic value of critical minerals to Australia

For all the hyperbole about prospects for critical minerals and Australia's undoubted leadership role in their production and global supply chains, some perspective is needed on their current and likely future commercial and economic value to Australia and its minerals industry. The Reserve Bank is conservative about the prospects for the production of critical minerals and its economic impact. In its October 2025 bulletin on the Australian economy,[22] the bank finds that 'in the near term, based on projects currently underway and announced, growth in production is likely to remain subdued, though new policy announcements may provide support for investment.'

The Reserve Bank provides further perspective in a resources exports chart, reproduced in Figure 3. Copper, which isn't currently classified as a critical mineral by Australia, makes up about 45% of 'critical minerals' exports.

In the light of US calls for Australia to be all-in on the new critical-minerals trading bloc and preference supply to nations other than China,[23] the risks of China's strategy to diversify its import sources, particularly for Australia's much larger iron ore and LNG exports, come into sharp focus.

Figure 3: Australia's resources exports, share of total value, by commodity, 2023–24



Sources: Australian Bureau of Statistics; Department of Industry, Science and Resources; Reserve Bank of Australia.

Challenges for developing new critical-minerals supply chains

Despite the growing global demand for critical minerals, multiple critical-minerals projects in Australia have struggled to reach final investment decisions. The reasons are complex, but common themes are the conditions of markets for minerals, with low prices and volatility, sometimes induced deliberately; challenging markets for investment, with footloose capital and competition between nations for investment; and vulnerability to foreign interference, as discussed below.

Minerals market conditions that make investment difficult result from the following factors, or combinations of them, affecting minerals demand and prices, and the ability of companies to attract finance and achieve commercial sanctioning of their projects:

- oversupply relative to demand, caused either by production rates ramping up faster than demand growth, or by deliberate flooding of supply to keep prices low and hold out competitors
- lower cost supply from other sources, often associated with lower standards of sustainability being applied to project development and production
- resistance in markets to pay premiums for sustainably produced and supplied minerals

- foreign interference with the affairs of companies and in individual projects
- minerals nationalism manifested through export restrictions to incentivise local processing, generous subsidies to attract investment, particularly in processing, and import tariffs aimed at driving greater local production.

Current supply capacity for several critical minerals, such as lithium and nickel, exceeds demand. Consequently, prices in 2025 were close to the lowest in recent history, although at the time of writing they are trending upwards. Rapid growth of lithium production, especially from Australia, and lower-than-projected growth of demand, principally for electric-vehicle batteries, resulted in recent low lithium prices and delays in bringing on new capacity. China-backed mining, smelting and refining of laterite-hosted nickel in Indonesia, at low costs but with high environmental impacts, caused the Australian nickel industry to largely shut down. At least 10 nickel mines were shut down, and operations were suspended at BHP's entire Nickel West business in Western Australia, including a smelter and refinery.[24]

China, which as noted above controls mine production and processing for several critical minerals and dominates processing capacity for several others, has ample incentive to protect its dominant position by stifling competition though minerals market manipulation and implementing other forms of economic coercion. Australia's Iluka Resources has documented such market manipulation and its price impacts,[25] which have depressed returns for certain REEs and led to financing difficulties for its rare-earths refinery at Eneabba in Western Australia. Project go-ahead was achieved only through additional debt financing support from the Australian Government.

While like-minded countries have agreed to cooperate to achieve price recognition for minerals produced and supplied via supply chains with high sustainability standards, that has yet to be achieved across borders. Progress is being made in markets, however. In October 2025, for example, the London Metal Exchange announced a road map and discussion paper for the development of sustainable metal premium pricing.[26] The US initiative to provide guaranteed offtake and floor prices for domestic neodymium–praseodymium (NdPr) production by MP Materials (see later discussion), and Australia's indication that it will do likewise for certain processed critical minerals, were start points for the support of offtake rates and prices along multinational supply chains. The February 2026 announcement by the US, EU and Japan of a partnership for critical minerals supply chain resilience went further, canvassing cooperative border-adjusted price floors, standards-based markets, price gap subsidies and offtake agreements.

Foreign interference in investment in critical minerals can have serious ramifications for corporate governance and national security. The most prominent example in Australia has involved attempts to gain equity control then board control of Northern Minerals Ltd, which is developing the Browns Range deposit of heavy rare earths, and is attracting conditional financial support from both the Australian and the US governments. In June 2025, the Australian Treasurer, Jim Chalmers, launched an action in the Federal Court against a China-linked company for not acting on a government order to divest shares in Northern Minerals.[27]

Some military applications, such as guidance systems, use very high-performance permanent magnets incorporating heavy rare earths, for which the world currently depends on China for almost 100% of supply.

Other examples of economic and political coercion involve minerals properties operated by Australian companies, which have been subjected to China-influenced expropriation and attempted expropriation of mining properties by governments of the African countries of Mali and the Democratic Republic of the Congo. Further discussion on foreign interference and how it's being countered is in the next section.

Minerals nationalism is driven for net producer nations by an understandable desire to maximise value generation from minerals production, usually through downstream processing. An example is Indonesia, which, from 2009, progressively banned exports of unprocessed minerals such as nickel and copper. That led to short-term uncertainty of supply, but, in the medium term, to new investment in minerals processing, albeit with some unexpected consequences.[28] For net consumer nations with mineral endowments, such as the US and EU countries, there's a desire to maximise domestic production to both improve supply-chain security and stimulate minerals industry development.

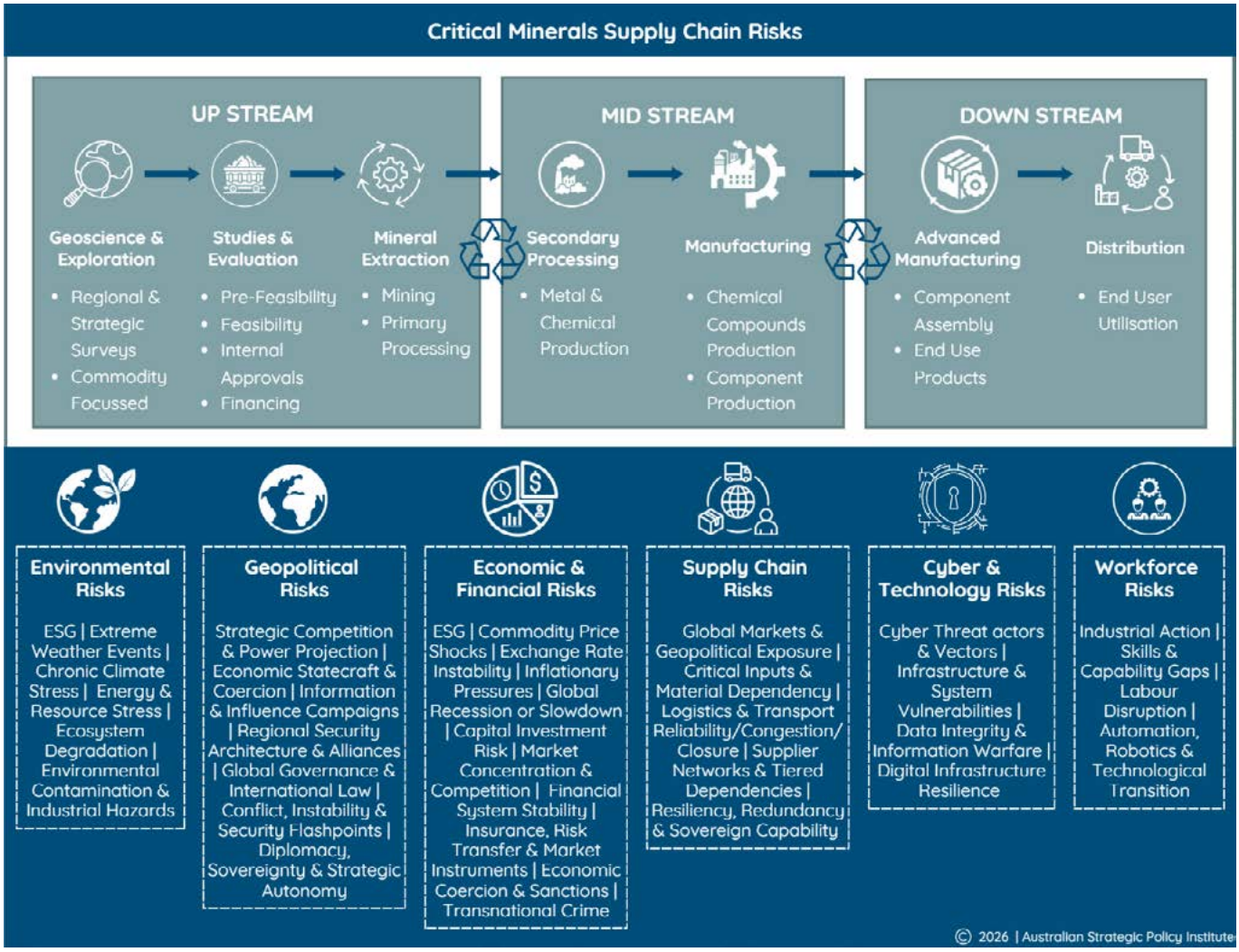
National and international responses to the identified impediments to diverse supply chains may mean that China's efforts to stifle supply competition are now having the opposite effect, but at a cost to the taxpayers and economies of like-minded nations, as governments step in to stimulate new capacity. Against that, the 2025 imposition of US tariffs on certain minerals and high tariffs on imports from particular producer countries may militate against achieving more diverse international supply chains in the short and medium terms.

Managing critical-minerals supply-chain risks

Identifying risks

While most commentary on risks to the supply of critical minerals focuses on deliberate market manipulation, withholding of supply and other forms of coercion, other risks abound. Figure 4 illustrates key categories of risks potentially affecting all parts of supply chains, while the discussion that follows explains the key risks and provides examples.

Figure 4: Illustrative critical-minerals supply-chain components and principal risks



Critical-minerals supply chains commencing in Australia or involving Australian companies have been affected by one or several of those risks being realised in recent years.

Overdependence on single supplier or customer nations exacerbates risks by creating opportunities for market manipulation and economic coercion, and more single points of potential failure in supply chains from multiple causes.

Creating more secure supply chains requires attention to all categories of risk. Governments in Australia and minerals companies exercise high degrees of control over several, but little control over others. Diversity of supply chains helps to mitigate many risks by increasing the number of supply nodes and reducing their concentration, and therefore the number of potential single points of failure and opportunities for supply disruption or coercion.

Australia can't assume that because it has a reputation as a reliable minerals and energy supplier that its critical-minerals production is low risk in the eyes of overseas customers. On the contrary, Australia's outsized share of production of several minerals, including manganese and lithium, is perceived as creating supply risks for customers through single points of failure in supply chains and has been a driver of supply diversification.

While supply-chain risks are seen mostly from the perspective of customer companies and nations, they also affect suppliers, such as Australia and its minerals companies. Just as more diverse supply chains reduce risks for consuming industries and countries, in many cases so too do they reduce risks for net producer nations like Australia, which can benefit from the reduction of single points of potential failure.

Project delays and uncertainties

Delays in project development restrict the availability of new supplies of primary or processed critical minerals. That can affect customers through supply not being available when needed or expected. For suppliers, delays can stunt cash flow and profitability. Delays can arise from multiple factors, including:

- internal company processes and their coordination, which affect project planning and due diligence
- market conditions, such as depressed prices, that can affect project viability
- financing due diligence and difficulties due to market conditions and a lack of offtake arrangements
- permitting processes and regulations between agencies and between levels of government that are uncertain, uncoordinated and time-consuming
- operational difficulties that may reduce output or product quality and affect project viability.

Most of those factors are normally regarded as commercial issues but, given the urgency of customer demand for new and secure critical-minerals supply, are increasingly involving interventions by governments to get projects developed. Discussion on Australia's permitting and regulatory processes is provided later in this report.

Environmental and social harm

Poorly managed exploration, mining and processing can cause significant harm to communities and the environment—from pollution and unsafe labour conditions to human-rights abuses, disrupted livelihoods and inequitable distribution of benefits. Any supply chain built on such practices is inherently insecure. While companies operating in Australia generally maintain strong environmental and social performance, multi-node global supply chains involving Australian partners may include weaker governance and higher risk operations elsewhere. This underscores the strategic importance of Australia re-engaging in minerals governance support for developing producer nations to lift standards, strengthen ESG performance and ensure that emerging supply chains are both secure and sustainable.

Community activism

Environmental or social harm can trigger community activism, civil unrest or government intervention, disrupting or even halting minerals production and supply chains. Protests and blockades can shut down mining operations for months or years, while political instability can prompt governments to curtail production outright.

Australian operators generally perform well in managing those risks, but the Juukan Gorge incident—in which the destruction of a sacred Indigenous site for a small volume of iron ore caused global outrage and significant reputational damage to Rio Tinto—remains a stark reminder of how failures in social performance can rapidly erode both company value and the social licence to operate.[29]

Regional conflict

Regional conflict and insurgency can shut down mines and processing facilities, disrupt transport links and undermine the safety needed for stable supply. Conflict can also block or divert shipping routes, lengthening supply chains and delaying deliveries—as seen in the Red Sea, where maritime attacks have forced vessels to reroute via the Cape of Good Hope. Closer to home, critical sea lanes to Australia's north remain similarly vulnerable, underscoring the strategic fragility of minerals supply chains exposed to geopolitical instability.

Natural disasters

Natural disasters such as cyclones and earthquakes can interrupt supply through temporary shutdowns or damage to production facilities and transport infrastructure. Interruptions can be short term while weather events pass, or long term if damage is extreme.

A sustained 30% increase in global manganese prices in the first half of 2024 was a direct result of damage to the Northern Territory's Groote Eylandt mining and shipment facilities from Tropical Cyclone Megan in March that year, which took out 12% of global manganese supply overnight.[30]

Technical shortfalls and mishaps

The processing of several critical minerals, including rare earths and lithium, is technically difficult and exacting. China understandably wishes to maintain its dominance of processing capacity and capability and seeks to keep technology and skills to itself. Those factors have resulted in difficulties and delays in developing new processing plants in Australia and other like-minded nations.

The Kwinana Lithium Hydroxide Refinery operated by the Tianqi Lithium Energy Australia joint venture involving Australian company IGO has been so plagued by technical issues that IGO wrote down the A$605 million value of its 49% stake to zero during 2025.[31]

Technical incidents at production facilities, such as ground instability in mines, fires at smelters or equipment breakdowns, can reduce or halt the output of mineral products. Several such incidents have occurred in Australian critical-minerals facilities over the past decade.

Trade measures

Trade measures can disrupt minerals supply chains in several ways: tariffs raise costs for end users, distort normal trade flows and can trigger the dumping of surplus product; export controls create uncertainty and disrupt manufacturing; and deliberate withholding of supply can generate acute shortages of strategically vital materials. Punitive measures inflict economic harm on target nations but also send destabilising signals to producers.

Lithium hydroxide product from US company Albermarle's Kemerton refinery in Western Australia fell foul of the US 'Foreign Entities of Concern' rule due to the Chinese shareholding of the lithium source mine at Greenbushes, meaning it faces high tariffs in the US. As a consequence of both that and of low global lithium prices, the company first scaled back production and cancelled expansion plans before halting production entirely in February 2026, placing the plant on care and maintenance.[32]

For Australia, US tariffs have only a modest direct impact on sales volumes, but they undermine confidence in the US as a reliable export destination and complicate the rationale for Australian Government subsidies intended to support critical-minerals supply into US markets—particularly when some Australian exports of minerals products face heavy tariffs while others do not.

Foreign interference

Foreign interference can distort investment markets, disrupt the smooth operation of companies, compromise corporate governance and exacerbate corruption, and can even lead to the expropriation of mining properties. Foreign interference takes multiple forms, including:

- economic coercion, whereby a state seeks to create an outcome by applying punitive economic measures such as tariffs or export controls
- market manipulation, such as withholding supply to drive up prices, or dumping product on markets to collapse processes and force out competitors
- bad-faith investment, in which investors, which might or might not be state-backed, seek to control companies and their production for their own ends.

