Deloitte.

# Creating opportunity through uncertainty

How can Australian critical mineral projects gain an edge in the emerging global market?

## Australian critical minerals: Understanding global uncertainty and positioning for advantage

As the energy and climate transition gathers pace, countries and industries across the world are locking in supply of minerals critical to deliver the transition. From rare earths to lithium, cobalt, graphite, nickel and copper, critical minerals are required for a range of clean technologies, including batteries for electric vehicles and magnets for wind turbines. In response to limited diversification of global supply and increasing demands for ESG value chain transparency, the global trade and investment environment for critical minerals has the potential to rapidly change. Australian mineral explorers, developers and producers must understand the potential implications for their businesses and impact on individual projects across a range of possible scenarios.

# The critical minerals sector

Mineral extraction has delivered extraordinary wealth to Australia. In 2023 alone the sector is estimated to have contributed $240bn to gross domestic product (GDP), directly supported 289,000 jobs, and represented 66% of Australia's export volumes.[1] Not only did it generate prosperity for Australia and Australians, it delivered much of what the world needed to support global prosperity, lifting billions of people out of poverty. Witness the enormous transformation of China over the past two decades, reliant on West Australian iron ore (AUD$253bn in export value in 2022 alone)[2] and before China's rise, Japan's transformation in the 1960s and 70s. Add to this, the role cheap, reliable gas and high-quality coking coal has played in providing the energy needs of industry across the Asia Pacific and beyond.

While the demand for iron ore and gas isn't likely to disappear anytime soon, a major industrial transformation and transition is underway. Driven by the need to urgently address unabated carbon emissions and the impacts of climate change, global business and political leaders are seeking to decarbonise industries and regions. Decarbonisation pathways to meet a 1.5 (preferred) or two-degree world[3] are still uncertain, but what is increasingly agreed on is the drive towards the electrification of almost everything. And what can't be electrified via renewable energy sources, will rely on low or zero carbon molecules.

It is estimated that for the world to meet a 1.5 degree pathway, 500 wind turbines will need to installed each day from 2030 onwards for 20-plus years, along with millions of solar panels, electrolysers and millions of kilometres of electricity transmission lines.[4] It's a monumental task. And each of these clean energy technologies requires 'so-called' critical energy minerals.

The concept of critical minerals is not new. It can be traced back to 1973, when the US Geological Survey prepared a report on mineral commodities important to national security. A list has been kept and updated ever since, with the latest update from the United States Geological Survey (USGS) released in 2022.

However, the challenges posed by disruption to global supply chains during COVID, the Russian invasion of Ukraine and growing tensions between the USA and China have elevated awareness of the importance of a strategic focus on minerals critical to economies' sovereign defence and security considerations.

In 2010, security considerations in the critical minerals space were elevated after China moved to restrict rare earths supply to Japan. This sent shockwaves through the sector, highlighting countries' exposure if they remained reliant on the importation of critical minerals and in the event of a broader trade war.

The current US Department of Energy Critical Materials for Energy list includes 17 elements: aluminium, cobalt, copper, dysprosium, electrical steel, fluorine, gallium, iridium, lithium, magnesium, natural graphite, neodymium, nickel, platinum, praseodymium, terbium, silicon, and silicon carbide. This list represents the minerals critical for the energy transition and essential for national security where the US does not have adequate domestic supplies and is exposed due to the current jurisdictional sources of these resources.

Many countries have developed their own critical minerals lists. Industrial jurisdictions such as Japan and the European Union, for example, have similar albeit slightly different lists to the United States.

Mineral extracting countries like Australia and Canada have quite different approaches. Australia's list (while sharing many of the same minerals as the US) is oriented more around the demand side economic opportunity for the country, providing the world the minerals it needs for the energy transition, as opposed to resolving supply chain and security issues for Australian industry.

The Australian 2024 critical minerals list comprises 31 minerals, including 16 light and heavy rare earth elements and six platinum group metals (51 minerals in total).[5] While it doesn't include every mineral from every jurisdiction, Australia (and particularly Western Australia) is one of the most prospective jurisdictions to supply the world's mineral needs, particularly in rare earths, high purity alumina, cobalt, lithium, graphite, magnesium, manganese, nickel, palladium, platinum group metals, silicon and vanadium.

[1] Australian Bureau of Statistics

[2] Chamber of Minerals and Energy Western Australia

[3] At the Paris meeting of the United Nations Conference of Parties ('COP'), 196 parties agreed to limit global warming to well below 2, preferably 1.5 degrees Celsius compared to pre-industrial levels

[4] Global Wind Energy Council

[5] The platinum group elements include ruthenium, rhodium, palladium, osmium, iridium and platinum. The rare earth elements include yttrium, lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium and lutetium

# How much critical minerals will be required?

Demand for almost all minerals on critical mineral lists is forecast to grow significantly as the energy transition gathers pace. There are a number of key drivers:

- Electric Vehicles (EVs) are a significant contributor to forecast demand growth. A single EV (for a standard lithium-ion EV battery and engine) uses 53kg of copper, 239% of the amount required by a conventional car. It also requires 40kg of nickel, 9kg of lithium and 13.3kg of cobalt[6]
- Renewable energy generation, including solar, wind and battery storage, will be a significant driver of critical mineral demand. An average onshore wind turbine requires 5,500kg of zinc, 3,000kg of copper, 400kg of nickel and 20kg of rare earth elements per megawatt of power capacity[7]. Solar PV generation requires 3,000kg of copper and 4,000kg of silicon per megawatt[8].
- Growth in the transmission network expansion required to connect new renewable generation to the end users will drive demand for copper. It is estimated that 89 million kilometres of rolled copper wire will be required for the expansion of global networks, as well as an additional 51 million kilometres to replace aging connections by 2050.
- A growing green molecules sector will also need critical minerals in the build out of electrolyser capacity, including for the production of hydrogen, hydrogen derivatives and sustainable aviation fuel. Alkaline electrolysers require more than 1,000 kg of nickel per MW[9].

**Critical mineral needs for clean energy technology**

| | Copper | Cobalt | Nickel | Lithium | REEs | Chromium | Zinc | PGMs | Aluminium |
|---|---|---|---|---|---|---|---|---|---|
| Solar PV | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Wind | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Hydro | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| CSP | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Bioenergy | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Geothermal | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Nuclear | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Electricity networks | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| EVs and battery shortage | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Hydrogen | ● | ● | ● | ● | ● | ● | ● | ● | ● |

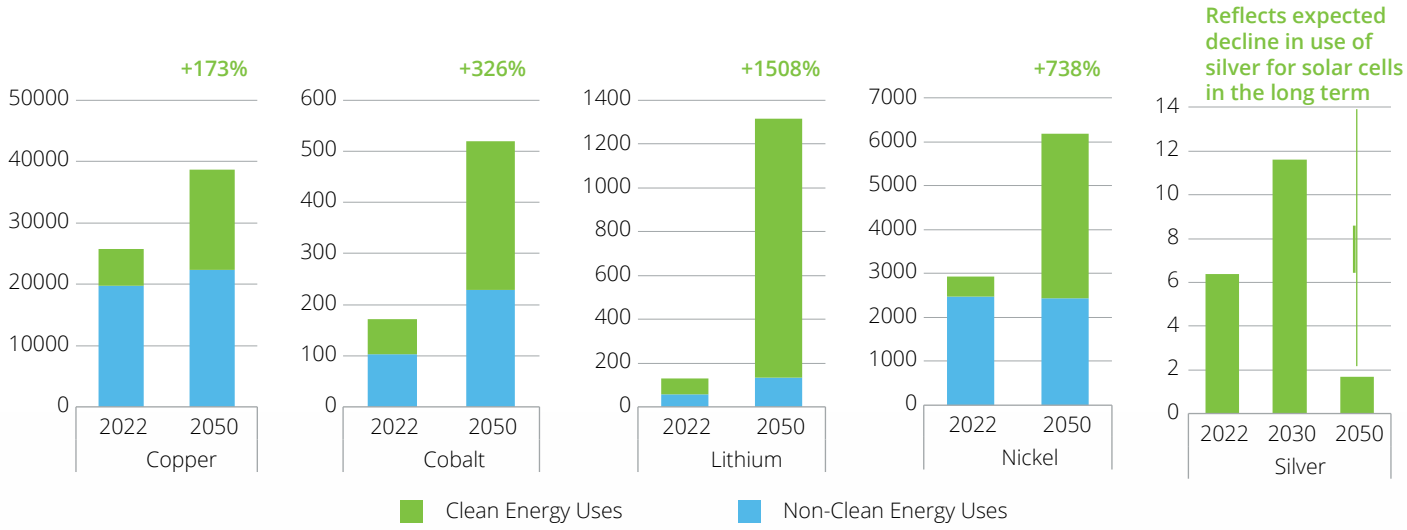
| Importance | High | ● | Moderate | ● | Low | ● |
|---|---|---|---|---|---|---|

Source: International Energy Agency

While total demand growth forecasts vary by mineral, the use of critical minerals for clean energy purposes is expected to exhibit significant growth. Global copper demand is forecast to grow 57% between 2023 and 2050. Nickel demand is forecast to double over the same period, while lithium demand rises by an astounding 11 fold.

