

Recognising China as an Australian critical minerals partner

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Abstract

This paper critically evaluates an Australian government policy tilt in the critical minerals sector aimed at promoting “industrial upgrading” and bolstering “economic security”. This policy tilt, which has occurred alongside an advocacy campaign pushing in the same direction, incentivises greater participation by local companies and those headquartered in geopolitically “like-minded” countries on the one hand, while blocking further Chinese participation on the other. Yet contemporary economic reality, as well as Australia’s own experience under the traditional policy framework, support an alternative assessment that Canberra’s objectives around prosperity, security and supply chain resilience would be better served by continuing to recognise China as a potential partner.

Introduction

Exports support domestic living standards by providing Australians with international purchasing power. In 2023-24, mining and energy products accounted for nearly two-thirds of Australia's total goods and services exports (DISR, 2024b; ABS, 2024).

Historically, Australian governments have taken a “hands off” approach to developing the country's natural resources. Since 2020, however, and in the case of critical minerals specifically (DISR, 2024c), the Morrison and Albanese governments have formed a view that policy interventions can leverage an upstream comparative advantage in mining and extraction to support two other desired objectives. The first is to see more downstream, higher value-added activities performed locally, such as minerals processing and related manufacturing. This is positioned as part of a broader Future Made in Australia (FMIA) agenda. The second is to contribute to more resilient critical minerals supply chains globally given a preponderance of activity that has accumulated in China and Beijing's demonstrated willingness to engage in economic coercion.

Grants, subsidies and other risk-sharing arrangements, underwritten by taxpayers, are now being deployed to promote “industrial upgrading” and bolster “economic security” (Sinclair and Coe, 2024). In October 2023, for example, the Albanese government doubled the value of a \$2 billion Critical Minerals Facility established by the Morrison government two years earlier. This aimed at underwriting the viability of local projects involving domestic companies and those headquartered in countries regarded as geopolitically “like-minded”. The “like-minded” partners listed in the Albanese government's *Critical Minerals Strategy 2023-2030* released in June last year included the U.S., U.K., E.U., Japan, Korea and India (DISR, 2023). Joint statements with political leaders and senior officials from these countries now routinely cite an intention to pursue closer critical minerals cooperation. In September, an agreement amongst these “like-minded” partners to establish a joint funding body, known as the Minerals Security Partnership Finance Network, was being described within the Australian government as the “NATO of critical minerals” aimed at “breaking[ing] China's supply stranglehold” (Coorey, 2024).

The other international component of Canberra's policy tilt has been to block further Chinese participation. This also began under the Morrison government. In April 2020, then-Treasurer Josh Frydenberg rejected a proposed \$20 million Chinese investment (11% equity stake) in Northern Minerals, a local rare earths miner and refining aspirant (McKinnon, 2020). In 2022, the Foreign Investment Review Board (FIRB) issued new guidance to would-be foreign investors in Australia's critical minerals sector “encouraging” them to seek prior approval by engaging in “voluntary notification”. Absent such notification, legislative and regulatory changes mean that the FIRB now has the power to initiate a national security review of a completed transaction that

could result in unfavourable conditions being applied or forced divestment (FIRB, 2022). In February 2023, and again a few months later, Treasurer Jim Chalmers followed Frydenberg's lead by issuing blocking orders on Chinese and China-linked investment proposals involving rare earths and lithium assets (Barlow, 2023). In May, Chalmers unveiled an even more securitised foreign investment review process that would see "risky" investments in "sensitive" sectors, like critical minerals, attract greater scrutiny (Chalmers, 2024). To the best of this author's knowledge, the last Chinese investment to be approved in the critical minerals sector was in December 2020 (Collins, 2020). This gives rise to perceptions that a de-facto ban is now in place.

Canberra's policy tilt has occurred alongside an advocacy campaign pushing in the same direction, led by the Australian Strategic Policy Institute (ASPI). In a report published last September ASPI argued in favour of a "prohibition of Chinese ownership over strategically essential commodities, echoing Canada's forced divestment of Chinese ownership in lithium", describing it as a "national-security issue". It then urged this ban on Chinese participation be followed "with strategies to increase investment from domestic sources and like-minded nations" (Coyne and Campbell, 2023).

This paper critically evaluates the government's policy tilt and associated advocacy and an alternative assessment is reached that Canberra's objectives around prosperity, security and supply chain resilience would be better served by continuing to recognise China as a potential partner.