China's foreign interference toolkit includes manipulating markets; withholding supply; equity and governance capture of Australian and international companies; elite capture of foreign governments; disinformation to influence communities against projects; and gaining political support for mine expropriation in some developing countries.

Foreign interference can be insidious and hard to detect. The Australian Government became so concerned about foreign interference in Australian companies that its Critical Minerals Office published an information toolkit, *Safeguarding against foreign interference in the critical minerals sector,* in March 2025 for 'Australian companies who want to understand, identify and report suspected acts of foreign interference in the critical minerals sector'.[33] Box 1 draws and expands on the toolkit to provide examples.

Box 1: Examples of how foreign interference can appear for critical-minerals companies

Covert financing and influence: Foreign actors can use proxies to conduct illicit financing activities or to undermine company governance. This includes evading the Foreign Acquisitions and Takeovers Act 1997 and the intent of Acts administered by the Australian Securities and Investments Commission to improperly influence company decisions.

Elite capture: Large shareholders or influential company officers can manipulate company resources or policies to deliver outcomes at the expense of other stakeholders.

Disinformation campaigns: Foreign actors can influence public opinion and behaviours, including to damage the reputation of people, companies or projects.

Cyberattacks: Attacks can be made in order to disrupt systems and operations or to collect information to support other foreign-interference activities.

Improperly leveraging relationships with key personnel: to manipulate targets into sharing sensitive information or making decisions contrary to a business's best interests.

Harassment and intimidation: to silence dissent, coerce decisions and change outcomes. This can take the form of blackmail, threats and malicious use of media, especially social media.

The use of tariff threats and tariffs themselves by the US Government for economic and geopolitical ends, and even to influence domestic governance in other nations, are recently deployed forms of interference from a hitherto reliable partner. They undermine the efforts of like-minded nations to build more diverse supply chains and are at odds with the spirit of multiple agreements to which the US and its partners are party, including the new Forum on Resource Geostrategic Engagement (FORGE) launched in February 2026,[34] replacing the Minerals Security Partnership,[35] which commenced in 2022, and the G7 Critical Minerals Action Plan of June 2025.[36]

China's geostrategic use of critical-minerals dominance

Having first restricted rare-earths supply in 2010 in retaliation for a maritime incident with Japan, China ramped up the use of its critical-minerals supply-chain dominance as a geostrategic weapon in 2025. China's control gave it the confidence to tell the world that, unless the US reduced its technology and tariff restrictions on China, Beijing would restrict the supply of rare earths to the entire world. That extraordinary threat underscored the risks of China's global minerals power, which should have been the final wake-up call to like-minded nations.

China again wielded critical minerals as an economic weapon in January 2026, punishing Japan for remarks by the Prime Minister about Taiwan in late 2025 by restricting Japan's supply of rare earths and rare-earth magnets. Beijing first announced a ban on the export to Japan of 'dual use' goods with potential military applications. Subsequently, China began restricting exports to Japanese companies of heavy rare earths and high-specification magnets.[37]

Wilful use of such trade measures even when a nation says something that China doesn't like needs to be countered with long-term coordinated commitment by allies to reduce the incentive for China to behave in that way. Australia has previously experienced the use of trade measures as punishment, when China imposed restrictions on imports from Australia in retaliation for national-security decisions taken by the Turnbull and Morrison governments, including relating to 5G telecommunications, foreign interference laws and remarks about the origins of the Covid-19 virus.

The use of critical-minerals supply is a huge security issue for Australia and its partners, highlighted in a 14 January proclamation by US President Trump, which noted that over-reliance on foreign sources presented:

> … significant national security vulnerability that could be exploited by foreign actors; weaken the industrial resilience of the United States; expose the American people to supply chain disruptions, economic instability, and strategic vulnerabilities; and jeopardize the United States' ability to meet demands for PCMDPs that are essential to its national defense and critical infrastructure.[38]

Mitigating supply risks

Australia, its minerals companies and like-minded nations must collectively confront and manage the full spectrum of risks facing critical-minerals supply chains. The diversity and scale of those risks demand not piecemeal responses but an integrated, overarching framework to ensure coherent, end-to-end risk mitigation. While Australia and partner nations

have taken important steps—concluding multiple bilateral and multilateral supply-chain agreements, tightening foreign investment scrutiny and strengthening protections against foreign interference—those measures remain early foundations rather than a complete strategy. The Critical Minerals Office's foreign interference toolkit is a useful start to counter foreign interference, but far more comprehensive and coordinated action is required across governments, industry and international partners to build a resilient and secure supply-chain system.

Reducing dependence on a dominant customer

As noted above, overdependence on single suppliers as well as dominant customers exacerbates supply-chain risks. The Australian resources sector is highly dependent on China for minerals and energy sales, offtake agreements and their associated financing. China is the largest market for minerals produced in Australia and produced in other countries by Australian companies. Minerals exports to China make up 53% by value of all minerals exports from Australia.[39] China's demand is a given for the health of the Australian resources sector and hence the Australian economy.

The Australian minerals industry can't do without China's financial backing either. Chinese companies are substantial minerals and energy investors, financiers and customers in Australian-operated mining projects. Despite recent tightening of scrutiny by Australia's Foreign investment Review Board (FIRB) of investment proposals from China, finance-backed offtake arrangements provide an effective mechanism for the financing of early-stage projects while not being subject to the same FIRB oversight as investment is.

The Australian Government actively supports Chinese shareholdings in some critical-minerals projects through concessional loan funding and in one case even co-investment in a company alongside a Chinese investor, underlining the importance of commercial linkages, despite the tensions in the strategic relationship.

While maintaining strong market links with China, Australia and its minerals companies must also seek to diversify customers and investors. Having such a dominant customer that's often closely linked to project financing raises market and economic dependency concerns for Australia. Over-reliance on one market also lifts risks of supply-chain failure, due to natural disasters or major breakdowns at processing plants. The vulnerability of China's dominant demand to geopolitical and economic shocks is a unique risk for Australia's minerals sector and the wider economy. China's currently patchy economic performance, particularly in domestic consumption and the housing sector, raises questions about its medium-term demand for imports.

As discussed, China has also demonstrated a ready willingness to apply economic coercion to achieve commercial, geo-economic, geopolitical and security objectives, often at the expense of Australian companies and resources security. Australia's critical-minerals partnerships to develop stronger supply chains with other nations could provide additional incentive for China to diversify its minerals suppliers, with attendant potential for reductions in Australia's resources exports.

To manage risks, it's demonstrably in the interests of Australia and its minerals companies to diversify markets, contribute to global resources security, and avoid becoming tributaries to China's geopolitical aspirations that may not be in Australia's interests.

Customer diversification won't be easy to achieve in the face of market dominance, however. Crucial will be the success of Australia and its like-minded partner nations in activating their multiple agreements to develop new, secure and sustainable supply chains.

It's also vital that critical-minerals partner nations maintain liberal trade relationships with Australia, keeping barriers low and maximising opportunities for supply-chain collaboration and the development of new minerals markets. The mineral trade relationship with the US is problematic in that regard, as joint backing of certain critical-minerals projects in Australia is at odds with punitive tariffs on other mineral products exported from Australia to the US. Tariffs on aluminium, steel and copper products, but at the same time, US Government investment in Australian production of certain critical minerals, at best create confusing signals. The very small minerals trade with the US and only modest prospects for increasing that, even with new investment and supply chain arrangements, limit upside economic benefits for Australia.

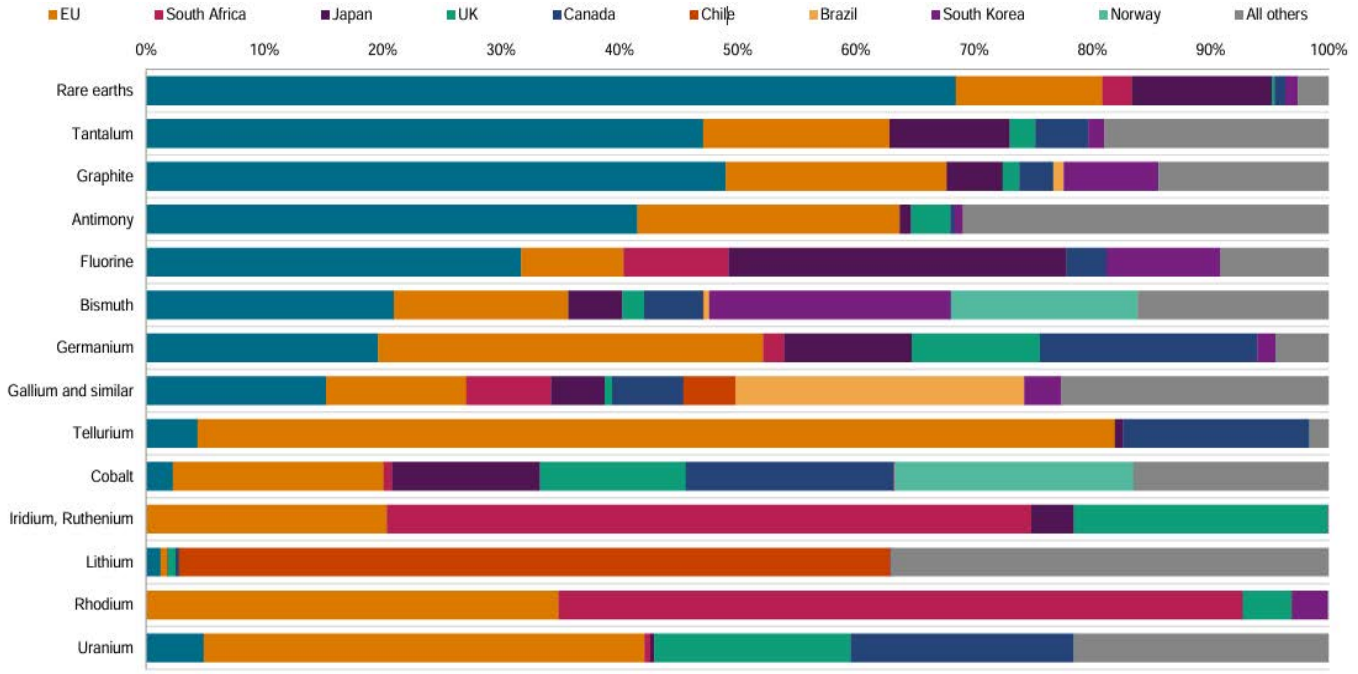
For individual companies and their critical-minerals operations, however, investment by the US and other nations, and their associated offtake, promise smooth pathways to project development that have been rocky to date.

Putting the Australia–US minerals relationship into perspective

Bilateral minerals trade and investment

The October 2025 Australia–US critical minerals partnership, *United States–Australia Framework for Securing of Supply in the Mining and Processing of Critical Minerals and Rare Earths*, represents a welcome strengthening of the strategic relationship, but expectations for an increase in overall minerals trade should remain modest.[40] The headline figure of US$2 billion (A$2.9 billion) of combined government investment in prospective critical-minerals projects must be viewed against the A$392 billion stock of foreign mining investment in Australia and the A$873 billion market capitalisation of ASX-listed resources companies. The US may be Australia's most important two-way investment partner, but it isn't—nor will it be likely to become—a major market for Australian minerals. China's resources imports from Australia are more than 250 times larger, and Japan and South Korea will continue to dominate Australia's export mix.[41] Beyond gold and a handful of critical and niche minerals, US demand is limited, while new US tariffs—now 10% across the board and 50% on steel and aluminium—further erode confidence in the US as a stable buyer. As Figure 5 shows, Australia doesn't figure among the major suppliers of critical minerals to the US. China and EU countries are the leading suppliers.

Figure 5: Sources of US imports of selected critical minerals, including processed materials, 2024



Source: S&P Global Market Intelligence, online.

US policy inconsistencies compound the challenge. American firms themselves are exposed to unintended consequences: Albemarle's plans to source lithium hydroxide from Australia collapsed under Inflation Reduction Act 'foreign entity of concern' rules and falling lithium prices. Calls in Washington for Western decoupling from China, rejected by Australia, aren't feasible given minerals trade realities and are inconsistent with the US's own actions in continuing to engage with China on both critical minerals and critical technologies; policies relating to areas such as advanced chips and magnets highlight the dilemma for America's allies even when they want to diversify from China.

In practice, US policy inconsistencies on minerals and technologies are more impactful than the tariffs, despite the latter receiving more media coverage. The impact of US tariffs on Australia is limited because the US accounted for just 0.6 % of Australia's minerals exports in 2024–25.[42] Australia isn't a major supplier of US critical minerals, and, even with increased cooperation, US consumption of key minerals such as antimony and gallium will remain tiny—raising doubts about commercial viability without sustained subsidies, even if the strategic case is strong.

Investment flows tell a different and more important story. Australian minerals companies are major players in the US, spending US$947 million on exploration over five years to 2025 (US$1.3 billion if Rio Tinto is included)[43] and holding

US$34.5 billion in mining and processing assets. That contributes to Australia's A$243 billion stock of outward investment in the US—its largest global investment destination. By contrast, US mining companies have invested US$37.7 billion in Australia and account for less than 5% of exploration spending here.

US efforts to build critical-minerals supply chains

The US is 100% import dependent for 12 critical minerals, while it relies on imports for more than half its consumption of another 29.[44] Even though government financial incentives will stimulate development of new processing capacity and exploration spending is rising, the US will remain very dependent on imported raw and semi-processed materials. The 21 bilateral critical-minerals agreements that the US Government signed in late 2025 and early 2026 and the US-led initiative to create a critical-minerals trade bloc are aimed at diversifying and securing supply.[45]

The US is now the third-largest *destination* for exploration spending, averaging about 12% of global budgets over the five years to 2025. Canada and Australia attracted 19% and 17% of global spending, respectively.[46]

In mineral exploration spend, US-based companies are now substantial players; their collective budgets grew from 7.1% of the global total to 10.9% in the five years to 2025. Companies from Canada and Australia had larger spends in 2025, accounting for 37% and 22% of global budgets, respectively.

The development of supply chains to the US is therefore very dependent on the success of Canada's and Australia's exploration in their own countries, in the US and in emerging supplier nations.

The US recognises the need for critical-minerals supply to the US from other countries in addition to domestic supply. Minerals-focused presidential executive orders have acknowledged that, and the US is actively supporting minerals investment in projects around the world, including in Australia. In January 2026, the US President announced that the US would seek stronger cooperation with allies to strengthen minerals security, which he tied to national security, identifying processed critical minerals as essential inputs across the US economy, not only for the defence industry.[47]

The President's announcement is being given effect through multiple agreements with 11 new bilateral critical-minerals frameworks or memorandums of understanding (MoUs) with countries signed on 4 February 2026, on top of 10 signed in 2025, including with Australia.

Significantly for Australia, with its strategic reserve proposal, and for the G7 critical-minerals action plan intention to develop standards-based markets, US agreements with Japan and the EU include references to specific market support measures:

> [T]he United States, the European Union, and Japan intend to develop Action Plans and explore a plurilateral trade initiative with likeminded partners on trade in critical minerals. Such a plurilateral trade initiative could include exploring the development of coordinated trade policies and mechanisms, such as border-adjusted price floors, standards-based markets, price gap subsidies, or offtake-agreements.[48]

Despite dismantling its aid program and applying often punitive tariffs in an arbitrary manner, the US is expanding its efforts to build more diverse and secure critical-minerals supply chains in developing countries through capacity-building in governance and investment in infrastructure corridors, in line with the aims of the Minerals Security Partnership and the most recent commitments of the G7 Critical Minerals Action Plan.

Rail transport infrastructure investments in the Lobito Corridor in Africa and capacity-building in minerals governance under the ASEAN–US Partnership Program are two examples of initiatives designed to develop and secure critical-minerals supply chains.

The US is also making targeted investments in minerals production and related infrastructure though the International Development Bank and the Export–Import Bank of the United States (EXIM Bank).

The critical minerals framework agreement with Australia for co-funding of mining projects, with letters of intent lodged for eight projects so far, is a firm statement of intent to source more products from Australia.[49] The October 2025 US–Malaysia and US–Thailand agreements on cooperation to diversify critical-minerals supply chains seek to cooperate in strengthening resource-sector governance, promoting partnerships between US and Thai and Malaysian companies, and promoting trade and investment between the participants to expand integration into secure and reliable global supply chains.