[6] IEA
[7] IEA
[8] IEA
[9] IEA 2021

**Demand growth for select critical energy minerals**




Source: International Energy Agency

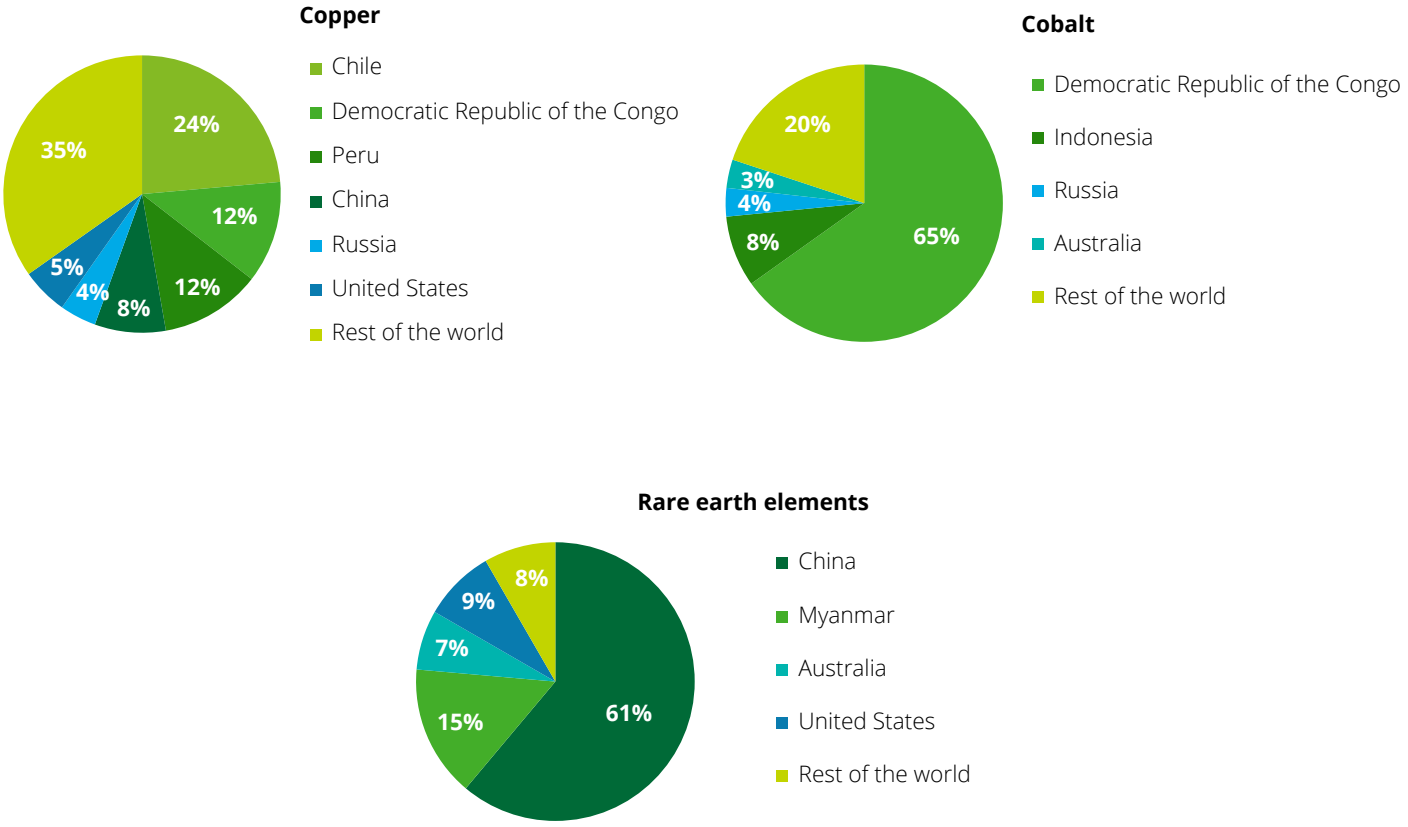
Recycling and new technology developments will help alleviate some pressure (for example we are already seeing battery technology investment pivot to lithium-iron-phosphate (LFP) batteries and vanadium flow batteries, to reduce the reliance on cobalt), but demand growth across these minerals is likely to remain significant in the near to medium term, irrespective.

# Who will supply the world with the critical minerals it needs?

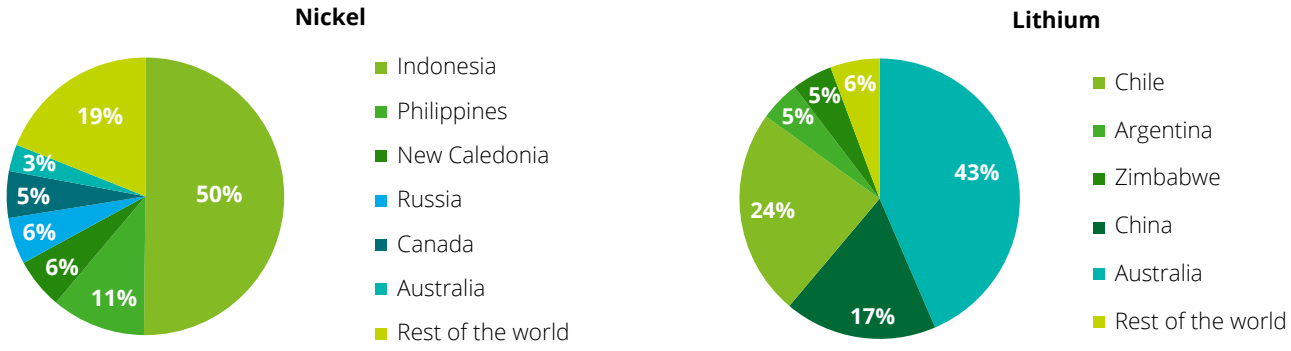
Currently, the supply of the raw critical minerals/ores and their refined chemical or product form is often dominated by a small number of countries for each mineral.

Australia is a major player in the extraction of critical minerals. In 2023 Australian mines delivered 54% of the world's raw lithium production[10]. Australia (and specifically Western Australia and Queensland) also delivered over 20% of the world's alumina, 15% of the world's rare earths concentrate, and was a top five producer of nickel, cobalt and platinum group metals (albeit the later two are dominated by Democratic Republic of the Congo (DRC) and Russia/ South Africa).

**Global critical minerals extraction (2023 - Kt)**




[10] https://www.cmewa.com.au/wp-content/uploads/2023/08/CME-Position-Paper_WA-Critical-Minerals-Opportunity.pdf




Source: International Energy Agency

However, to really understand the role of critical minerals in the energy transition requires an understanding of the entire product value chain – from mining through to chemical processing and end product development – not just the source of the mineral itself.