The US President's more geopolitically problematic pronouncements on taking over the governance of Greenland appear to be substantially if not exclusively driven by the US's desire to access the Danish jurisdiction's endowments of critical minerals. Canadian, Australian and UK companies are the principal holders of mineral rights in Greenland, where just one prospect is held by a US-based company.[50]

US support for Australian-originating supply chains hasn't yet included specific support for Australia's government-backed strategic reserve via an agreement or agreements for offtake or equity. The canvassing of market intervention mechanisms, such as price floors and price gap subsidies, in the agreements with the EU and Japan, indicates positive direction, however.

Apart from two Australian-operated projects (in Mozambique and Brazil), expressions of US support for projects in Australia or other Australian-operated projects outside the US have yet to translate into long-term agreements for finance, offtake and support for managing sovereign risk, particularly for projects in developing countries.

However, the President's January announcement at the completion of the section 232 review of the effects of imports of 'processed critical minerals and their derivative products' creates an opportunity for greater US cooperation with supplier nations like Australia and allied industrialised countries like Japan. It includes an order to officials to negotiate agreements with trading partners to ensure adequate supply of processed critical minerals and their derivative products to the US. It also includes building on critical-minerals agreements with Australia, Saudi Arabia, Malaysia, Thailand, Japan and others to diversify global supply chains and reduce dependence on 'adversarial nations'. Price floors are contemplated as part of the agreements.

Conveying a sense of urgency is a 180-day deadline for the negotiation of the agreements, with a slew of 11 new bilateral frameworks or MOUs announced during the US-hosted Critical Minerals Ministerial in February 2026.

Current financing and offers of US Government support for 21 current and potential projects operated by Australian companies, with the Australian Government also offering to support eight of those projects located in Australia, can also provide a foundation for building a wider coalition of nations that seek to establish new multilateral supply chains. Price floors proposed by the US could align well with the structure of Australia's critical-minerals strategic-reserve arrangements. When details are released about the US President's 3 February announcement of the 'Project Vault' critical minerals stockpile, US policy should align even more closely with Australia's approach.

There are active precedents for project support in rare earths in Australia. Long-term support from Japan for Lynas Rare Earths' maturing rare-earths supply chain is creating supply opportunities for other nations, including the US. Arafura Rare Earths' Nolans project, which has support from institutions of five countries, is similarly proposed to supply multiple customer nations.

This field is another in the category of needing to not overanalyse the regular hyperbolic and negative words of the US administration and instead focusing on its actions, which are more positively advancing the minerals security of both the US and its allies. Policy contradictions remain, however. Resolving those will be the key to sustained supply-chain development between like-minded nations.

The framing by the US President of uncertainty of supply of critical minerals as a core issue for America's security also provides an opportunity for Australia to be a key contributor to the solution, both by supply from Australia and through the expertise and capital of Australian companies.

US domestic critical-minerals policies

It's noteworthy that annual exploration spending in the US rose by 79% over the five years to 2024, and by 200% for US-based minerals companies,[51] indicating the success of US Government minerals policies driven by the Biden era Inflation Reduction Act. The US is now approaching Australia's position as the second-largest global destination for exploration investment after Canada. As such, the US is a growing investment competitor to Australia and a potential future rival in the production of several minerals, including lithium and copper.

Trump administration tariffs on imports of certain minerals in excess of base bilateral tariffs, plus generous subsidies, are aimed at accelerating investment in the US minerals sector, with an emphasis on in-country processing.

While three of the four executive orders relating to critical minerals[52] that were issued by the President in 2025 acknowledge the need for imported raw-material feedstocks, US policies have so far provided little room for mineral processing in other countries; instead, tariffs penalise some metals and metal products that are produced outside the US. Steel and

aluminium, plus products made from copper, for example, attract 50% tariffs, including for Australian product, despite the close US–Australia strategic relationship and what was a close trade relationship. Generous subsidies in the form of concessional loans and capital grants are available for companies investing in processing in the US.

The January 2026 proclamation that set out measures to diversify sources and secure supplies of processed critical minerals and their derivative products indicates recognition that processing in other nations for supply to the US is also a reality.

US development assistance programs and financial institutions are supporting critical-minerals projects and regions in other countries that supply the US or have the potential to do so. The largest single such activity is the development of the Lobito Corridor to link the Zambian copper belt with the Atlantic coast by rail, competing with a Chinese project to connect Zambia to a port in Tanzania on the Indian Ocean coast. Most activity appears to be aimed at mining projects that can supply the US. Another region of recent US focus is Southeast Asia, where, as noted, the US has supported region-wide minerals governance capacity-building to provide a foundation for investment attraction.

Heavily subsidised new minerals-processing projects in the US could outcompete processing projects in other countries in attracting private investment, however. That said, despite the deep pockets of the US Government, the ability of new projects to proceed in a timely way will depend on the ability of the government and US states to assess and approve new projects expeditiously, but the US has an unenviable record of very long permitting time frames.

The US is prioritising the development of domestic end-to-end supply chains for REEs and magnets that use them. Investment by Australian minerals companies in the US is being enabled by US Government financial support (see below). A case study of Lynas Rare Earths' global investment in rare-earths and magnets supply chains is presented later in this report.

US domestic REE supply-chain initiative creates new model

The US imperative to develop new sources of rare earths and permanent magnets that use them was demonstrated in July 2025, when New York Stock Exchange–listed MP Materials announced that it had entered into a public–private partnership with the US Department of Defense. The groundbreaking deal enables the expansion of separation capacity for heavy rare earths at the company's Mountain Pass mine in California, which is the only mine currently producing rare earths in the US. MP Materials will also build a new manufacturing plant for permanent magnets, with a capacity of 10,000 tonnes per annum (tpa), to supply both defence-industrial and commercial customers such as electric-vehicle manufacturers.

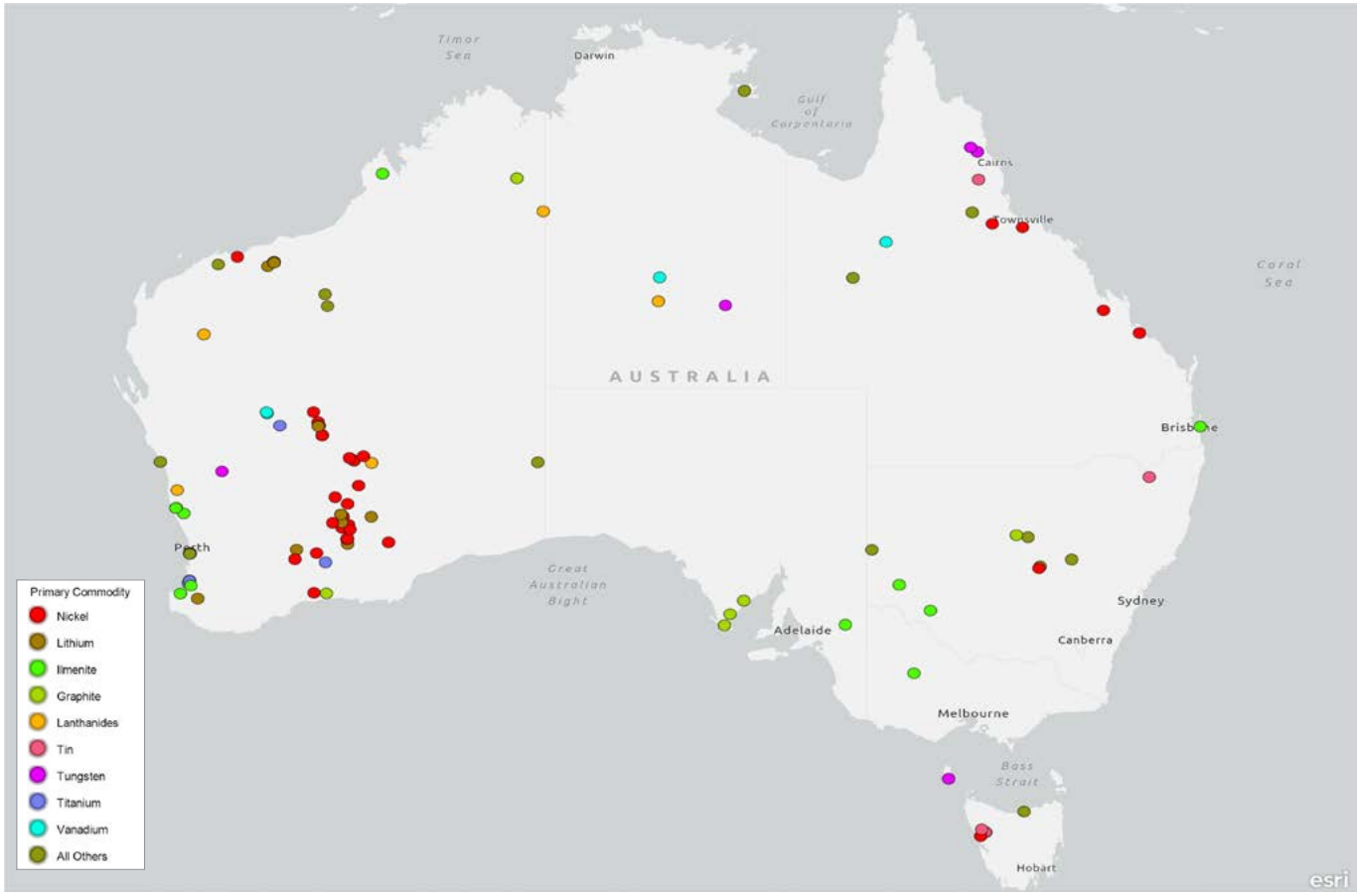
MP Materials currently has a tolling agreement with Vietnam Rare Earth Company to produce NdPr metal from its US-produced NdPr oxide. MP Materials then uses the metal in its 1,000 tpa magnet plant in the US and sells the rest globally, together with the remainder of its NdPr oxide production.

The partnership aspects of the July deal demonstrate the determination of the US Government to rapidly reduce dependence on China for magnet supply. The partnership includes:

- a 10-year price floor commitment for NdPr products stockpiled or sold, so reducing vulnerability to market manipulation and underpinning cash flow, with 'shared upside' (presumably, sharing margins for product sold for above the floor price)
- a 10-year agreement that 100% of the magnets produced at the new facility will be purchased by defence and commercial customers, with shared upside
- a US$150 million loan from the Defense Department for the expansion of heavy rare-earth separation capacity
- the purchase of an equity stake in MP Materials by the Defense Department equivalent to 15% of total shareholding, making it the largest shareholder.

The partnership has helped MP Materials to secure US$1 billion of financing for the development of the new magnet facility. At the time of the announcement, US officials indicated that components of this partnership were likely to be replicated for other projects. In November 2025, magnet maker Vulcan Elements received a loan plus grant funding in exchange for Commerce Department equity in the company and warrants to the Defense Department.[53] In January 2026, the government announced an investment of US$1.6 billion in USA Rare Earth through a US$1.3 billion loan and US$277 million in grant funding in exchange for shares and warrants.[54]

Figure 6: Critical minerals projects in Australia at stages of feasibility, construction, production and care-and-maintenance



Source: Metals and Mining Database, online template by subscription, S&P Global, analysis by the author.

Contradictions in US policies may harm critical-minerals supply

Recent US policies and initiatives might not work fully as intended. US Government incentives, apart from floor-price and offtake arrangements, may prove to be ineffective in attracting investment in minerals processing in the US, for which risks are raised through China's market dominance and manipulation. Tariffs may drive up input costs for the very industries that they're aimed at assisting. Moreover, given extended mine development times in the US from discovery to development averaging 19 years,[55] tariffs on minerals imports alone are highly unlikely to be effective in stimulating exploration or mine development. They may support the construction of processing plants in combination with financial support, but permitting processes may again militate against rapid development, as Lynas Resources is currently experiencing for its Texas processing plant. By comparison, lead times for new mines in Australia average 14 years.

The recently reinforced critical minerals commitments of the Quad[56] and G7[57] provide assurances of members' joint resolve and commitment to market-based approaches but highlight contradictions in US critical-minerals policies.

Contradictions in US policies and statements will inevitably lead to confusion among investors and financiers about how policies will operate in practice and how stable they'll be. Combined with the instability of markets, policy confusion could well result in potential projects being delayed or not proceeding at all.

US–Australia partnerships in minerals projects

The October 2025 US–Australia critical minerals framework announcement[58] of conditional support for new projects in Australia needs to be seen in the context of wider US support for Australia-linked projects in the US, Australia and elsewhere. Analysis of recent announcements by US and Australian government-backed financial institutions reveals that an impressive total of 21 critical-minerals projects (12 in Australia and nine overseas) have now received indications of US Government financial support, and eight of those in Australia have also received conditional Australian Government support. The Australian Government currently doesn't financially support any minerals projects outside Australia, although it does support several projects in Australia that plan to use imported as well as domestically sourced feedstock.

Box 2 lists companies that have received US Government assistance for critical-minerals projects in the US and elsewhere outside Australia. Box 3 lists companies that have received US and/or Australian government assistance for critical-minerals projects in Australia.

Box 2: Australia-linked companies that have received US Government support for critical-minerals projects in the US and elsewhere outside Australia

1. *Lynas Rare Earths:* Lynas USA, LLC has been awarded US$288 million in funding from the US Department of Defense to establish commercial-scale light and heavy rare-earths oxide production facilities in Texas.
2. *Syrah Resources:* US$102 million concessional loan from US Department of Energy for a spherical graphite processing plant in Louisiana, USA; supplied the company's Balama graphite mine in Mozambique, which has been supported by a concessional loan of US$150 million from the US International Finance Development Corporation.
3. *South 32:* Funding of US$20 million from US Department of Defense to advance mining at the Hermosa manganese project in Arizona; and US$166 million from the US Department of Energy for the construction of a battery-grade manganese refinery nearby.
4. *Element 25:* Funding of US$166 million from the US Department of Energy for the construction of a battery-grade manganese refinery in Louisiana.
5. *Locksley Resources:* EXIM Bank letter of interest for debt support of up to US$191 million for the Mojave antimony project in California.
6. *American Rare Earths:* September 2024 EXIM Bank letter of interest for debt support of up to US$456 million to fund all capex for its Halleck Creek Project in Wyoming, plus June 2024 State of Wyoming grant of US$7.1 million.
7. *Anson Resources:* EXIM Bank letter of interest for debt support of up to US$330 million to finance the construction of Anson Resources' lithium production plant in Paradox Basin, Utah.
8. *Amaero International:* US$23.5 million loan from EXIM Bank as part of the 'Make More in America' initiative to fund capital equipment and expand its advanced manufacturing facility in Tennessee.
9. *Meteoric Resources:* March 2024 EXIM Bank letter of interest for debt support of up to US$250 million for the Caldeira Project (rare earths NdPr and dysprosium–terbium, or Dy/Tb) in Minas Gerais, Brazil.

Note: Australia-linked companies are defined as those that are ASX listed and/or have headquarters in Australia.

Sources: EXIM Bank, company announcements.

Box 3: Australia-linked companies with projects in Australia that have received tentative or firm assistance from the US and/or Australian governments

1. *Australian Strategic Materials:* March 2024 letter of interest from EXIM Bank for debt funding of US$600 million for the Dubbo Project (rare earths NdPr and Dy/Tb) in NSW, contingent on US content (equipment, goods and services) to be supplied in the construction phase of the project, plus rare-earths supply to US customers; is in addition to a previous A$200 million letter of support from Export Finance Australia (EFA).
2. *Australian Vanadium:* September 2024 EXIM Bank letter of interest for debt funding of US$31 million for the Australian Vanadium Project in Western Australia.
3. *Victory Metals:* April 2025 EXIM Bank letter of interest for debt funding of US$190 million for the North Stanmore heavy rare-earths, scandium and hafnium project in Western Australia.
4. *EQ Resources:* June 2025 EXIM Bank letter of interest for debt funding of US$34 million for the capital expansion and further development of the Mt Carbine Tungsten Mine.
5. *Arafura Rare Earths:* October 2025 letter of interest from EXIM Bank for debt funding of US$300 million for the Nolans Project (rare-earths NdPr) in the Northern Territory, additional to existing debt funding agreements totalling US$1.05 billion million from government-backed institutions in Korea, Canada, Germany and Australia, plus equity investment of $100 million from EFA. EXIM Bank funding is predicated upon the sale of rare-earth products to US buyers.

6. *Northern Minerals:* October 2025 EXIM Bank letter of interest for debt funding of US$230 million for the Browns Range heavy rare-earths (Dy/Tb) project in Western Australia, plus unspecified but conditional financial support from EFA and potential funding from the Northern Australia Infrastructure Facility.
7. *Graphinex:* October 2025 EXIM Bank letter of interest for debt funding of up to US$860 million for the Esmeralda Graphite Project, spanning upstream mining and concentrator operations in Queensland and downstream refining operations in the US.
8. *La Trobe Magnesium:* October 2025 EXIM Bank letter of interest for debt funding of up to US$122 million for the La Trobe Magnesium Stage 2 Commercial Magnesium Plant in Victoria; funding discussions are continuing with the National Reconstruction Fund and EFA, plus a commercial lender.
9. *VHM Limited:* October 2025 refreshed letter of interest from EXIM Bank for debt funding of up to US$200 million, plus a conditional letter of support from EFA for debt provision of up to A$75 million for the Goschen Project in Victoria (rare-earth oxides plus heavy mineral sands).
10. *RZ Resources:* Approved project financing from EXIM Bank announced on 25 September 2025, plus 20 October EXIM Bank letter of interest for potential financing of up to US$450 million, plus letter of support from EFA, for the Copi Project in NSW to supply rare earths, titanium and zircon to the US and allied nations; strategic investment by Japan's Marubeni Corporation announced in November 2025.
11. *Sunrise Energy Metals:* Refreshed EXIM Bank letter of interest for the potential to provide up to US$67 million in debt financing for the Syerston Scandium Project in NSW, plus EFA conditional letter of support for up to $400 million in debt funding for its Sunrise Battery Materials Complex comprising the Syerston Project and the Sunrise Nickel–Cobalt Project.
12. *Japan Australia Gallium Associates (JAGA; an Alcoa–Sojitz joint venture):* 20 October 2025 announcement of joint Japan, US, Australia and Alcoa special purpose vehicle, with additional equity participation by the Japan Organization for Metals and Energy Security, to enter into a joint development study for the construction of a 100 tpa gallium plant.

Sources: EXIM Bank, Export Finance Australia, National Reconstruction Fund, Northern Australia Infrastructure Facility, company announcements.

Resolving tension between America First, Make More in America and Future Made in Australia

Until the Australian Prime Minister and the US President signed the 20 October 2025 declaration, *United States – Australia Framework for Securing of Supply in the Mining and Processing of Critical Minerals and Rare Earths*,[59] it was unclear how the Albanese government's Future Made in Australia policy and its emphasis on local minerals processing would reconcile in minerals trade with the Trump administration's America First policy and its focus on processing in the US.

The agreement marks a shift in the practical application of Australian Government positions on critical-minerals supply chains. The government seems to have adopted the realistic and pragmatic position that Australian minerals investment and supply chains are global and that processing between Australia and the US will occur where it makes commercial sense to do so. Australia's competitive strengths are mineral discovery, development and primary mine production. The US, with supply-chain security imperatives, cheap energy, local demand and deep pockets, is always going to prioritise local processing.

Arafura Resources noted in its announcement of EXIM Bank support for the Nolans project that it planned to 'deliver critical rare earth oxides directly to the US supply chain, supporting their onshore manufacturing objectives'.[60] That means mixed, not separated oxides, meaning that the Australian Government hasn't required further processing as a condition of its financial support.

That may be a pragmatic response to the reality of rare-earths customer requirements. Rare earths comprise 17 elements, but customer companies typically require only a few or even just one for their production processes, and typically as metals. That means that Australian refineries that will produce mixed rare-earth oxides must then sell to an intermediate processor that can separate the mixed product into individual rare earths and from there produce metals. That capability exists in only a few plants in the world, mostly located in China, the Lynas Rare Earths refinery in Malaysia, and one (MP Materials' facility) only just now being developed in the US. The Iluka Resources Eneabba refinery will also produce separated rare-earth oxides when commissioned in 2027.

Managing US policy turbulence

All nations now face the volatility and uncertainty of US trade policy—which is often shaped by domestic politics rather than trade or geo-economic logic. For Australia, the direct tariff impact is small because exports to the US are limited and tariff rates are mostly low. The secondary effects, however—shifts in demand and economic disruption in major customers such as China, Japan and South Korea—pose far greater risks.

US efforts to de-risk critical-minerals supply chains are increasingly undermined by policy contradictions, making it difficult for partners to connect the steps needed for non-China supply. Australia must remain agile as US policy settings evolve, including the likelihood that Washington will continue to recalibrate once impacts are clear and unintended consequences mount. Opportunities will continue to emerge for Australian investment in the US and for supplying processed and unprocessed minerals that the US lacks domestically.

Yet Australia faces fierce competition from generous US Government subsidies for processing and manufacturing. Domestic incentives help but can't compensate for uncompetitive policies, high energy costs, slow approvals and other structural barriers. With global competition intensifying, Australia must activate every lever—regulatory, fiscal and strategic—to restore and sustain its competitive advantage across diversified minerals markets.

Multilateral initiatives to build new supply chains

For all the planning and promise, bilateral transactional approaches by industrialised nations to assuring the supply of certain minerals have dominated international critical-minerals policy. A shift to multilateral, long-term commitments for investment by customer nations and their end-user and trading companies is underway, however. The 2026 Critical Minerals Ministerial, hosted by the US in early February, marked a potential inflection point in critical minerals alliances between like-minded consumer and supplier nations, as well as emerging resource-rich countries from Africa, Asia and Latin America.[61] A total of 54 countries plus the EU participated.

A major announcement from the ministerial was the launch of the Forum on Resource Geostrategic Engagement (FORGE), which succeeds the Minerals Security Partnership, established in 2022.

The minerals sector was engaged immediately after the ministerial on how to advance priority projects under the new FORGE partnership, with several Australian companies represented. This is also a breakthrough, recognising that it is private-sector investment that is a fundamental essential to developing new supply chains. Governments can merely facilitate, albeit with greater financial involvement than in the past to overcome induced market volatility and economic coercion that have worked to stifle new investment in supply chains for key minerals.

The benefits for supplier and customer nations of multilateral agreements on critical minerals are obvious. Just as AUKUS was agreed by three nations as a multigenerational endeavour, critical-minerals supply should be seen the same way, with core like-minded partners making firm, long-term commitments.

Recent announcements by the Quad and the G7 highlight increased commitment to building critical-minerals supply chains among like-minded nations and at the same time supporting efforts by individual nations to assure their supply of critical minerals.

Discussions within the Quad (US, Japan, India and Australia) and the G7 (plus Australia, India and the Republic of Korea) in early 2026 are detailing how nations will work together to build more diverse, secure and sustainable supply chains.

The Quad Critical Minerals Initiative of July 2025 seeks four-way cooperation to build supply-chain resilience for critical minerals, coordinating with the private sector to facilitate increased investments.

The G7 Critical Minerals Action Plan includes developing a road map to promote standards-based markets for critical minerals, establishing minimum thresholds, traceability arrangements and price recognition. The G7 plan also makes much of signatories working with developing-country partners to develop infrastructure and supporting policy and regulatory reforms that improve their investment climate and attract responsible capital.

These initiatives build on other multilateral efforts, notably the Minerals Security Partnership, founded by the US in 2022 and now supplanted by FORGE.

Each of the recent multilateral initiatives is discussed in more detail later in this report.

Australian projects and multinational supply chains

Well before the US–Australia co-investment announcement, critical-minerals projects operated by Australian companies at home received strong support from the Australian state and federal governments, and at home and abroad from overseas supply-chain partners—both private and public sectors. Several projects from overseas and Australian governments were moving along the value chain from upstream to downstream. The following case studies demonstrate how end-to-end supply chains can come to fruition through sustained and stable policy commitments and cooperation.

Lynas Rare Earths

A prominent example of the development of end-to-end supply chains is the value chain being developed by Lynas Rare Earths, stretching from the Mt Weld mine in Western Australia to downstream processing in Kalgoorlie, Western Australia, and Malaysia and potential permanent magnet partnerships in Malaysia and the US.

In addition to ramping up production and improving product quality from the new Kalgoorlie Rare Earths Processing Facility, the Lynas plant in Malaysia, which the Kalgoorlie plant feeds with mixed rare-earths carbonate product, has been further developed.

In May 2025, Lynas announced the first production of heavy rare-earth product outside China from its new separation circuit at its refinery in Malaysia.[62] The circuit now produces dysprosium and terbium; both of which are used in high-performance permanent magnets.

In July 2025, Lynas announced that it planned to move further down the value chain, signing an MoU with Korean permanent magnet manufacturer, JS Link, to develop a 3,000 tpa rare-earths permanent magnet plant in Malaysia using light and heavy rare-earth products from the Lynas Malaysia plant.[63]

In October 2025, Lynas announced an expansion of its heavy rare-earths separation facility and product range, to be supplied from both the Mount Weld mine and other sources to be developed.[64] Also in October, Lynas announced a memorandum of understanding for a strategic partnership with the only operational US manufacturer of sintered rare-earth magnets, Noveon Magnetics.[65]

Lynas proposes to supplement raw-materials production from its Mount Weld mine with mixed rare-earths carbonate product supplied from other sources, such as ionic clay deposits in the Malaysian state of Kelantan. Those resources are rich in heavy rare earths.

At the same time, Lynas has progressed engineering for its US Rare Earths Processing Facility in Texas.[66] A permitting issue in relation to wastewater has resulted in project delays and a requirement for additional capex, however. At this time, there's significant uncertainty as to whether the project will proceed and, if so, in what form.

The success of Lynas has been enabled by a partnership with Japanese private and public entities (Japanese Government's Japan Oil, Gas and Metals National Corporation (JOGMEC) and Sojitz Corporation) since 2011, when it provided financial support in the form of US$250 million of financing to Lynas through a loan and equity.[67]

Figure 7: Mt Weld Rare Earths Processing Plant

Source: Lynas Rare Earths, online.

Iluka Resources Eneabba rare-earths refinery

Iluka Resources announced project go-ahead for its Eneabba rare-earths refinery in April 2022 following the agreement of a strategic partnership with the Australian Government. That partnership included the provision of a $1.25 billion non-recourse loan to Iluka, administered by Export Finance Australia. Early works at Eneabba subsequently commenced shortly thereafter, in mid-2022.

In December 2023, Iluka announced a capital increase to support the delivery of the refinery. Negotiations with the federal government on how the resulting funding gap would be addressed took place over the course of 2024. In December 2024, Iluka announced an expansion of the strategic partnership, with the EFA debt facility increased to $1.65 billion

Once commissioned in 2027, the project will deliver be Australia's first fully integrated refinery for the production of separated light and heavy rare earths.[68]

The refinery will be supplied from diversified resources, including a monazite stockpile built over several decades at Eneabba, ongoing production from Iluka's portfolio of current and future mineral sands developments and feedstock sourced from a range of third parties. Iluka has concluded concentrate supply agreements with emerging third-party miners Northern Minerals and Lindian Resources. Northern Minerals' Browns Range project is being developed in the Kimberley region of Western Australia; Lindian Resources Kangankunde Rare Earths Project is located in Malawi, southeastern Africa.

Previously, intermediate rare-earth products would require export overseas prior to refining to produce separated rare-earth oxides. Iluka's approach represents one of the few cases in which imported concentrates are being refined or processed within Australia. Diversified feedstock for the Iluka refinery provides an upstream example of strengthening supply-chain security.

In 2022, Iluka entered into an agreement with Northern Minerals for the supply of rare-earths concentrate from the Browns Range project. Iluka backed that up with an initial investment of A$20 million to help fund a definitive feasibility study and a commitment of equity funding following the delivery of a final investment decision for the mine. The Browns Range deposit has high concentrations of heavy rare earths dysprosium (Dy) and terbium (Tb), which are used in exacting applications.

According to Northern Minerals, Dy and Tb make up 67% of the rare-earths 'basket value', and the deposit has the potential to be the largest source of those minerals outside China.

In addition to the concentrate supply agreement, Iluka will lend US$20 million (A$30.8 million) to Lindian to contribute to the construction of the Kangankunde mine.

As mentioned above, Northern Minerals has been subject to regulatory and legal intervention from the Australian Government to compel sell-downs of investment by certain foreign shareholders following a review by the FIRB.

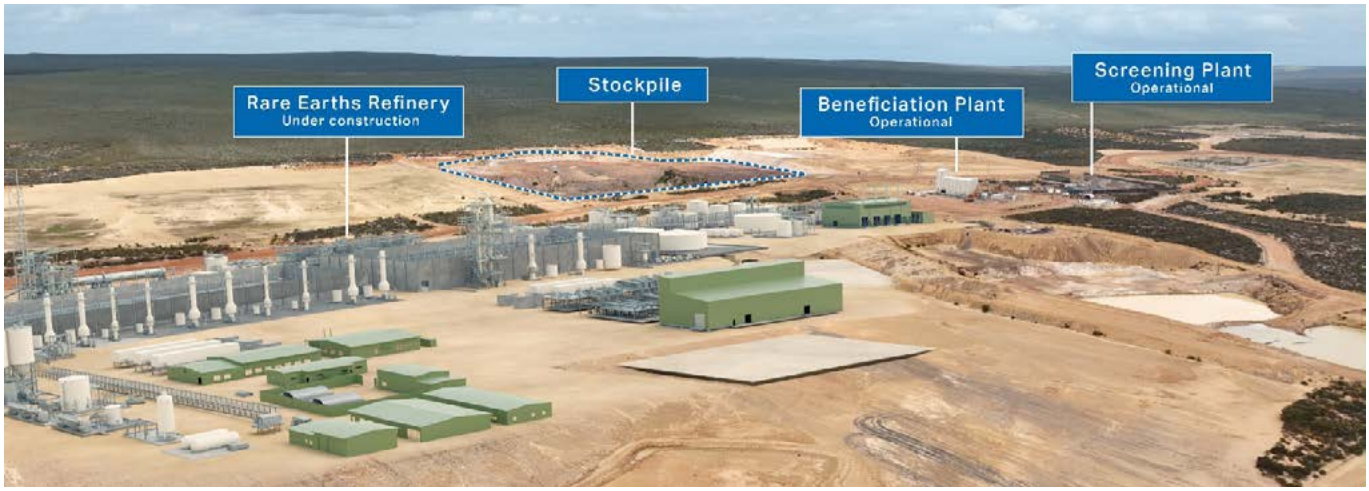
The Eneabba refinery project has several novel, if not unique, characteristics designed to mitigate risk and support sustainability and longevity:

- The construction of the refinery is the result of a partnership with the Australian Government, which has provided A$1.65 billion via a non-recourse Critical Minerals Facility loan, with an A$414 million equity contribution by Iluka.
- Iluka is seeking to establish an independent pricing mechanism for the sale of its separated light and heavy rare-earth oxide products that is delinked from the Asian Metals Index, and is understood to be looking for floor prices and offtake at a guaranteed rate.
- Pricing of feed concentrate will be determined by a mechanism that's linked to the price realised by Iluka from product sales. This ensures that both Iluka and the concentrate producer share in the value uplift associated with achieving non-China pricing outcomes.

Iluka has noted the terms of the agreement between the US Department of Defense and MP Materials, including a price floor of US$110/kilogram for NdPr products that are sold or stockpiled. This, Iluka says, is acknowledgement by the US Government that higher prices for separated rare-earths oxides are essential to building Western rare-earths supply chains.

Recent commentary has pointed to opportunities for the G7 and its partners to deepen cooperation to strengthen supply-chain resilience, including through coordinated pricing measures. As noted, within Australia, the government's national-security-focused strategic reserve underpins its approach to pricing support for certain rare-earth products.

Figure 8: Artist's render of Eneabba rare earths refinery



Source: Courtesy of Iluka Resources

Australian Strategic Materials rare earths and metals

Pending commercial sanctioning of its Dubbo rare-earths mining project in New South Wales, Australian Strategic Materials has taken an unusual pathway to entering supply chains by starting downstream. Its first project is in South Korea, where it opened a REE metallisation plant in 2022, following the purchase of a Korean start-up. The plant produces NdPr metal and neodymium–iron–boron (NdFeB) strip alloy. The company plans to expand its product range to produce dysprosium and terbium metals.