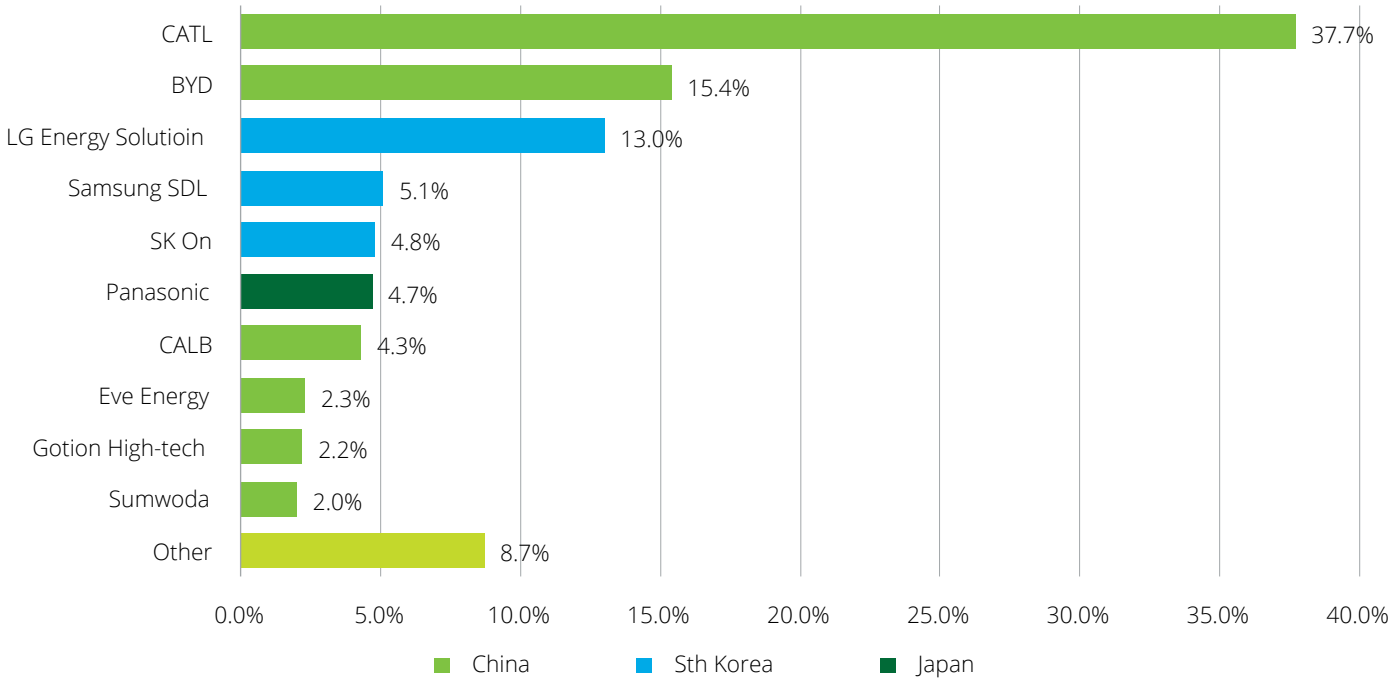
Take cobalt for example. In 2022, 65% of the world's cobalt was mined in the DRC. The mined product is then transported primarily to China where 73% of the world's processing capacity exists. Cobalt is primarily used in NCM (nickel, cobalt, manganese) batteries, one of the preferred technologies for passenger electric vehicles. For the first four months of 2024, more than 65% of the world's batteries were made in China, supplying its domestic car manufacturers as well as international manufacturers such as Tesla.[11]

In recent years, China has moved to shore up supplies of raw material inputs into its processing facilities by integrating up the value chain (for example, China owns or co-owns more than 75% of the operating cobalt mines in the DRC).

The key point here is: much of the battery value chain is characterised by very narrow diversification of supply. While China has undoubtedly invested ahead of the curve to be the world's dominant battery manufacturer and, by default, electric vehicle producer, if COVID and Russia's invasion of Ukraine taught us anything, it is that narrow supply chains pose a risk to any country's industry and economy.

[11] CNE

**Market share of world's top EV battery markets (Jan-Apr 2024)**

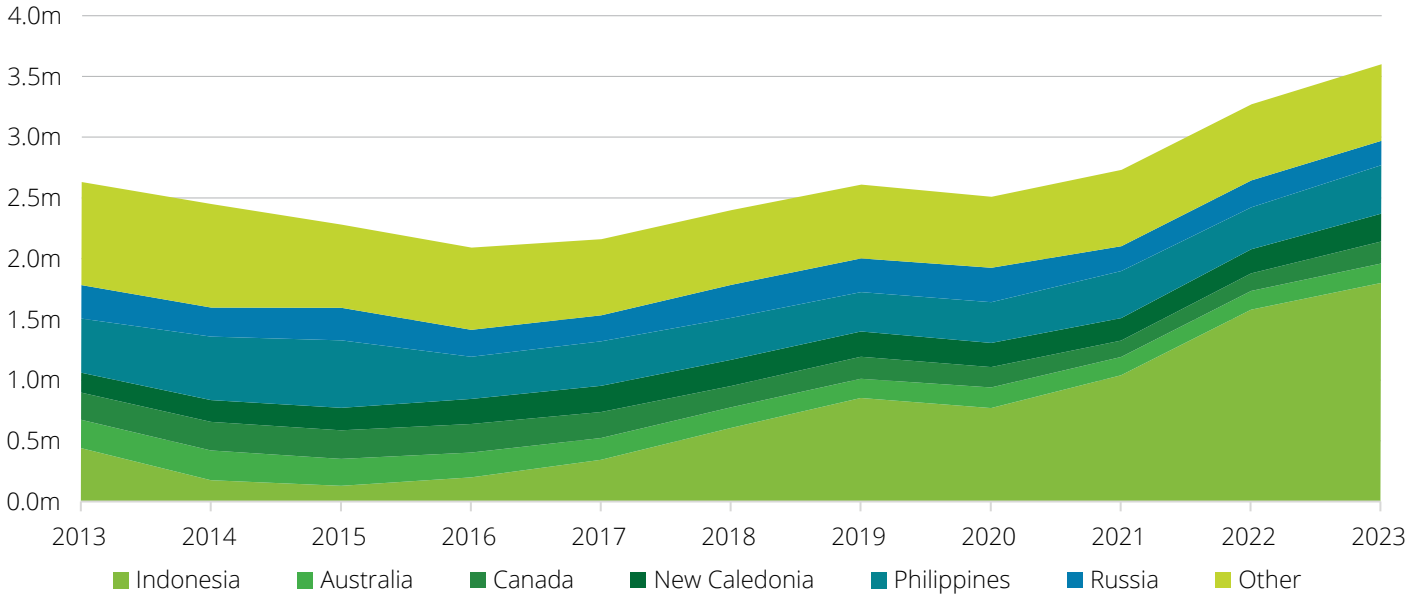



Source: SNE Research
Source: https://cnepost.com

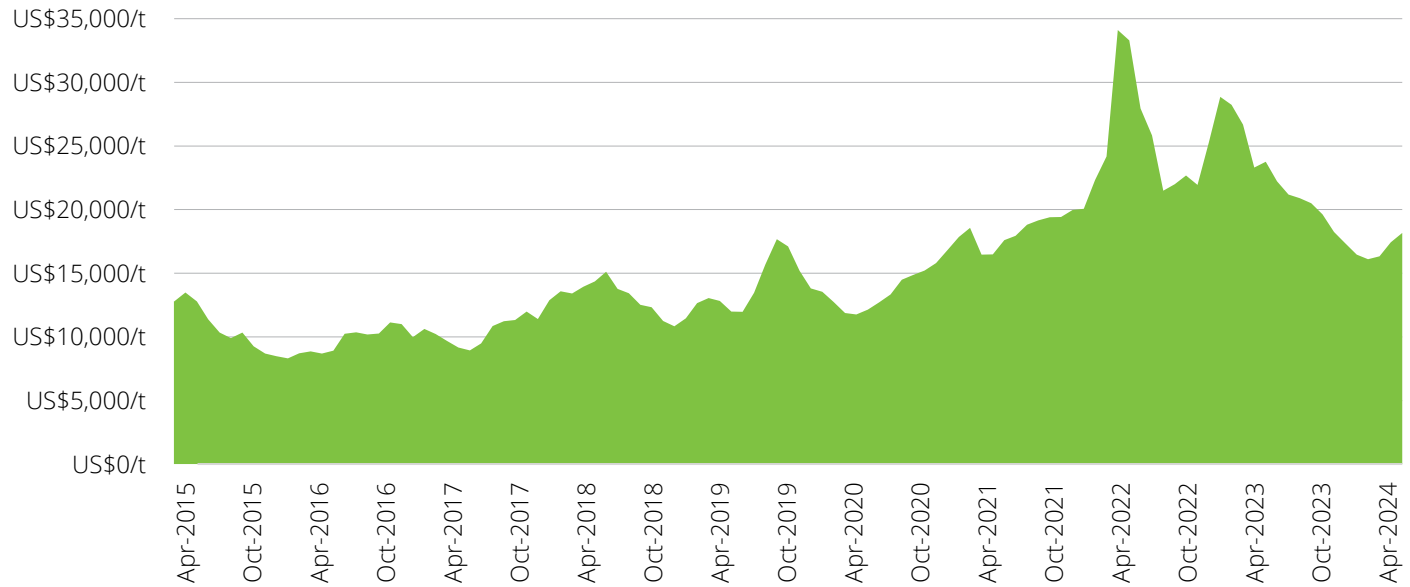
Another example of a mineral in high demand for the energy transition is nickel. It plays a key role in the energy transition, specifically in clean energy technologies including the cathode in lithium-ion batteries for electric vehicles. Challenges in the nickel market have been well documented. Price volatility has been extreme – in 2022, the nickel price rose 250% in two days (the majority of the move over a 20-minute period on 7 March 2022) as a result of a short squeeze. This is endemic of the challenges with market transparency and price discovery in many critical minerals markets.