The Korean Metals Plant is one of the few facilities outside of China capable of producing such metals and alloys. The company proposes a second metals plant in the US, contingent on funding from the US Department of Defense.

In the meantime, Australian Strategic Materials is progressing planning for its Dubbo rare-earths mining project, examining lower cost production pathways including heap leaching. Its conditional backing by the US EXIM Bank since 2024 provides some heft to the project.

Proposed gallium production in Western Australia

A supply-chain approach to critical minerals is being taken by US–Australian company Alcoa and its Japanese partners in a feasibility study for the production of the critical mineral gallium as an existing by-product of Alcoa's alumina refining south of Perth.

Alcoa and its joint venture partners in the study, Sojitz Corporation and Japan Organization for Metals and Energy Security (JOGMEC), are examining the feasibility of the 100 tpa gallium project to be co-located with the Wagerup alumina refinery, which would deliver an additional value-generating product from the production of alumina based on the large bauxite deposits in the Darling Range.[69]

As highlighted in Box 3, the project received a major boost with the October 2025 announcement of US and Australian government support for the project in addition to support from the Japanese Government. If it proceeds, the project will introduce non-China supply options for semiconductor production, with the partners seeking to work closely with midstream processors and manufacturers in Japan. Current gallium production is concentrated in China and has recently been subjected to export controls, apparently in retaliation to restrictions on the supply of advanced semiconductor chips from the US.

French company Rhône-Poulenc previously operated a gallium plant, taking feedstock from the Alcoa Pinjarra alumina refinery. It opened in 1989 and operated to 1991, and again from 1996 to 1997. The then A$50 million plant had capacity to produce 50 tpa, which was more than 20% of global demand at the time.

The project's Phase 2, which didn't proceed, was to be a rare-earths processing plant fed by monazite extracted from local mineral sands to produce around 15,000 tpa of rare-earth concentrate.

The reasons behind the commercial failure of the gallium plant, and the rare-earths plant not being built, hold lessons for the contemporary production of critical minerals. Those include a need to mitigate market volatility and create certainty of demand through offtake and minimum-price arrangements; a requirement for direct end-to-end supply chains from concentrate production to refining to metallisation and supply to manufacturers; mitigating risks though collaboration between upstream producers, midstream processors and product offtakers, including manufacturers and holders of strategic stockpiles, like JOGMEC and now the Australian Government; and facilitative permitting processes.[70]

Australia's critical-minerals policies and actions

Since ASPI's April 2024 *Reclaiming leadership* report, Australia has advanced its policy settings and signed new international agreements, although implementation has been slow—hampered by election cycles at home and abroad and by ongoing volatility in US policy.

Australia rightly aspires to be a leading global supplier of critical minerals and already holds dominant positions in minerals such as lithium and manganese. It also has strong potential in rare earths and other minerals, provided global markets stabilise and domestic policy settings genuinely support sector growth.

Yet, downstream ambitions have been difficult to realise: new processing projects remain slow to materialise, in part because market manipulation has driven prices down. Substantial government support via concessional loans for the construction of Iluka's Eneabba refinery stands out as an enabling investment that could anchor Australia's first domestically integrated supply chain for the production of rare-earth oxides.

Australia's partner nations face their own strategic imperatives: diversifying supply, mitigating risk and capturing value through onshore processing. Building efficient, sustainable, multi-node supply chains requires pragmatism and cooperation, not zero-sum thinking—precisely the logic embedded in Australia's network of critical-minerals agreements. That logic must remain central even as slow implementation and nationally focused policies like 'America First' strain like-minded nations' cooperation.

Meanwhile, China remains Australia's dominant customer and the world's leading processor of many critical minerals. Diversification is urgently required for both geostrategic and monopolistic reasons, but that doesn't mean abandoning that market; it means growing additional customers and supply-chain pathways to reduce vulnerability, increase the scale of production and expand strategic options.

Developments in Australia's critical-minerals frameworks

Several major policy developments affecting critical minerals have been announced since the April 2024 ASPI critical minerals report. They are discussed in the following pages. There is, however, inconsistency and lack of policy coherence between the various announcements.

Future Made in Australia

Australia seeks to promote investment in critical minerals, just as it does for minerals generally. Critical minerals have special status when it comes to incentivising downstream processing, however, being identified as a priority sector within the government's Future Made in Australia National Interest Framework, released in May 2024.[71]

Future Made in Australia identifies two priority industry streams:

- The Net Zero Transformation Stream is for industries such as critical minerals where Australia has or will have a *comparative advantage for supply to the global economy to help enable its transition to net zero carbon emissions, and public investment is needed for the sector to make a significant contribution to emissions reduction at an efficient cost.*
- The Economic Resilience and Security Stream includes industries in which some level of domestic capability is necessary to deliver economic resilience and security, and the private sector wouldn't invest in that capability in the absence of public investment.

The supporting paper to Future Made in Australia was pointed in its veiled reference to trade policies of China and prescient about future policies of the US:

> Australia has the ability to leverage its track record as a trusted and reliable trade partner, with established links into key markets in North Asia, the United States and Europe, to be a reliable supplier into the growing markets of the future. Australia has been a strong advocate and champion of the multilateral trading system and a rules-based approach. We will continue to actively engage in the relevant international fora to uphold existing rules and develop new rules to address contemporary challenges.[72]

As discussed above, the US critical-minerals policy of domestic processing of domestically produced and imported minerals, and associated strong financial incentives, limit the scope of proposed Australian-sourced supply chains with the US by eroding the viability of Australia-based processing. Pragmatism is needed when developing new supply chains with international partners.

As noted, the Arafura Resources Nolans project will include limited processing to the mixed rare-earth oxide stage, not separated rare earths. The Iluka Resources Eneabba rare-earths refinery in Western Australia will produce separated light and heavy rare earths. The Lynas Rare Earths supply chain from Mt Weld to Kalgoorlie to Malaysia, and proposed magnet manufacturing in Malaysia in collaboration with a Korean company, is an example of commercial considerations rightly driving company decision-making about the locations of supply-chain components. Lynas also stands to supplement its refinery feed from Kalgoorlie with Malaysian-sourced rare-earths concentrates.

The government has stated that the critical-minerals priority in Future Made in Australia also aligns with priorities for critical technologies such as batteries, their components, permanent magnets and defence technologies. The alignment seems largely to be academic, however. In the absence of domestic end-to-end supply chains, the inevitable mixing of mineral products from various sources in global supply chains and the consequent difficulty in tracking flows, it will be difficult if not impossible to assert that there are Australian critical minerals in all products used in Australia. Not that this should matter, given Australia's laudable commitment to the multilateral trading system and to diverse global supply chains for critical minerals, most recently reaffirmed in February 2026 by Resources Minister King in comments about US proposals for tariffs on critical minerals from certain countries.[73]

The principal exception may apply to minerals used in defence equipment, for which a tracking system for key rare earths and perhaps other minerals may be implemented by the US.

More practical for most minerals supply chains is to ensure that they're both secure and sustainable. The G7 Critical Minerals Action Plan includes an aspiration to ensure that minimum standards are met by new supply chains. The plan includes establishing 'a set of criteria that constitute a minimum threshold for standards-based markets, strengthening traceability as a necessary measure'. The US-EU-Japan agreement concluded during the 2026 Critical Minerals Ministerial takes this further, proposing examination of several potential price support and offtake mechanisms.

Australia is in a prime position to ensure that its market standing is strengthened by the implementation of standards-based markets, given the high sustainability credentials of its minerals industry and the skills and practices of Australian companies, wherever they operate.

Australia can also use its experience in minerals supply tracking, developed through its leadership in the implementation of the Kimberley Process to stop 'conflict diamond' trade,[74] and in chemical fingerprinting to determine sources of mined gold.

Australia therefore should be closely involved in the development of standards-based markets and their criteria and associated tracking protocols.

Global minerals industry bodies plan to launch the Consolidated Mining Standard in mid-2026.[75] The new standard will bring together aspects of four current industry standards into one global standard to provide guidance on responsible practices for minerals companies of all sizes. The consolidated standard prescribes three levels of operational performance across business practices; worker and social safeguards; social performance and environmental stewardship. Expected to apply to more than 600 minerals facilities operated by almost 100 minerals companies across 60 countries, the standard should provide a sound basis for upstream and midstream supply-chain assurance.[76]

Strategic reserve and floor pricing

In April 2025, during the Australian federal election campaign, Prime Minister Albanese announced that the next government would establish a Critical Minerals Strategic Reserve,[77] comprising two mechanisms:

- *National offtake agreements:* Through voluntary contractual arrangements, the government proposed to acquire agreed volumes of critical minerals from commercial projects, or establish an option to purchase at a given price, holding security over those assets as part of the strategic reserve.
- *Selective stockpiling:* The government would establish Australian stockpiles of certain key critical minerals produced under offtake agreements, as required.

The details of how the strategic reserve will operate were still being developed by the government in early 2026, but more information was released in January.[78] The reserve arrangements will include A$1 billion for transactions and A$185 million for selective stockpiling of minerals and other implementation costs. The reserve will focus initially on antimony, gallium and REEs. It will secure rights to those minerals, apparently not holding physical stockpiles, and then will on-sell the rights to customers.

In July 2025, Resources Minister Madeleine King proposed a floor price for the acquisition of rights to minerals, similar to the US Department of Defense arrangement for NdPr from the MP Materials operation.

The Australian Government previously indicated that the strategic reserve will focus on securing priority critical minerals for strategic reasons, prioritising those minerals that are most important for national security and the security of key partners. The initial focus on antimony, gallium and REEs aligns with that.

The reserve will complement existing government support mechanisms that provide concessional loans and equity for projects.

The initial financial commitment of nearly A$1.2 billion is modest. For comparison, the value of Australia's copper exports alone in 2023–24 was more than A$11 billion,[79] although copper isn't classed as a critical mineral by Australia; rather, it's a 'strategic material'.

The financial viability of the strategic reserve is far from certain. It remains to be seen how market risks are to be managed and how sales revenue is to generate surpluses in excess of purchase and holding costs of rights. The Prime Minister said in April 2025, 'The Strategic Reserve will generate cash-flow from sales of offtake on global markets and to key partners.' Resources Minister King commented in January 2026, 'It won't be revenue upside in the immediate term, but I'm confident, as we change the dynamics of this global market, based on our abilities and our standards, that there will be an upside for the Australian taxpayer.'[80]

It's one thing for the government to underwrite sales of certain minerals; it's another for it to avoid substantial losses when stockpiles are sold. That's why the stockpile needs to be underwritten by back-to-back agreements with customer governments and companies. That is, rights agreements with a critical minerals project should preferably be implemented back-to-back with agreements by several foreign customer firms or by other government entities that also hold stockpiles.

The failure of the October 2025 US–Australia announcement on critical minerals to include the US partnering with the Australian Government on the strategic reserve seemed a setback for the stockpile initiative. The situation is changing, as the US presidential proclamation of January 2026 and announcements during the 2026 Critical Minerals Ministerial included potential cooperative stockpiling and price support for critical minerals. Other countries, such as Japan, which actively stockpiles certain critical minerals itself through JOGMEC,[81] may agree to partner with Australia with agreed offtake from the stockpile.

The principal drivers of the strategic reserve initiative are:

- a need to overcome the inability of several mining projects, particularly for rare earths, to gain finance and achieve final investment decisions in the face of depressed prices and an inability to achieve required offtake volumes
- providing stocks of critical minerals that like-minded nations seek to access via more diverse, secure and sustainable supply chains
- building trade and strategic advantages for Australia's dealings with like-minded nations.

Depressed prices are most likely as a result of market manipulation, while small offtake volumes are due to fragmented demand and lack of integrated rare-earths supply chains in key markets. Fragmented demand is a consequence of both the relatively small volumes consumed by individual offtakers and the small range of individual rare earths required by each end-use manufacturer.

The fact that the US currently has only one plant with very small capacity to manufacture permanent magnets using rare earths is a prime example of the lack of integrated supply chains. The presidential proclamation highlighted the problem, noting that limited domestic processing capacity requires rare-earth oxides to be exported for further processing before being reimported for domestic use. That gap in manufacturing will start to be redressed with the proposed construction of the MP Materials rare-earths refinery and an associated magnet plant, heavily supported by the US Government, including through equity in the proponent.

The mismatch between the volumes of mixed rare-earth oxides proposed to be produced by some Australian market entrants, and the demand for, say, two rare earths in metal form by an individual manufacturer overseas, isn't going to be resolved by the strategic reserve initiative alone. Matching products to customer needs is vital to building supply chains, but the costs of additional processing and low volumes per customer make that challenging.

The product ranges of Lynas Rare Earths and, in the future, Iluka Resources provide examples of matching refined products to customer demand. Given the complexity and capital costs of rare-earths processing, not all rare-earths projects will be able to support their own dedicated refining capacity. For some smaller projects, centralising refining capacity in Australia or in another country along the supply chain could be the commercial pathway for development.

The treatment of concentrates from the Browns Range project and other projects in Malawi and the state of Victoria at Iluka's Eneabba refinery provides a model for the centralised refining of rare-earth concentrates from diverse sources.

Proposals for critical-minerals production from existing base-metals operations

In August 2025, the Australian Government, together with the governments of South Australia and Tasmania, announced packages of financial support for the Port Pirie lead smelter and the Risdon (Hobart) zinc refinery.[82] Neither lead nor zinc is classified as a critical mineral in Australia, although zinc was included in the strategic materials list released in December 2023.

The Australian Government focused the rationale for its support on the addition of side-stream or stand-alone production of certain critical minerals, applying a critical-minerals fig leaf to justify subsidies for more general minerals processing.

Part of the Australian Government's justification for the A$135 million federal–state package to keep the Port Pirie lead smelter and Hobart zinc refinery open is to 'fast track feasibility studies into world-leading critical metals production. Through the studies, Nyrstar proposes to explore the potential production of essential critical minerals, including antimony and bismuth at Port Pirie and germanium and indium at Hobart.'[83]

All four critical minerals are used in small quantities for alloying with other metals, in semiconductors and in flame retardants. Antimony is used as a hardener for lead in defence projectiles and in flame-retardant chemicals and electronics. Bismuth is used to alloy with other metals and in pharmaceuticals. Germanium is used in optics and electronics. Indium is important for thin-film coatings for screens on devices such as televisions and mobile phones.[84]

Their production may be fed from concentrates processed in the smelter and refinery or from a stream of antimony concentrate from selected goldmines that currently dispose of antimony in their mine tailings streams. Australian antimony production currently comes from the Costerfield gold and antimony mining and separation operations owned by Alkane Resources.[85] Production of antimony is at the rate of approximately 1,300 tpa, much of which is supplied to the US, which consumes about 24,000 tpa and is more than 80% import reliant for the mineral.[86]

In another statement to justify the smelter support package, the Minister for Industry and Innovation, Senator Tim Ayres, drew on part of the definition of critical minerals to justify support for the zinc refinery: 'Zinc is useful for Australia's and the world's transition to a low-carbon economy. It is an enabler of emerging technologies such as solar and wind power.'[87]

The minister further blurred the distinction between critical minerals and other products, saying 'This smelter also produces critical [sic] byproducts including copper sulphate, sulphuric acid, gypsum and cadmium, which are going to be crucial for industry in the years to come.'

The production of some or all of antimony, bismuth, germanium and indium by the Nyrstar operations would presumably be subject to the 10% production tax credit for critical-minerals processing. The outcomes of feasibility studies may find that the production of these critical minerals requires further subsidisation to be commercially viable. Alkane Resources receives no subsidy for its current antimony production.

Figure 9: Nyrstar Port Pirie multi-metals processing facility

Source: Adobe Stock.

The A$1.65 million non-recourse federal government loan to the Eneabba rare-earths refinery project marked a new level of intensity of government support for critical-minerals projects. Announcements in July and August 2025 ramped that up further, when the Australian Government took equity in a lithium mining project and opened the door to financial stakes in minerals smelting and refining operations.