Since March 2022, the nickel price has declined over 50% as a result of significant processed product coming onto the market from Indonesia. In the past five years, Chinese investment has expanded Indonesian processing capacity to bring Indonesian nickel product to market (Indonesian nickel production has expanded by over 100% during that period), creating a short-term global over-supply and sending prices plummeting. The implications for Australian miners has been dramatic, with a raft of recent mine closures and projects slowing. Many aspiring Australian nickel mines are higher cost than their Indonesian peers and are non-competitive when the price drops below US$20,000/t.

**Nickel mine production, Metric Tons**




**Historical nickel pricing (LME Benchmark Nickel Price (cathodes, minimum 99,8% purity))**




Source: World Bank

While Australia is a major player in the mining of critical minerals, it is far less so in the way of processing or value-adding. In addition to cobalt and nickel, China processes 60% of the world's lithium, even though Australia is the dominant lithium miner, with a 50%-plus share). China also processes 90% of the world's rare earths, and an astounding 100% of global graphite. As a relatively high-cost jurisdiction, Australia has historically struggled to develop a processing and manufacturing capability based on price competition alone.

Despite this history, Australia is very well placed to supply many of the world's critical minerals and, increasingly, some of the value adding through processing of the raw minerals into useable products. There are two reasons for this:

1. The size of the country's in-situ resources and reserves (with un-exploited sources of nearly all of the key critical minerals)
2. The global trade environment is changing.

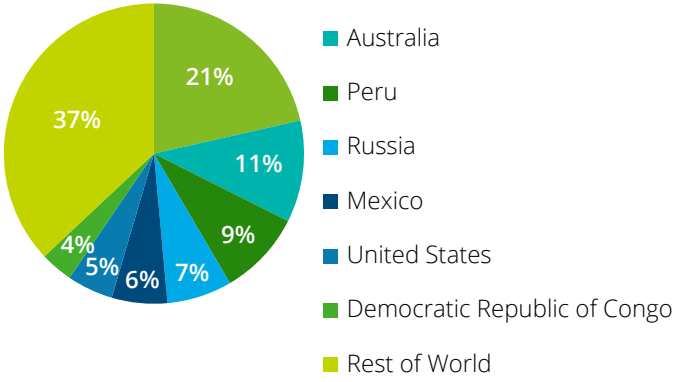
While being a significant existing miner of critical minerals the growth potential for Australian explorers and developers is significant, based on our reserves/ resources. For example while Australia only currently mines 4% of the world's cobalt it has 13% of known reserves.

However, until considerations other than cost are reflected in the purchasing behaviour of customers, the financing of projects or the actions of regulators, Australia's higher cost projects will struggle to compete.

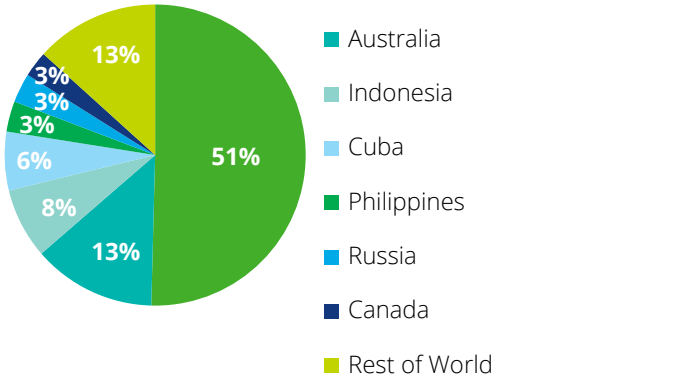
**Reserves of minerals by country**

Global critical minerals reserves (2022 - Kt)