Government equity stake in a lithium mine alongside a Chinese company

The announcement in July 2025 of the acquisition by National Reconstruction Fund Corporation (NRFC) of a $50 million equity stake in lithium producer Liontown Resources is a further increase in the level of government involvement.[88] Several issues arise in this case, however.

First, lithium may be classed as a critical mineral but it isn't one for which there's a potential disruption to supply. Indeed, recent lithium oversupply was in part due to production from the largest producer, which is Australia (China is the largest lithium processor).

Second, the provision of financial, let alone equity, support for a miner that isn't a producer of a secondary product through refining is the first time the government has stepped into upstream production alone.

Third, the government has chosen to invest in this particular lithium producer, when several other current and imminent producers, including one new miner that's also a refiner (Wesfarmers), haven't received support, save for future production tax credits for refining.

Further, the headline of the NRFC announcement—'NRFC announces $50 million investment in leading lithium producer and refiner'[89]—is misleading. So, too, is the headline in the government's media release: 'NRF invests $50 million in Western Australia to ramp-up lithium mining and refining'. NRFC clarifies this in the text of its media release: 'Kathleen Valley's multi-decade and quality ore deposit also means that Liontown has the *potential* to build Australia's industrial capacity and unlock further value in the critical minerals supply chain by becoming an integrated producer and refiner of lithium products' (emphasis added). Liontown, however, is clear when it says on its website:

> We are exploring a refinery to take our spodumene to lithium intermediates, such as lithium sulphate (which would then be further refined to lithium hydroxide in a finishing plant closer to customers), as well as through to final battery-grade lithium hydroxide.[90]

This situation contrasts with the Covalent Lithium operations of Wesfarmers, which, when fully commissioned in 2026, will produce 50,000 tpa of lithium hydroxide in Kwinana, Western Australia, from spodumene produced at its Mount Holland mine site.[91]

It seems therefore that the government is investing in a project that plans overseas refining to produce lithium hydroxide, unlike the Wesfarmers operations and two others in Western Australia that are already fully integrated.

It's additionally curious, given Australia's commitments to work with allies to diversify critical-minerals supply chains, that the government's $50 million investment is alongside another new $50 million equity stake purchased by China's Canmax Technologies Co. Ltd, presumably to underpin spodumene supply arrangements for the production of lithium chemicals at its plants in China. The Canmax investment has survived the FIRB process and presumably there could be further investment from such sources. If that's the case, why has the government taken equity in this project that won't even meet Future Made in Australia processing thresholds?

Government loan to a China–Australia joint venture

In 2022, despite controversies over China's economic coercion and market manipulation, the Northern Australia Infrastructure Facility approved a concessional loan of up to $160 million to support a China–Australia joint venture, Kimberley Mineral Sands, to develop the Thunderbird Mineral Sands Project.[92] Located in the Kimberley region of Western Australia, the project will produce a zircon concentrate and a magnetic concentrate that contains ilmenite suitable for the manufacture of titanium dioxide pigment.

Zircon and its derivatives are used in a wide range of products, from decorative tiles to cladding for nuclear fuel rods to heat-resistant coatings for hypersonic missiles. Australia supplies about one-third of the world's zircon, and China is heavily dependent on Australia for supply. Given the 50:50 joint venture arrangement between Australia's Sheffield Resources Ltd and China's Yansteel, it's likely that production from the project will be China-oriented.

Potential government stakes in lead, zinc and copper processing capacity

The government's August 2025 announcement of A$135 million worth of federal and state government financial support to keep zinc and lead smelters operating has opened the option of the government taking equity stakes in minerals companies as part of subsidy packages.

That would mark an escalation of government involvement in minerals companies and projects, although, as noted, the main products of lead and zinc aren't classed as critical minerals in Australia. One justification for the support of the smelters is that sovereign processing capacity is important to maintain, which has some merit. Nyrstar's commitment to 'explore' the potential production of critical minerals, however, is a tenuous justification, given the tiny scale of production of that production relative to the volume of the core products of metallic lead and zinc.

The government's announcement in October 2025 of a $600 million support package for the Mt Isa copper smelter and Townsville copper refinery abandoned the critical-minerals fig-leaf strategy, instead relying on the sovereign capability argument.[93] The operator, Glencore, was transparent about its view of the government package as a 'short-term lifeline for the copper smelter and refinery [that] comes after Glencore had already stepped up to absorb significant financial losses to maintain operations and jobs while working on a solution with government.'[94] Glencore noted that competition in global copper smelting is fierce, and that other countries are working to secure 'substantial market positions'.

Similarly, a late 2025 support plan to keep the Tomago aluminium smelter in NSW operating was justified by the sovereign capability argument.[95] Aluminium is listed as a strategic material by the Australian Government.

Escalation of government intervention in the minerals sector

Given China's subsidies and unfair practices, Australian (and allied) government involvement in the minerals market is necessary to ensure both an even playing field and that Australia's strategic and security interests aren't undermined. Still, creeping escalation of government intervention in the minerals sector raises questions about the potential for market distortion and requires transparent justification for the expenditure of taxpayers' money on high-risk and potentially market-distorting ventures.

Distortion of product and investment markets

An argument first advanced by Lynas Rare Earths has a new dimension in the lithium, lead and zinc cases. Government interventions in product and now investment markets that benefit some companies and not others could disadvantage incumbents. Lynas expressed a valid concern that rare-earths sales from a government stockpile purchased from Australian producers could undercut commercial sales by Lynas.[96]

Supporting one lithium miner (and not yet a refiner), Liontown, with an equity stake and not supporting others that do have downstream processing (presumably because they haven't requested such support) is at best attempting to pick a winner, and at worst discriminating between companies, arbitrarily distorting markets for investment.

Similarly, while there are no competitors in Australia for the current lead and zinc refineries, any move to subsidise Glencore's Mt Isa copper smelter and Townsville refinery could disadvantage the much newer Olympic Dam copper smelter, operated by BHP, that's being expanded without government subsidy. The same concerns apply to the support plan for the Tomago aluminium smelter relative to other smelters along the east coast.

Questioning 'national security' in relation to critical minerals

The importance of critical minerals (as with critical technologies) to Australia's long-term sovereignty, and its allies' security, means the sector should be a key national-security topic and not just an economic one. It's precisely why economics and security should no longer be separated. Nonetheless, diligence and transparency are needed to ensure that the government doesn't just add the phrase 'national security' to its justification for any and all subsidies to critical-minerals operations. The public should be provided with sufficient information to trust where initiatives are a national-security issue and where they're not. There are clear and legitimate national-security needs of manufacturing nations like Japan and the US where the supply of REEs and other critical minerals like gallium can be and have been restricted by the dominant producer, China. For major manufacturing nations, restrictions on current supply represent an existential situation for their manufacturing sectors and their defence-industrial capabilities, directly threatening their national security.

For Australia, the national-security link for processing is more tenuous, as Australia doesn't undertake advanced processing. That isn't to say there are no security issues for Australia—indeed, decisions by successive governments to

facilitate offshore processing, largely for environmental and economic reasons, have been a major factor in passively allowing China to gain a near monopoly in the processing of Australia's minerals.

The national-security argument gains real force once Australia abandons the outdated separation between economic policy and national security. When viewed through an integrated lens, China's market dominance—and its demonstrated willingness to weaponise trade—exposes the Australian economy to unacceptable coercive risk. Australia might not be a major user of critical minerals in manufacturing, but it's profoundly dependent on the stability of global supply chains and the rules-based order that underpins them. If safeguarding that order is a core national-security priority, then strengthening the resilience of supply chains among like-minded countries becomes equally a national-security imperative. In this broader frame, diversifying markets, supporting trusted producers and reducing structural exposure to a single dominant buyer aren't merely commercial choices—they're essential components of Australia's national-security posture.

Supply-chain facilitation rather than point subsidies

The Minerals Council of Australia (MCA) has questioned the value of the government's strategic reserve on its own,[97] saying that Australia should be leveraging its comparative and competitive advantages to secure end-to-end supply chains by building strategic partnerships with like-minded countries at both government and industry levels, connecting Australian minerals production with overseas manufacturers.

The government's subsidies, including the underwriting of floor prices in combination with the strategic reserve, appear to be only loosely linked to actions to develop end-to-end supply chains.

The MCA cites relationships with Japan and South Korea, where firms, backed by their governments, are working with Australian producers to lock in commercial supply contracts, usually tied to financing. Japan's relationship with Lynas Rare Earths, dating back to 2011, is the prime example of such a partnership, in which financial support in the face of market manipulation has enabled the development of an Australia–Malaysia–Japan supply chain, with the US being added if the Lynas Texas refinery is built after the current delays.

Australia's strong and growing supply-chain relationships with Japan and South Korea contrast with the small and uncertain critical-minerals supply relationship with the US, which is demonstrating through its tariffs policy that it's now a less reliable trade partner, if a more dependable investment one. The negotiations to be conducted to mid-2026 by the US with its trade partners and allies to try to secure the supply of processed critical minerals provide an opportunity to cement and grow the currently tiny minerals trade relationship.

One approach that the Australian Government can take to build and secure supply chains is to dovetail its incentive packages with those of key and potential customer nations and have them reciprocate. That's occurring to an extent with Japan and South Korea and shows promise with the EU.

Given the urgent need of the US for new supply chains for key critical minerals such as light and heavy rare earths, antimony and gallium, it seems obviously in its interests to apply its incentives to supply chains connecting Australian production to the US.

Germany–Australia supply-chain study

A study between Germany and Australia sets an example of how to scope new supply-chain cooperation.[98] It seeks to understand existing supply chains, identify promising potential supply chains and match critical-minerals production and opportunities for cooperation to develop them. The study is also assessing sustainability standards, research and development (R&D) requirements and collaboration, and how to overcome potential obstacles to joint supply chains, including mismatches between products and volumes available for supply from Australia and the requirements of individual processors and end users in Germany. Crucially, the study will also recommend measures to encourage customers to pay premiums for minerals produced and supplied under high sustainability standards. Proof-of-origin mechanisms will also be assessed.

The mineral supply chains being examined are for lithium, high-purity alumina, manganese, nickel, titanium and REEs.

The end result should provide a model of how two allies can use complementary comparative advantages and technical capabilities to build secure critical-minerals supply chains end-to-end, from mined materials and concentrates to oxides, metals, components and complex manufactured products.

International critical-minerals partnerships

Another Australian Government initiative with an international supply-chain facilitation objective is the International Partnerships in Critical Minerals program.[99] Through direct grants, the program supports early-stage critical-minerals projects that involve overseas supply-chain partners. Projects supported include pilot plants, feasibility studies and commercial validation tests.

Overseas raw materials supply to Australian processing plants

The August 2025 Iluka Resources announcement of a 15-year agreement for the supply of 6,000 tpa of rare-earth concentrate from an Australian-operated mine in Malawi, Africa, to the Iluka refinery at Eneabba[100] marks a new development in critical-minerals supply chains. It aligns closely with the supply-chain vision of agreements like the Minerals Security Partnership and the new Forum on Resource Geostrategic Engagement of assisting developing countries to develop well-governed, secure and sustainable supply chains.

A proposal by Australian company EcoGraf to undertake final processing of graphite mined in Tanzania in a product qualification facility in Perth and to supply the EU, Asia and the US has similar supply-chain aspirations.[101]

The so far minimal participation of the Australian Government in the developing country component of the Minerals Security Partnership is at odds with the vision of other partners to develop such multinational, multi-node secure and sustainable supply chains. Australia needs to become more involved to achieve supply-chain objectives, meet its obligations and rise to the expectations of its partners. This is further discussed in the 'Developments in international coordination and cooperation' section of this report.

State and territory policies and regulation

Australia's federal system adds a layer of complexity to both national rules and regulations and to Australia's international partnerships. Understanding the different jurisdictions and their at times nuanced legislative and policy provisions can be challenging but is important for all stakeholders. With Australia's states and territories having primary responsibility for minerals development and regulation, it's appropriate to examine subnational frameworks for critical-minerals investment, trade and supply chains.

All states and the Northern Territory have critical-minerals strategies or programs. All of those have similar objectives: to increase exploration, extraction and processing. They align well with the National Critical Minerals Strategy and Australia's incentives and support mechanisms.

They're also tools for positive competitive federalism whereby states vie for investment in critical-minerals projects, sharpening their settings to ensure that they're competitive in the eyes of potential investors. The production of 'critical minerals' required for the global energy transition also helps to improve the social licence to operate for minerals projects.

As discussed earlier in this report, the key requirement is for more coordinated and timely permitting processes, backed by effective and efficient regulation.

Developments in international coordination and cooperation

ASPI's April 2024 *Reclaiming leadership* critical-minerals report identified 25 international agreements and processes to which Australia was a party. Since then, Australia has signed seven more agreements, while one has been supplanted by a new agreement and the author understands that one has fallen into abeyance. All 30 current agreements go to securing and assuring critical-minerals supply from Australia. The Appendix to this report summarises Australia's bilateral and multilateral critical-minerals agreements.

The 30 agreements go to securing supply chains from Australia. Of those, 17 also commit signatories, including Australia, to work with partners to develop secure and sustainable supply chains from resource-rich developing countries, through mechanisms including capacity-building in governance and sustainable minerals development, knowledge and technology transfer, infrastructure investment, support for minerals investment and facilitating local benefit generation.

Several of the more recent agreements include provisions for signatories to work together to build markets that recognise the real cost of critical minerals produced to high sustainability standards. Several of the most recent agreements include commitments to developing standards-based markets and price support mechanisms.

Evidence of recent Australian Government initiatives to support supply-chain development from developing countries is sparse, however; Australia is yet to rebuild its world-leading Mining for Development Initiative, which was progressively defunded from 2015.[102]

Memorandum of understanding with the European Union

In May 2024, a MoU was executed by Australia with the EU to establish a strategic partnership on sustainable critical and strategic minerals.[103]

The MoU has seven objectives, which in summary are:

1. Jointly develop projects along the value chain, facilitating business-to-business links and supporting investments.
2. Enhance economic and industrial integration of value chains.
3. Develop open, fair and competitive markets for minerals, to develop Australia's critical-minerals sector and enable the EU to diversify its suppliers.
4. Cooperate on ESG standards and assessments, including aligning market pricing with high ESG standards.
5. Cooperate on research and innovation along value chains.
6. Cooperate in third countries, while minimising environmental impacts and benefiting local communities.
7. Promote innovative and digital technologies and services for mining and other projects.

A central challenge for implementing the partnership is to align the rigid EU regulatory system and Australian approaches to project permitting and facilitation, as well as overcoming Australia's cost disadvantages.[104]

Australia–US cooperation in investment financing

In August 2024, the Australian and US financial institutions responsible for facilitating international trade and investment announced their collaboration to create a 'single point of entry' for US and Australian businesses involved in critical-minerals development. This enables critical-minerals businesses to approach either Export Finance Australia (EFA) or the Export–Import Bank of the US (EXIM Bank) and receive streamlined access to financing from both agencies.[105]

Several of the critical-minerals projects that had potential joint loan funding announced on 20 October 2025 applied through the single point of entry.

EXIM offers financing, including export credit insurance, working capital guarantees, loan guarantees and direct loans. As noted, EXIM is already supporting the Dubbo rare-earths project of Australian Strategic Materials through an initial and conditional letter of interest to provide a concessional debt funding package of up to US$600 million (A$923 million) for the construction and execution phase of the project.

The bilateral agreement between the two institutions was followed in January 2025 by EXIM's Supply Chain Resiliency Initiative, which provides targeted financing to develop projects that secure critical-minerals supplies to the US.[106] Financing under the initiative supports supply agreements between suppliers in 'trusted partner countries' and US manufacturers to enable critical-minerals flow into the US and encourage the onshoring of midstream processing. That latter aim highlights the policy tension between US domestic processing objectives and Future Made in Australia.

EFA, using its A$4 billion Critical Minerals Facility, has invested in several critical-minerals projects in Australia or issued letters of support.

EFA's administration of both the Critical Minerals Facility and the A$2 billion Southeast Asia Investment Financing Facility could offer opportunities for support for Australian companies investing in critical-minerals supply chains as they relate to the region's energy transition and associated infrastructure.[107] EXIM is also increasingly active in Southeast Asia as the US seeks to build supply chains and increase its economic influence. EXIM also actively participated in the Minerals Security Partnership and no doubt will continue to engage under the new FORGE initiative. How EFA and EXIM interact in Southeast Asia to facilitate critical-minerals developments there will be a key to securing sustainable supply chains from and within that region through support for Australian and US companies operating there.

G7 Critical Minerals Action Plan

In June 2025, the G7 launched its Critical Minerals Action Plan,[108] building on the Five-Point Plan for Critical Minerals Security established in 2023. Leaders of Australia, India and South Korea have endorsed the G7 action plan.

It sets out how the signatories will work together to build standards-based markets, mobilise capital, invest in partnerships and promote innovation.

In the face of uncertainty about US policies, the action plan is a timely indicator of the commitment of the US to working multilaterally with other nations, both developed and developing, to build more diverse, secure and sustainable supply chains, governed by market principles.

Importantly for Australia, with its high sustainability standards and higher costs of production, the signatories to the action plan also recognise the importance of standards-based markets that reflect the real costs of responsible extraction, processing and trading of critical minerals, while addressing labour standards, local consultation, bribery and corruption, and environmental protection. The G7 plus endorsing nations have agreed to develop a road map to promote standards-based markets for critical minerals, in collaboration with the full range of stakeholders. The road map will establish criteria for minimum thresholds for such markets, including the traceability of products.

The G7 action plan seeks to increase investment in critical-minerals projects within G7 countries and around the world. It recognises that government investment is needed to help mining and processing projects overcome obstacles to development. In this context, it's silent on addressing project development delays in permitting and approvals processes in host signatory countries but does commit to continuing to work with developing-country partners to develop infrastructure, address investment barriers and support policy and regulatory reforms that improve their investment climate.

Quad Critical Minerals Initiative

On 1 July 2025, Australia and its partners in the Quad (Japan, India and the US) launched the Quad Critical Minerals Initiative—'an ambitious expansion of our partnership to strengthen economic security and collective resilience by collaborating to secure and diversify critical minerals supply chains'.[109] Details of the initiative have yet to be developed, however.

In their statement, Quad foreign ministers expressed deep concern about the constriction and unreliability of key supply chains for critical minerals:

> This includes the use of non-market policies and practices for critical minerals, certain derivative products, and mineral processing technology. We underscore the importance of diversified and reliable global supply chains. Reliance on any one country for processing and refining critical minerals and derivative goods production exposes our industries to economic coercion, price manipulation, and supply chain disruptions, which further harms our economic and national security.[110]

It's obvious which country was being referred to. Diplomacy is a key factor for the Quad nations (as well as the G7 and EU). A question for them all is whether the diplomatic omission in referencing China is diluting the message to the private and civil sectors, which are more focused on price and unlikely to change behaviour without clarity.

Pax Silica Declaration

The Pax Silica Declaration, signed in December 2025, is aimed at building secure end-to-end supply chains for AI. Involving Australia, Japan, Republic of South Korea, the UK, Singapore, Israel and the US, Pax Silica seeks 'scalable approaches and solutions to supply chain security by mobilizing the complementary industrial and technological strengths of strategic companies and firms from our respective economies'.[111] The declaration recognises the rapid development of AI, its 'transformative force' for long-term prosperity and how it has created a need for a new, complex supply chain involving investment, energy, critical minerals, manufacturing, technological hardware, infrastructure and new markets.

It encourages partnering on what it terms 'strategic stacks' of the global technology supply chain, from software to minerals refining to energy. The declaration emphasises the engagement of industry and the importance of entrepreneurship, mobilising the complementary industrial and technological strengths of strategic companies in participating economies.

Pointedly, Pax Silica says 'true economic security requires reducing excessive dependencies and forging new connections with reliable partners and suppliers committed to fair market practices.' It emphasises the importance of countering non-market practices, coordination to protect private investment from induced market distortions, and the protection of sensitive technologies. It says parties will do this by strengthening cooperation on economic and national security.

Pax Silica's explicit recognition of the impacts and causes of induced market distortions and its commitment to tackle them is an important strength. On the other hand, it doesn't address the other elephant in the room: domestic policy settings of partner nations that variously cause project delays, drive up costs and restrict supply of vital infrastructure and services.[112] Nor does it go to the design of mechanisms to counter market-distorting and coercive behaviour that lead to delays in investment in critical-minerals production in particular. But then, neither to any other agreements signed thus far. International agreement on details of how to provide market stability and deliver consistency of pricing is now needed to develop new, secure and sustainable supply chains.

Pax Silica is the 30th agreement that Australia has entered into with like-minded nations that involves critical minerals. The question is how the declaration will be implemented along with all the others.

Forum on Resource Geostrategic Engagement

In February 2026, a new multilateral agreement was launched at the at the 2026 Critical Minerals Ministerial, hosted by the US. The Forum on Resource Geostrategic Engagement (FORGE) is the successor to the Minerals Security Partnership and aims to 'lead with bold and decisive action to address ongoing challenges in the global critical minerals marketplace. Understanding the benefits of working together and building on the MSP, FORGE partners will collaborate at the policy and project levels to advance initiatives that strengthen diversified, resilient, and secure critical minerals supply chains.'[113]

At time of writing this report, details of FORGE membership and how it will operate are yet to be released, although the operation of the Minerals Security Partnership should provide a guide.[114]

Activating Australia–Canada cooperation

The extraordinary mineral endowments of Australia and Canada, combined with their world-leading global mineral investment footprints, provide the two nations with unique opportunities not only to dominate critical-mineral supply chains to like-minded nations but also to exert greater global influence in the face of economic coercion and geopolitical upheaval.

As Canadian Prime Minister Mark Carney urged at the World Economic Forum in January 2026, there is an opportunity for middle-power nations like Canada and Australia to work together more closely in the face of disruption from great powers' rivalry and the use of hard power in their own interests and to exercise leadership as the international rules-based order fast erodes.[115] Australia needs to tread carefully, for well-known reasons canvassed earlier.

Working together, Australia and Canada have the opportunity to wrest market influence back from those with lesser standards and self-centred aspirations. As they're the two largest non-China suppliers and have resident companies dominating global minerals investment, close collaboration between them can deliver unmatched supply-chain and geopolitical leverage.

Until the November 2025 announcement of a Canada–Australia partnership,[116] it seemed that the world's two leaders in critical-minerals extraction were taking diverging paths that weakened their market impacts and undermined the efforts of like-minded nations to build more diverse, secure and sustainable supply chains. That was despite both nations committing to multiple critical-minerals cooperation agreements together. It seems that misguided perceptions of competition with Canada in both investment and minerals markets had swayed Australian policymakers away from close cooperation.[117] Australia, wisely, has changed its position.

Strengthening existing collaboration commitments and delivering on them were needed, in the economic and geopolitical interests of Australia, Canada and their allies. There are compelling reasons to conclude and activate the bilateral agreement. While a welcome and pragmatic step, the partnership still falls well short of global cooperation, as it focuses solely on cooperation in each other's domestic industries.

Through the companies they host, the two countries are the largest investors and producers for most minerals, with the exception of several critical minerals, for which China controls supply chains. Data from S&P Global reveals that minerals companies resident in Australia and Canada make up more that 70% of all minerals companies headquartered in like-minded nations.

Further, as the following tables and maps show, Australia and Canada together dominate global exploration, both as destinations for investment and as leaders in global exploration though their resident companies. Significantly, though, the US is growing as a destination for investment and, through its resident companies, as an explorer. Together, Canada, Australia and the US generate nearly 70% of exploration spending and attract 46% of global budgets.

Table 4: Top five sources of exploration spending, by location of company headquarters, 2025

Country	Budget 2025 (US$ million)	Share of global total
Canada	4,602.2	37.1%
Australia	2,667.4	21.5%
USA	1,346.9	10.9%
UK	853.1	6.9%
China	532.2	4.3%

Table 5: Top five destinations for exploration spending, 2025

Country	Budget 2025 (US$ million)	Share of global total
Canada	2,319.5	18.7%
Australia	1,859.7	15.0%
USA	1,464.6	11.8%
Chile	874.7	7.1%
Peru	573.5	4.6%

Source: 'Metals & mining exploration budget by country and global region', 2021–2025, S&P Global.

Canadian and Australian companies combined also operate 223 mines and 43 downstream processing plants globally.[118]

While Australia and Canada are well recognised as highly reliable investment partners and suppliers, the growth of the world's demand for critical minerals to enable both the energy transformation and the digital revolution will be too large for them alone to supply. Additional supply needs to be developed.

It follows that Australia and Canada will become less market competitors and have more to gain from collaboration. So have their customer countries for minerals. Collaborative competition recognises the realities of footloose markets for investment while understanding the power of collaboration in minerals supply chains.

Australia and Canada have signed multiple agreements with each other and with like-minded customer countries that commit to working collaboratively to build secure and sustainable supply chains for critical minerals involving Australian and Canadian production and also output from third countries. Most such nations host both Australian and Canadian minerals investment.

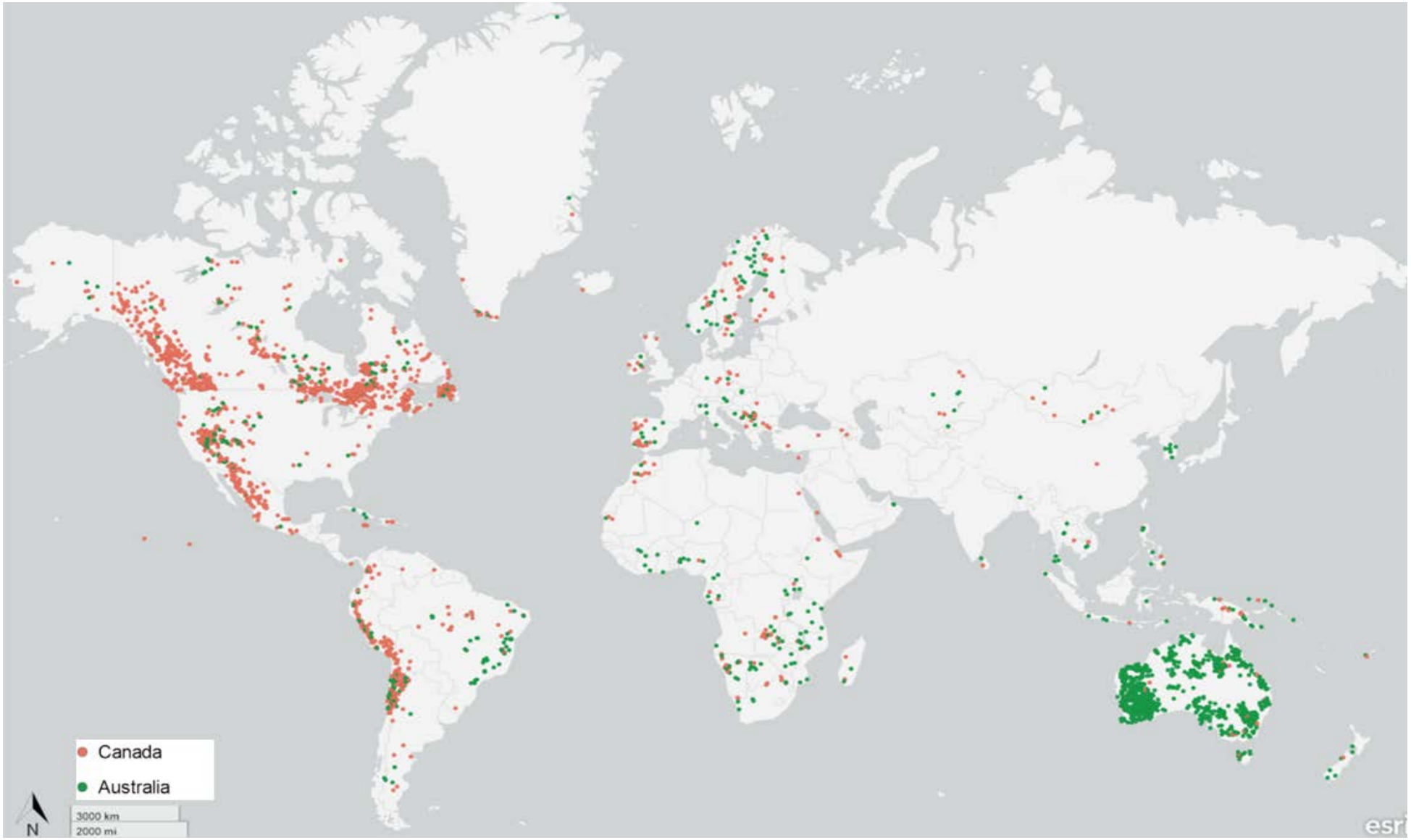
Australia and other members of the Canada-led Sustainable Critical Minerals Alliance seek to support the sustainable and responsible development and sourcing of critical minerals worldwide. The US-initiated Minerals Security Partnership, of which Canada and Australia are also members, emphasises capacity-building of mineral-rich developing countries, tapping the mining governance knowledge and practices of advanced mining nations like Australia and Canada. Most recently, in June 2025, Australia endorsed the G7 Critical Minerals Action Plan, as noted above.

Finally, Australia and Canada are also recognised as the world's leaders not only in minerals exploration and production, but also in sustainable minerals development practices, in which their companies share common standards.

It's therefore concerning that the agreement between the two minerals leaders is about working together in just Australia and Canada and doesn't include them working together in other countries that host Australian and Canadian companies.

Global leadership must include leading other nations and supporting them to help meet critical-minerals demand.

Figure 10: Canadian and Australian companies' global critical-minerals footprint—exploration



Source: Metals and Mining Database, online template by subscription, S&P Global, analysis by the author

Figure 11: Canadian and Australian companies' global critical-minerals footprint—mining and processing

Source: Metals and Mining Database, online template by subscription, S&P Global, analysis by the author

Speeding critical-minerals projects to market

Australia's minerals permitting and regulation

One of the main reasons for uncertainty and delay in critical-minerals projects in Australia is the systems of project assessment and approvals, and coordination within and between levels of government. While improvements have been made to both in the past decade or so, processes often take too long to meet market windows.

Concerted action by the federal and state governments and industry is needed to sustain the nation's minerals investment competitiveness through market cycles and induced downturns due to critical-minerals market manipulation by others.

The average time from discovery of a mineral resource to the commissioning of a mine in Australia is estimated by S&P Global at 14 years,[119] compared to the global average of 15.5 years. Canada, the most comparable minerals producer to Australia, averages 20 years; in the US, the average lead time is 19 years; both nations are focusing on solutions to the problem. Of the major mining nations, Türkiye was assessed as the fastest to production, at 11 years.

As any minerals or energy company knows, the bottom cost quartile is the key to competitiveness through price cycles. The same principle should apply in Australia for lead times for minerals development, particularly as delays reduce project viability. The Productivity Commission has estimated that a one-year delay to a project can reduce its net present value by between 7% and 18%,[120] depending on the discount rate and the stage of the project at which the delay occurs. Reducing lead times can therefore improve project viability.

While governments are understandably keen to trumpet the pipeline of potential projects, analysis by the MCA of the Australian Government's Resources and Energy Major Projects List in 2023 found that only one in five of the projects first listed made it to completion.[121]

The resources industry tends to focus on timelines and processes for government assessment and approvals as principal contributors to long lead times. The time taken, duplication between governments, legal challenges and associated uncertainties certainly contribute to delays. Governments must find ways to reduce project assessment and approval timelines and continue to improve intra- and intergovernment coordination. Governments should also focus on better processes within and between federal and state agencies, cutting through bureaucratic hurdles and legal uncertainties that slow progress. That would not only help to reduce the time from exploration and discovery to mine commissioning but would also maintain Australia's competitive edge in global resources investment.

Approvals timelines are by no means the only reasons for project delays. Some, like poor and unreliable infrastructure, are at least partially under the control of government, but others relate to processes within companies, markets and financing.

Minerals and energy companies can improve their project planning and decision-making by better integrating processes, linking exploration activities and results, community engagement, mining and processing technologies, environmental management and value sharing to create pathways that speed the commercial sanctioning of projects.

Achieving competitive costs in Australia

The government's Future Made in Australia initiative focuses on hosting more complex manufacturing industries. Australia's cost structure for manufacturers is uncompetitive with other nations'.