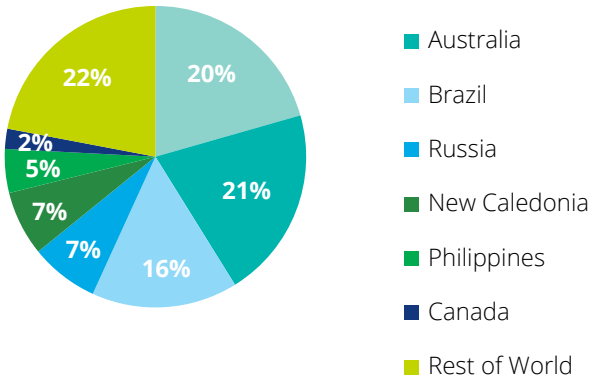
**Copper**



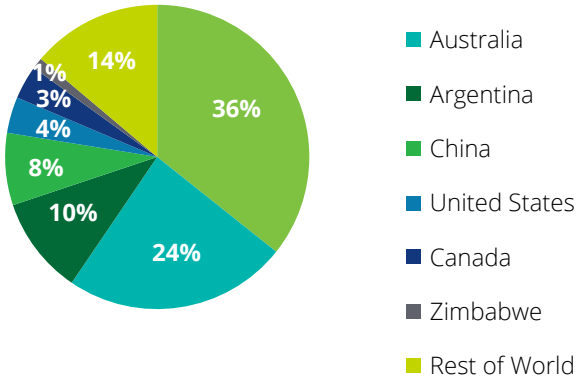

**Cobalt**

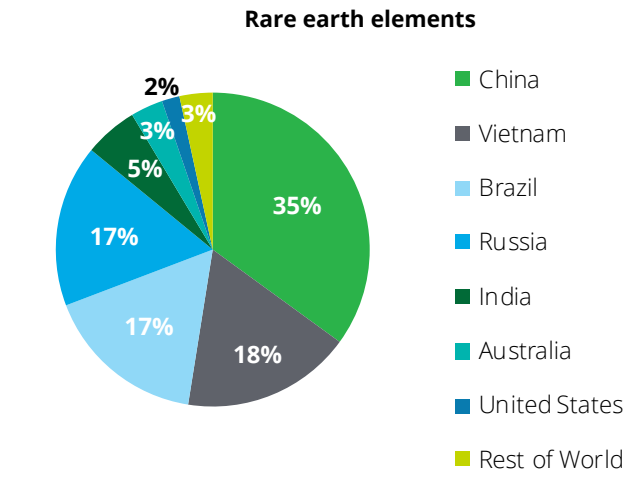



**Nickel**




**Lithium**






Source: Critical Mineral Maps - 2024 | Wilson Center

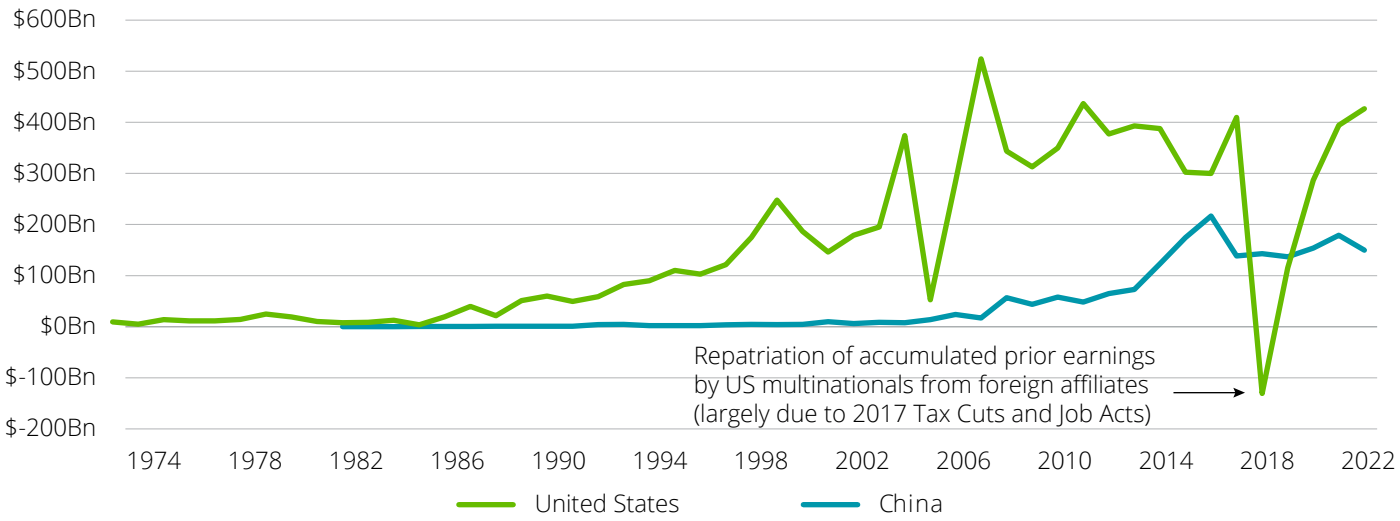
# Show me the money: Global financial flows into mineral extraction and processing

It is estimated that for the world to reach net zero, investment of some US$9 trillion dollars annually will be required each year until 2050, including to support the transition of global energy and industrial sectors to net zero. This is an unprecedented level of capital movement. A significant proportion of this investment must flow into critical minerals extraction, processing of these minerals into useable chemicals and end-product development.

An assessment of current global investment flows provides an indication as to how this has played out more recently.

Despite a small blip during COVID, the US is a significant foreign direct investment (FDI) player. Reflecting its growing economic status, China has seen significant growth over the past two decades to close the gap with the US.

**Foreign Direct Investment, Net Outflows, BoP basis, Current USD terms**

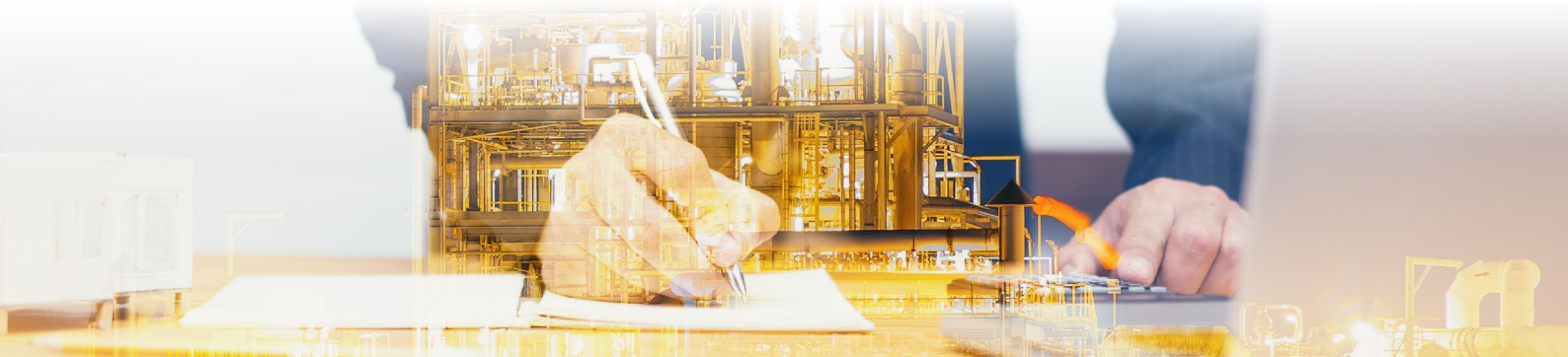



Source: World Bank

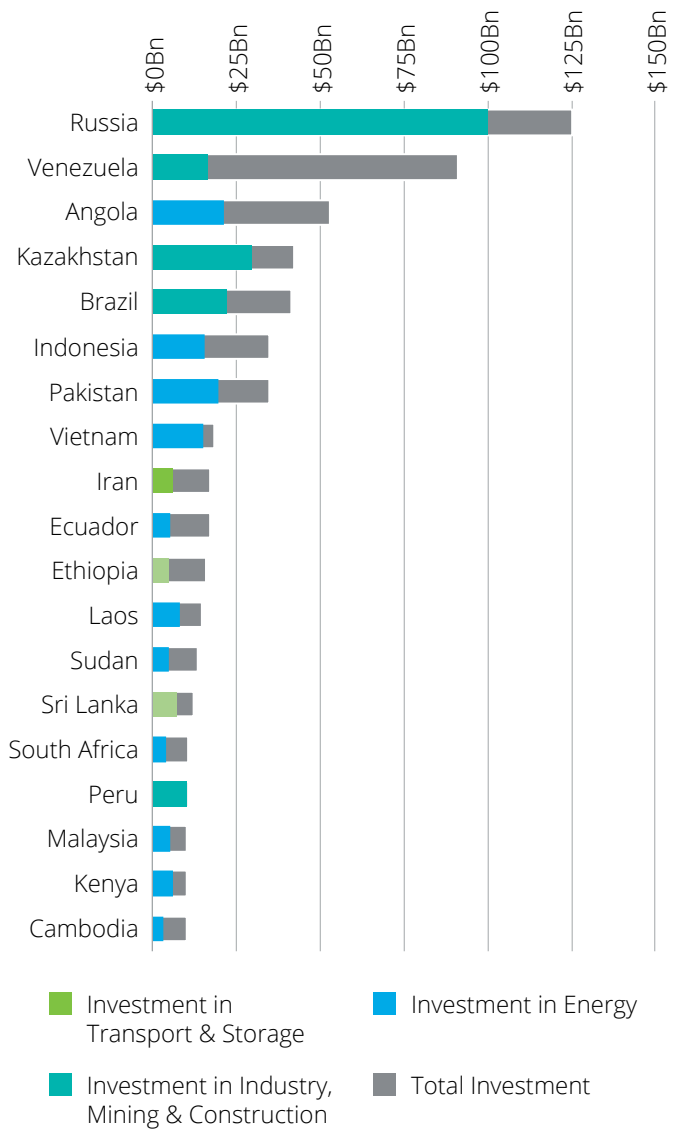
A breakdown of China's direct outbound investment indicates, since 2017, two countries have received an outsized share of China's outbound investment – Russia and Venezuela. A high proportion of this investment went into industry development and mining. Similarly, Kazakhstan and Brazil have attracted significant minerals-related investment from China. Angola, Indonesia and Pakistan have attracted the most investment into the energy space.

In aggregate China has invested over US$1 trillion dollars into infrastructure and development projects with a focus on Africa, Asia and Latin America.

Despite the outsized importance to Australia of the China-Australia trade relationship, Australia doesn't even get a mention in the top 20 recipients of direct outbound investment from China, since 2017.