Energy availability and cost are fundamental to the viability of manufacturing, ranging from metals and chemicals production to finished goods. Unfortunately, more than a decade of policy stagnation on energy has delivered the opposite. East coast gas shortages and high prices are an existential threat to manufacturing, including downstream minerals processing, which has no substitutes for gas as a process feedstock. Long-term, competitively priced gas supplies in Australia are essential to making almost anything in Australia.

Implementation of the proposed domestic gas reservation arrangements and associated market reforms in 2027 are eagerly awaited by commercial gas customers and investors.[122]

East coast gas supply shortages and costs are also factors—but not the only factors—behind rising electricity costs for industry. Renewable generation, firmed by various technologies, promises to be the cheapest source of electricity in

the future,[123] but achieving the transition and providing the necessary infrastructure is proving to be technically and economically challenging for Australia.

Australia's corporate taxation system is increasingly uncompetitive with those of other resources nations such as Canada. The Productivity Commission has found that tax rates and tax payments by companies are high by international standards.[124] Reductions to corporate tax and generous investment incentives in the US also make it a more attractive destination, including for Australian minerals and energy companies, which are investing heavily. While Australia can't hope to match the incentives offered by the US Government for critical-minerals processing investment there, it must ensure that the overall fiscal environment isn't a relative disincentive to investment in Australia.

The Productivity Commission has identified reforms to corporate tax as a key to spurring business investment, including the introduction of a more efficient mix of taxes and reductions in tax rates. The minerals industry, however, has particular characteristics that make it vulnerable to certain of the commission's proposals, such as a cash-flow tax. Careful design is needed to avoid unintended consequences and achieve the goals of tax reform in ways that support, not disadvantage, the minerals sector.

Developing skills

The growth of Australia's critical-minerals production is limited not by the volume and diversity of resources but by shortages of skilled people to discover and develop mineral deposits, and build and operate mines and processing plants. Australia's Critical Minerals Strategy has growing a skilled workforce as one of its six focus areas. It cites Jobs and Skills Australia as identifying national shortages of key minerals professionals, especially:

- mining engineers
- geological, geotechnical and processing engineers
- geologists
- hydrogeologists
- metallurgists.

As far back as 1998, the MCA identified skills shortages as threats to the industry's future,[125] and through its Minerals Tertiary Education Council and with other industry bodies and the minerals professional association, the Australasian Institute of Mining and Metallurgy,[126] has long advocated for reforms to encourage participation in minerals-related education and training.

Despite such efforts, Australia's universities are struggling to maintain degree courses in the face of much reduced demand from students who wish to study resources disciplines. Some courses have already shut down; for example, earth sciences at the universities of Wollongong and Newcastle and at Macquarie University.

The shortfall in professional skills threatens the ability of the industry to discover new resources, develop and operate mining projects and operate increasingly complex processing plants.

The diminishing supply of technical experts in resources is thus creating increased sovereign risk for Australia and its resources customers.

China's recent restrictions on exports of critical-minerals processing technology and now even travel by expert technicians make it more important than ever to maintain and further develop domestic capability.

Overcoming skills shortfalls requires close cooperation among universities, industry and governments. Increased funding of degree courses in resources disciplines is a key to incentivising prospective students.

Enhance infrastructure to improve efficiency and reliability

Australia's regional infrastructure, on which critical-minerals projects and other resources operations rely for inputs, outputs and efficient operation, is often inadequate and unreliable, particularly in the face of natural disasters. This can and has delayed bringing projects to market and interrupted both outbound minerals and energy supply chains and the timely supply of inputs to production operations.

Community infrastructure and associated services are also often inadequate to deliver the living standards in regional areas that today's skilled workforces and their families demand.

The vast area of Northern Australia, where so much of Australia's critical minerals endowment is located, suffers the greatest deficits of infrastructure availability and reliability.

Several government plans and strategies have highlighted the needs and proposed solutions. The Critical Minerals Strategy 2023-2030 has as one of its six focus areas: *unlocking investment in enabling infrastructure and services*.

The Australian Infrastructure Plan 2021 and the Northern Australia Action Plan 2024–2029 also emphasise the importance of infrastructure to resources development in regional areas.

Despite these plans and government action, infrastructure deficits remain. The federal and state governments must implement the actions and recommendations of their plans and strategies to lift the efficiency and reliability of regional infrastructure, including community infrastructure, to enable the resources sector to operate to maximum efficiency and deliver dependably into critical-minerals supply chains.

Making the most of disruption and opportunity

Australia is in an extraordinary position to be able to leverage both its domestic endowments of critical minerals and the worldwide footprint of its minerals companies into not only leadership in critical-minerals supply chains but also to strengthen is geopolitical and geo-economic power.

Navigating disruptive trade and strategic tensions requires deft and pragmatic handling to mitigate risks and maximise opportunities.

Turning international critical-minerals agreements into action is crucial to building new secure and sustainable supply chains with like-minded nations, and to diversifying customers for Australia's minerals at scale.

To reinforce Australia's position as one of the world's most reliable and trusted sources of minerals and energy products and indispensable to the creation of new, secure supply chains, Australia should ensure that its domestic policy settings work to reduce the costs of the construction and operation of minerals facilities, deliver efficient and effective permitting processes, and provide sufficient energy at competitive cost.

Governments, industry and universities need to cooperate closely to arrest and turn around the downward trend in the availability of skilled people in the minerals sector.

Managing the full range of supply-chain risks requires close attention by Australia, its minerals sector and its investment and trade partners. Australia, like its minerals peer, Canada, should more strongly support the impressive geo-economic reach of its minerals companies and the Australian companies that service them. That Australia has signed multiple agreements to work with emerging minerals-producing nations provides the commitment.

In the end, the geopolitical disruptions faced by the world provide great opportunities for Australia and its minerals sector. Australia shouldn't waste these unique circumstances.

Appendix: Australia's critical-minerals agreements

Australia's bilateral critical-minerals agreements and processes

	Agreement / process	Features
1.	Australia – United States Climate, Critical Minerals and Clean Energy Transformation Compact and Statement of Intent, 2023	Establishes climate and clean energy and a shared energy industrial base as the third pillar of the Australia–US alliance, with defence and economic cooperation.
2.	United States – Australia Reciprocal Security of Supply Arrangement, 2011	Provides for cooperation, coordination and priority support for requests for 'industrial resources'. This was to be enabled by a system based on a code of conduct to be signed by accredited Australian companies.
3.	Australia – United States Strategic Commercial Dialogue, from 2022	Discussions examine enhanced cooperation and working with like-minded partners to build more secure and resilient supply chains.
4.	Australia – United States Net Zero Technology Acceleration Partnership, July 2022	Aims to accelerate the development and deployment of zero-emissions technology solutions, and advance collaboration on critical-minerals supply chains, to support energy security, economic growth and decarbonisation goals.
5.	Australia – United States Energy Security Dialogue, from 2018	Facilitates cooperation on clean energy supply chains, critical minerals, energy security and clean energy technologies.
6.	Australia and United Kingdom Critical Minerals Statement of Intent, 2023	The parties seek to work together to increase and diversify the global supply of critical minerals; build sovereign capabilities in downstream processing and manufacturing; and build new critical-minerals industries.
7.	India–Australia Critical Minerals Investment Partnership, 2022	Aims to identify critical-minerals projects in Australia for potential investment by Indian companies.
8.	Australia – Republic of Korea Memorandum of Understanding on Cooperation in Critical Mineral Supply Chains, 2021	Collaboration across joint initiatives, including supply-chain mapping, R&D, and trade and investment, and connecting the private sector to investment and trade opportunities.
9.	Japan–Australia Critical Minerals Partnership and corresponding Critical Minerals Working Group, 2022	Build bilateral critical-minerals supply chains and contribute to diversifying global supply chains; facilitate information sharing and research collaboration; and encourage Japanese investment and partnerships with Australian firms.
10.	Australia–France Critical Minerals Dialogue, 2021 and 2023	Build secure, reliable and sustainable supply chains for critical minerals.
11.	Australia–Germany Joint Declaration of Intent, 2023	Joint study on critical-minerals value-chain feasibility.
12.	Indonesia–Australia cooperation on critical-minerals supply chains, 2023	Cooperation on battery manufacturing, critical minerals processing and other aspects of electric-vehicle supply chains.
13.	Joint Statement by Canada and Australia on Cooperation on Critical Minerals, 2024	Six action areas, including responsible sourcing and high ESG standards; supply-chain transparency to monetise responsible sourcing; cooperation and coordination in international forums; supporting bilateral investment.
14.	Memorandum of understanding between the European Union and Australia on strategic partnership on sustainable critical and strategic minerals, 2024[127]	Seven objectives, including markets and supply chains reflecting high ESG standards; cooperation along the value chains; and cooperation in third countries.
15.	Export Finance Australia and Export–Import Bank of the United States single point of entry for critical minerals, 2024	Australian and US critical-minerals businesses may now approach US EXIM Bank or EFA and receive streamlined access to both agencies' financing support.
16.	United States – Australia Framework for Securing of Supply in the Mining and Processing of Critical Minerals and Rare Earths, October 2025	Seven clauses, including securing supply; public- and private-sector support for investment in mining and processing; acceleration of permitting; cost-reflective price mechanisms; working with third parties.
17.	Australia–Canada Joint Declaration of Intent on Critical Minerals Collaboration, November 2025	Four objectives, including facilitation of public investment; encouraging commercial and research collaborations.

Australia's multilateral and minilateral critical-minerals agreements and processes

	Agreement / process	Parties	Features
1.	IEA Critical Minerals Working Party and Critical Minerals and Clean Energy Summit	IEA member countries (~49)	Accelerate progress towards diversified and sustainable supplies of critical minerals.
2.	Forum on Resource Geostrategic Engagement (FORGE) (led by US and RoK)	Australia, Canada, Estonia, Finland, France, Germany, India, Italy, Japan, Norway, Republic of Korea, Sweden, UK, US, EU	Established in February 2026. Successor to the Minerals Security Partnership. Collaborates at the policy and project levels to advance initiatives that strengthen diversified, resilient and secure critical-minerals supply chains.
3.	Sustainable Critical Minerals Alliance (Canada-led), 2022	Canada, UK, France, Germany, US, Australia	Promote sustainable, environmentally and socially responsible mining practices for the critical-minerals sector.
4.	Conference on Critical Materials and Minerals	Japan, US, EU, Australia, Canada	Advancing collaborative efforts towards securing a stable supply of critical materials.
5.	Strategic Advisory Group on Critical Minerals in the International Organization for Standardization (ISO)	167 countries, including Australia	Development of overarching standards guidance for critical-mineral supply chains.
6.	Energy Resource Governance Initiative	Australia, Botswana, Canada, Peru, US	Disseminate 'best practices' across the international mining sector, engaging countries to advance governance principles, share best practices, and encourage a level playing field.
7.	OECD resources governance programs	38 member countries	Improve resources governance, mining practices and outcomes for nations, including for critical minerals.
8.	Critical Minerals Mapping Initiative between Geoscience Australia, the US Geological Survey and the Geological Survey of Canada.	Australia, US, Canada	Provide data to build a diversified critical-minerals industry across Australia, Canada and the US by developing better understanding of the world's known critical-mineral resources.
9.	Indo-Pacific Economic Framework Critical Minerals Dialogue, 2023	Australia, Brunei, Fiji, India, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, US, Vietnam	Foster closer collaboration between members to strengthen competitiveness and diversification of critical-mineral supply chains and boost regional economic competitiveness.
10.	G7 Critical Minerals Action Plan, June 2025	G7 nations France, US, UK, Germany, Japan, Italy and Canada plus Australia, India and the Republic of Korea.	Focus is on diversifying the responsible production and supply of critical minerals, encouraging investments in critical-mineral projects and local value creation, and promoting innovation.
11.	Quad Critical Minerals Initiative, July 2025	US, Japan, India, Australia	Strengthen cooperation on priorities such as securing and diversifying reliable supply chains, e-waste, critical-minerals recovery and reprocessing.
12.	Australia–Canada–India Technology and Innovation Partnership, November 2025	Australia, Canada, India	Emphasis on green energy innovation and building resilient supply chains, including in critical minerals, with strategic collaboration towards net zero and further diversification of supply chains.
13.	Pax Silica Declaration, December 2025	Australia, Japan, Republic of Korea, UK, Singapore, Israel and US	End-to-end or full stack approach to technology supply chains, including mining and processing of critical minerals.

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Acronyms and abbreviations

AI	artificial intelligence
ASX	Australian Stock Exchange
Dy/Tb	dysprosium–terbium
EFA	Export Finance Australia
ESG	environmental, social and governance
EU	European Union
EXIM Bank	Export–Import Bank of the United States
FDI	foreign direct investment
FIRB	Foreign investment Review Board
FORGE	Forum on Resource Geostrategic Engagement
GDP	gross domestic product
IEA	International Energy Agency
JOGMEC	Japan Organization for Metals and Energy Security
LNG	liquefied natural gas
MCA	Minerals Council of Australia
MoU	memorandum of understanding
NdFeB	neodymium–iron–boron
NdPr	neodymium–praseodymium
NRFC	National Reconstruction Fund Corporation
NSW	New South Wales
R&D	research and development
REE	rare-earth element
tpa	tonnes per annum

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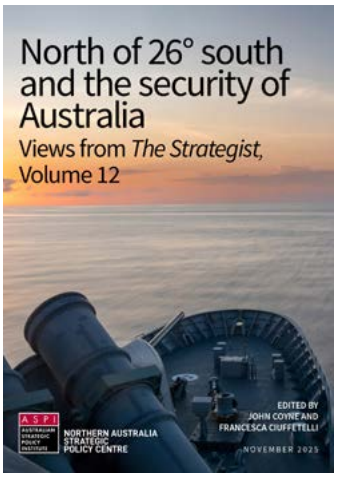

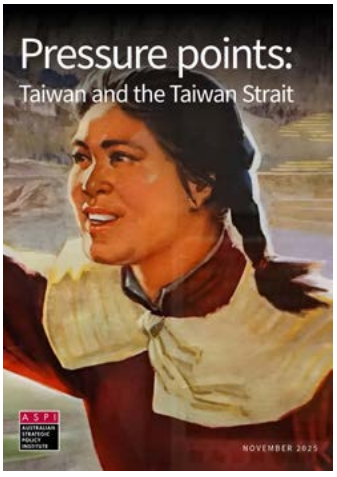

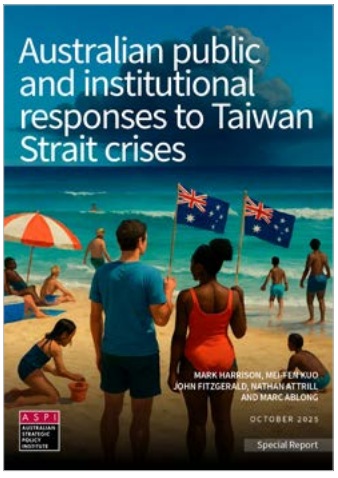

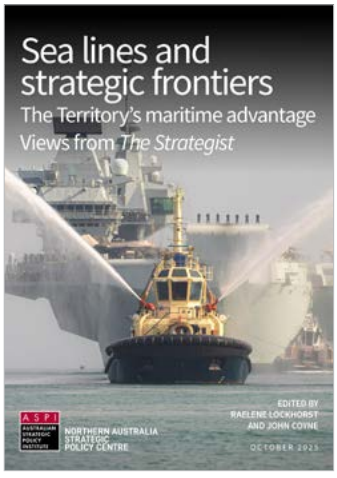

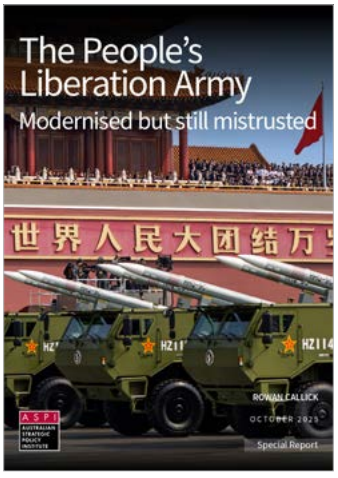

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