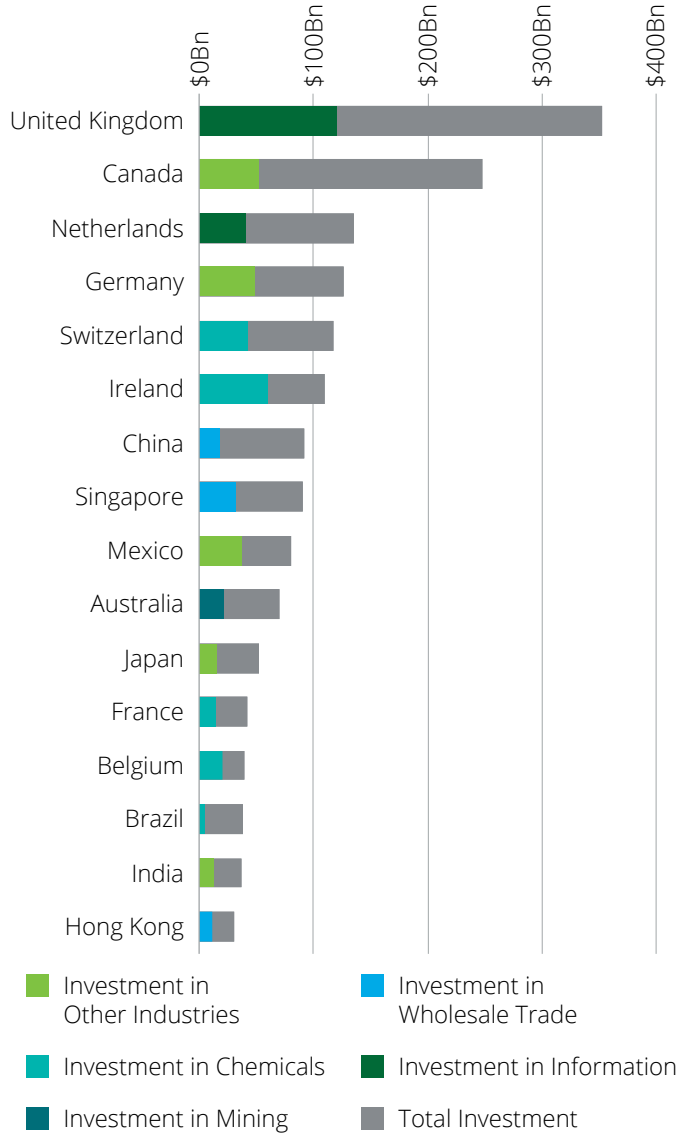


**China outbound FDI since 2017**




Source: World Bank

**US outbound FDI since 2017**



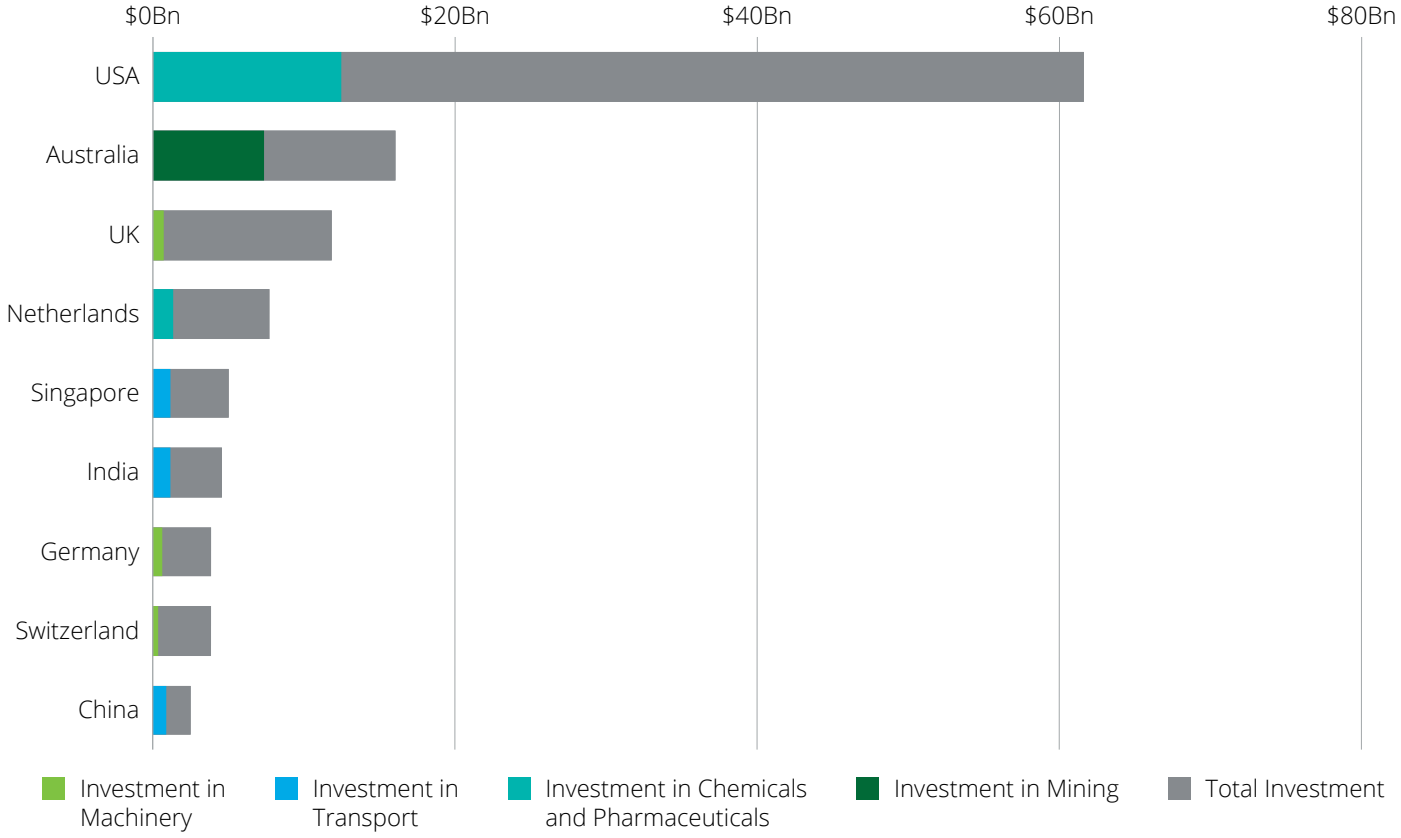

Source: World Bank

In contrast to China, the US has invested in starkly different jurisdictions and sectors overall. The UK and Canada are the largest beneficiaries, with sectors including information technology and chemicals dominating the top five countries. Australia leads as the largest recipient of US direct outbound investment in the mining sector, since 2017.

The US has very clearly prioritised its investment into developed nations it considers as strategic allies.

Taking a look at Japan, a country that will continue to be heavily reliant on importing its energy needs, Australia is the second largest destination for Japanese foreign investment. Almost half of this is in mining. The remainder of Japanese investment is in countries and industries similar to the US, including western pharmaceuticals and chemicals.

**Japanese outbound investment since 2017**




Source: World Bank

# Implications for Australian critical mineral producers

**Let's take another look at nickel.** Indonesian nickel can meet market demand more cheaply than Australian product. Significant volumes of new product from Indonesia has resulted in nickel miners in Australia either putting their operations on care and maintenance or slowing development. BHP has now made the decision to temporarily close Nickel West and related operations.[12]

However, nickel is not always, well, nickel. Increasingly western manufacturers and regulators are signalling an interest in being more discerning regarding the environmental and social credentials of the product they procure. What is the point, for example, of putting cobalt or nickel into an EV to save the planet if the product has not been mined ethically or with high environmental credentials? European and America car manufacturers are critically aware of this. Securing product which meets the expectations of their driving customers, their investors and employees, as well as regulators, has the potential to drive supply chain decisions. However, it must be noted that despite the growing rhetoric, there is limited evidence the end consumer will actually pay more than a minimal premium for an ESG compliant product.

The market for critical minerals is immature and not well developed, relative to carbon-based energy markets such as oil or gas. In the most part, critical mineral markets lack scale and transparency. As a result, it is very difficult for a project developer to immediately understand the price for their product, and even more challenging to forecast what that price might be into the future. Further, insight into the origin of a particular product can be challenging, impacting the ability to price differentiate.

The London Metals Exchange (LME) doesn't currently differentiate commodities like nickel, transacted on its platform, by their ESG credentials, irrespective of where it came from and how it was produced. Most recently it has pushed back a request from Australia and the USA to recognise "clean" metals, on the basis the market for clean metals lacks liquidity.[13]

While exchanges haven't moved, regulators and lawmakers are moving to ensure local industry is protected from products entering their market that don't meet the same high environmental standards with respect to carbon.

The European Carbon Border Adjustment Mechanism (CBAM) will likely have a significant impact on imports into Europe. As an example, from 2026 onwards, the CBAM will move from a transitional phase into the definitive phase requiring all steel/iron, aluminium, cement and hydrogen products, among others, entering the EU to comply with carbon pricing requirements. To do this, they must demonstrate they have paid a price of carbon for carbon emissions embedded in their production, or buy a CBAM certificate (representing an EU emissions trading scheme allowance per tonne of $CO_2$ emitted). The mechanism ensures European climate measures are not undermined by imports.

An imported steel product, for example, with nickel sourced from a supplier where a carbon price has not been incurred for emissions created during the mining and refining process, will incur the European carbon price via a CBAM certificate, or will be blocked from entering the EU economic zone. This is likely to have significant implications for the relative competitiveness of products.

[12] ABC 15/2/2024

[13] Australian Financial Review 06/03/24

In addition to ESG-driven considerations, there are growing geopolitical trade tensions miners need to consider when thinking through customer contracts, financing decisions and even who to partner with for technology. All will be impacted in the event of a global trade war.

Recently, US President Biden pledged a 100% tariff onto imported Chinese EVs (essentially shutting China out of the US market). The Europeans have a 25% tariff which could be upped at any time. This impacts the demand for Chinese EVs and therefore the potential demand of critical minerals that supply Chinese manufacturers. To counter this, Chinese companies are looking at 'friendly' nations. Brazil, the world's sixth largest automobile market is attracting significant attention from Chinese car manufacturers. Similarly in Mexico, Chinese manufacturing plants are being set up to build new EVs.

Since Russia's invasion of Ukraine and the resulting trade embargoes, Russian copper supplied after April 2024 cannot be sold via the LME exchange. This doesn't address the current LME copper volumes which originated from Russia prior to April (as of June 2024 this was 44% of stockpiles) but it does impact future supply. In essence, Russian copper needs to find another market. To date, China has assisted here, but it creates further uncertainty in an opaque market.

Lines are without doubt being drawn in global trade and there is a significant drive to diversify and de-risk the global supply of different critical minerals and protect sovereign manufacturing and supply chain capability. How fixed these lines are remains to be seen, however miners need to understand the implications for their individual businesses.

Miners and developers need to ask the question: Given the increasing focus on green washing and ESG credentials, how could growing ESG standards impact the global market for my product? Further: How can projects in Australia take advantage of this given the relatively high environmental and regulatory standards Australian projects must meet to get developed?

Adding to this, and following on from the global COVID supply chain experience and increasing trade tension between the US and China: What could the impact of increasing geo-political tensions with Australia's largest trading partner be?; and: Do I need to ensure my product aligns with support such as the US's Inflation Reduction Act or US Defence Pact?

No one would wish for increased trade tension with China (especially given recent positive progress made in Australian-Sino relations) as it would have a significantly negative impact on Australia's prosperity given our large economic relationship with China.

However, every miner (explorer, developer or producer) needs to consider the above questions. Even if considered low probability events, they are potentially high impact.

To take a look at the potential disruptions facing project owners, we address the question: **How is the demand-supply dynamic impacted for an Australian miner in a world where ESG credentials differentiate minerals?**

We know current demand-supply dynamics are bullish for most critical minerals.

Taking nickel and cobalt as examples, both are in high demand in battery manufacturing[14]. Both have also been impacted by recent supply coming on from both DRC and Indonesia, off the back of Chinese investment.

2023 International Energy Agency (IEA) data indicates that cobalt is in slight supply surplus and nickel in deficit (some data indicates nickel is also in slight surplus due to additional Indonesian supply in 2024). The demand-supply dynamic is forecast to deteriorate over the medium to long term, with the cobalt supply deficit increasing to around 20% of global supply, and nickel to around a 10% deficit.

But let's take a look at how the market might develop from the perspective of an Australian miner looking to supply into western markets demanding higher ESG certified product and overcoming a relatively higher cost base.

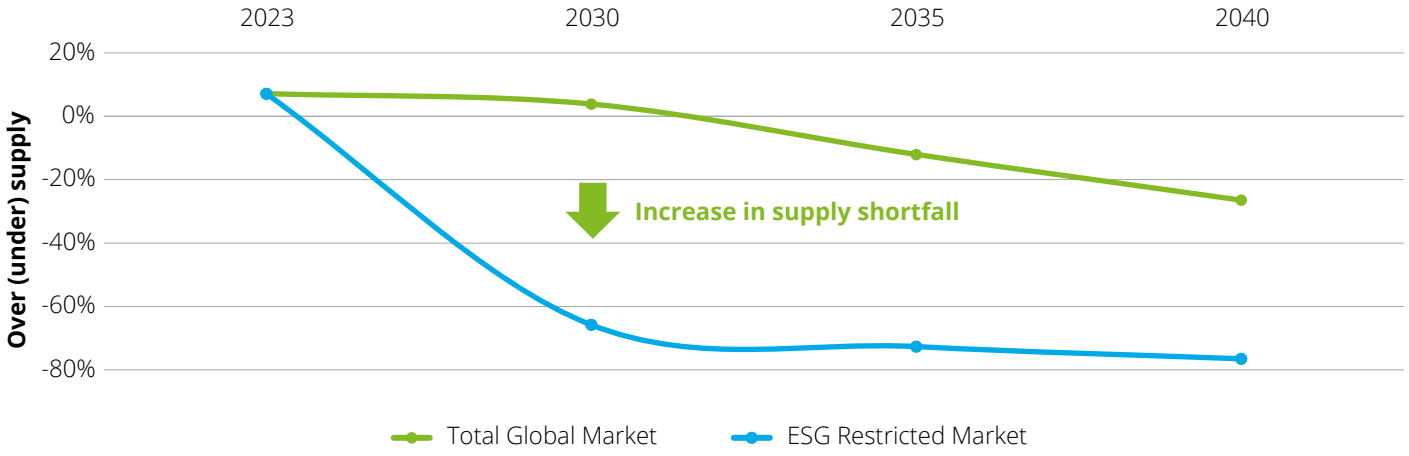
We have modelled a potential outcome by removing supply that comes from low ESG jurisdictions on the basis that this product will be restricted and significantly penalised before entering American and European markets. We have also adjusted demand to only include western markets likely to demand higher ESG product.

[14] Demand has been calculated using the refining capacity planned rather than end consumer demand to better reflect the dynamics for mined product. We have not assumed demand destruction due to increasing prices and consumers will accept a green premium or the cost will be covered through government subsidy or support initially.

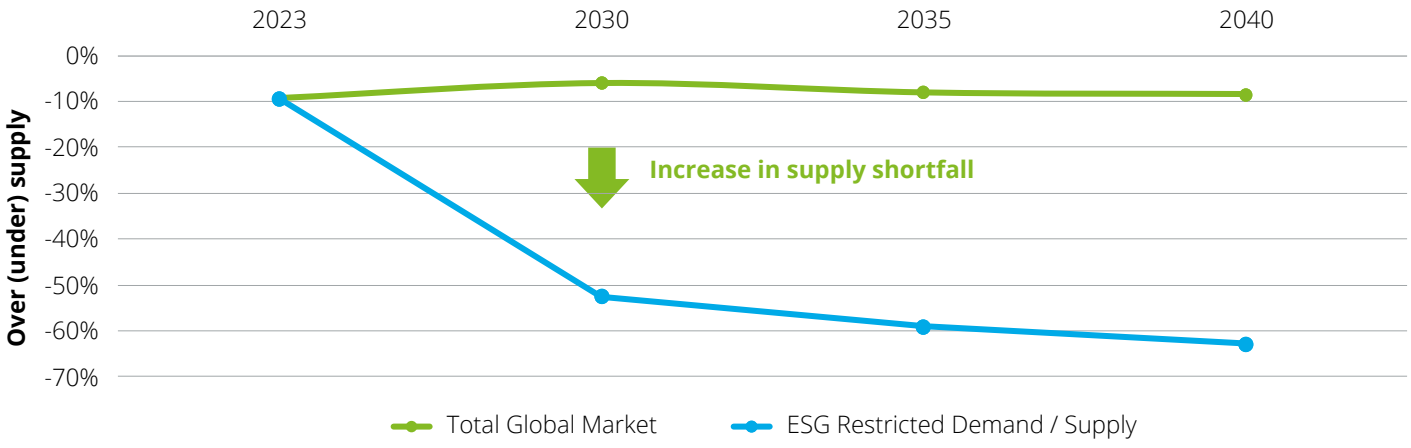
To differentiate between a low and high ESG supplier we assume a mine located in a country with a Sustainable Development Goal Index rating of less than 75 is deemed a low ESG jurisdiction. Similarly, we have assumed demand in these countries will also be open to low ESG product and purchase accordingly. We then adjusted the demand-side equation for known market dynamics (specifically supply arrangements that are unlikely to change and certain dynamics in the value chain e.g. we assume a portion of the processing/manufacturing in China, which is a low ESG jurisdiction per the above definition, will move to the end markets of Europe and the USA or jurisdictions where the ESG credentials will be met).

The results are insightful. In both the cobalt and nickel markets, the ESG compliant demand supply equation shows a significant increase in the supply shortfall. This should be positive for pricing and, therefore, the commercial opportunity for Australian minerals (and potential value adding).

**Cobalt demand-supply dynamic**




**Nickel demand-supply dynamic**



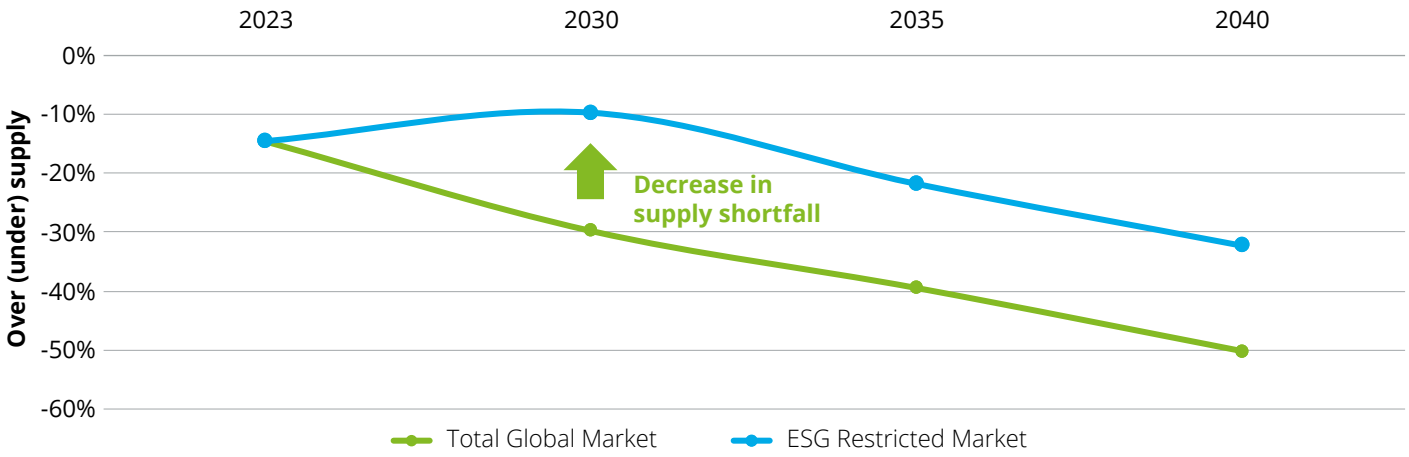

Looking at copper, we see a very different dynamic play out.

In the copper market, a growing supply shortfall is forecast into the medium and longer term. Given the timeframes for new mine development and the lack of known globally significant resources, this is unlikely to be corrected in the near term. If we apply the same ESG hurdles to supply and demand jurisdictions we get an outcome where the supply shortfall actually reduces for ESG compliant

jurisdictions. This reflects a dynamic where a larger portion of the demand for copper heading to China is likely to stay in China, rather than reappear in the value chain of a product exported to ESG compliant jurisdictions. There is also strong supply from Peru and the USA which are considered high ESG jurisdictions and sufficient to meet ESG compliant demand for known refining demand.

The chart below depicts the outcome of the scenario.

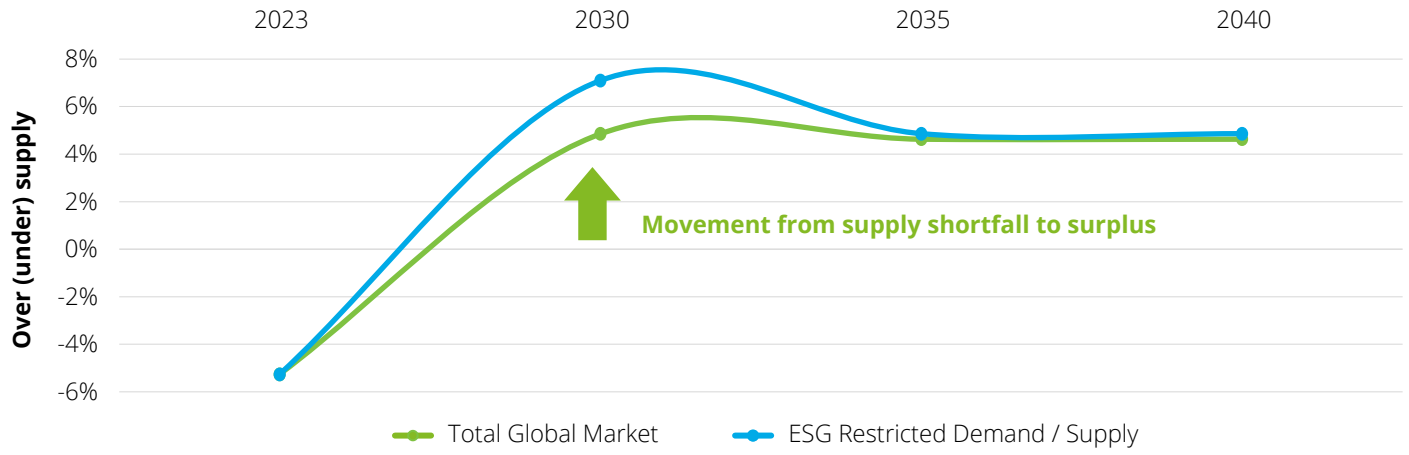
**Copper demand-supply dynamic**




The same analysis for rare earths indicates the change to the supply-demand dynamics is similar for the current global forecast (per the IEA) and for ESG compliant product (despite a fair amount of market complexity). In both cases the market moves from a state of current supply shortfall to surplus.

However, it should be noted that the current refining capacity for rare earths to meet projected end consumer demand is not sufficient and will likely increase, impacting the below analysis. Where that refining capacity is located, and its ESG 'certification', will impact the market outcomes.

**Rare Earth Elements demand-supply dynamic**




In reality, it is difficult to exactly model how trade will be impacted (as we have seen most recently with the Russia/Ukraine dynamics). The above are overly simplified scenarios, however understanding how different players might act, in the case of ESG style disruptions or geo-political disruption are critical to understanding the way in which different markets will develop.

# What's next?

Australian miners need to consider how different market scenarios might play out. Specifically, how regulators (or customers or financiers) might impose ESG compliance requirements. Owners should assess how this might impact demand-supply dynamics for different products over time. Similar analysis in the event of a broader trade war should be considered.

Project owners should act now to understand the implications and prepare for different eventualities. For example, the US Defence Procurement Act is highly supportive of value chain investment into Australian mineral projects. Understanding what is needed to tap into this opportunity requires alignment of the business to US off-takers and financiers must meet certain thresholds. Similarly, the current debate around the draft 45V legislation following the US's Inflation Reduction Act (IRA) needs to be understood to ensure compliance. And as outlined above, compliance with the EU's CBAM and potential changes to the metals markets need to be assessed.

Australian mines have some significant advantages to position for a world where there are greater ESG requirements on mined or processed minerals or where there is a broader trade war. In can be argued Australia would be critical to any such scenario. However, currently Australia's comparative advantages (strong environmental and regulatory settings) are not sufficiently valued in the global demand-supply dynamic for critical minerals. Industry and government must consider how to ensure this value is recognised in the global trade environment for minerals critical to the energy and climate transition. This will be essential to ensure Australia's critical minerals sector can become a commercially sustainable supplier.

With so much economic upside, there is a significant opportunity for Australian critical mineral developers to take advantage of the changing global landscape, by aligning projects to support diversification of the value chain for critical minerals through extraction, refining and production as the climate transition gathers pace.

## Author

**Matt Judkins**
Lead Partner
Deloitte Energy & Climate Advisory
Tel: +61 424 173 550
mjudkins@deloitte.com.au

## Special thanks to

**Nicki Ivory**
Partner
Mining & Metals Sector Leader
Tel: +61 8 9365 7132
nivory@deloitte.com.au

**Ian Skelton**
Partner
Audit and Assurance
Tel: +61 8 9365 7890
iskelton@deloitte.com.au

**Mark Upton**
Partner
Global Investment and Innovation Incentives National Leader
Tel: +61 8 9365 7800
maupton@deloitte.com.au

**Reid Quekett**
Analyst
Deloitte Access Economics
rquekett@deloitte.com.au

Deloitte.



Designed by CoRe Creative Services. RITM1754442