2. Right-sizing and contextualising risks in critical minerals supply chains

Identifying and responding to risks stemming from a concentration of critical minerals supply chain activity in China is prudent. There is no national interest benefit, however, in exaggerating these risks or reading them in isolation.

While Beijing has previously engaged in economic coercion, including recently against Australia, it has shown a distinct preference for doing so via disrupting the access of foreign companies to its domestic market rather than disrupting international supply chains (Laurenceson and Armstrong, 2023). In 2023, Beijing imposed export controls on critical minerals like gallium, germanium and graphite but this took the form of requiring exporters to obtain a license, not banning their sale. The latest trade data show that China's exports of these goods now stand at "normal levels" (Bloomberg, 2024). Analysts expect a similar outcome in the case of export controls Beijing imposed on antimony in August (Wischer and Bazilian, 2024).

There are multiple possible reasons behind Beijing's reluctance to weaponise foreign supply chains. One is that supply chain vulnerabilities are not one-sided. China's prominence in critical minerals supply chains is particularly strong downstream. In

contrast, China is oftentimes exposed upstream. In the case of lightly processed lithium, for example, China relies on imports to meet three-quarters of total domestic demand, and around 60% of these imports are sourced from Australia. More broadly, since the mid-2000s China has been “utterly dependent on world markets to keep supplying it with all the resources it needs for its economic survival” (Raby, 2018). Australia is a vital supplier to China of not only lithium but iron ore, liquefied natural gas (LNG) and more.

Another likely reason is that disrupting foreign supply chains would damage China’s own longer-term interests. The cause célèbre motivating Canberra’s more interventionist policy approach is a 2010 episode in which Tokyo judged that Beijing had threatened to disrupt the supply chains of Japanese companies for rare earths. The extent to which this disruption materialised is contested in the scholarly literature (Johnston, 2013; Evenett and Fritz, 2023). Irrespective, within just a few years Japan managed to reduce its exposure to China from close to 100% to just 50%, including by supporting investment in rare earth mining and processing facilities outside of China (Armstrong and Westland, 2022). The Australian company, Lynas was one of the beneficiaries of Tokyo’s response. Nowadays, Australia is the world’s third largest producer of rare earths, accounting for 5% of the global total (Geoscience Australia, 2024).

There is a salutary warning for Australia on this point. Both sides of politics have long seen merit in reassuring international customers that local producers were reliable suppliers, lest similar dynamics might be triggered. A non-discriminatory foreign investment regime has traditionally been part of the reassurance package. The danger now is that unlike in decades past when Beijing and steel-makers like Baowu Steel could confidently regard Australia as a reliable supplier of iron ore, China’s clean energy giants, like battery and EV manufacturers CATL and BYD, will be incentivised to aggressively develop lithium and other critical minerals assets elsewhere.

Further undercutting Beijing’s assumed leverage is that the potential targets of economic coercion are not defenceless. Promoting alternative suppliers is just one of many strategies available to the U.S. and its allies and partners to manage risk. In the case of rare earths, for example, while these are vital in some supply chains, they generally exist as solids at natural temperatures and the volumes demanded are relatively small. This makes mitigating against supply chain disruption through measures like stock-piling more practical and less costly (Wolf, 2022).

3. The economic and security benefits of the traditional policy framework

The Productivity Commission warns that policy intervention “can also act as an indirect form of trade protection” that comes with a long list of well-known associated costs, such as rent-seeking (Productivity Commission, 2023).

Even leaving such costs aside, in its tilt towards policies intended to bolster “economic security”, Canberra risks failing to appreciate that the traditional policy framework was overwhelmingly successful in delivering not only prosperity, but security and resilience in global supply chains too.

The clearest demonstration of this is that over the past decade, and prior to the government’s policy tilt, Australia had emerged as one of the world’s largest suppliers of critical minerals. It is now the world’s largest producer of lithium with a 52% share of the global total. This year Australian lithium production is expected to reach 1,236 LCE kt, up from 233 LCE kt in 2017. Australia is also a top five producer of rutile, zircon, cobalt, manganese, rare earths, nickel and tantalum. Alongside Canada, Australia is the world’s leader in exploration spending for critical minerals, a leading indicator of project development (Geosciences Australia, 2023).

Yet in the early 2010s, Australia only had one lithium mine in operation: Greenbushes in Western Australia. In November 2012, FIRB registered no objections to Chengdu Tianqi Industry Group acquiring Talison Lithium, Greenbushes’ owner. In 2017, Tianqi and its joint venture partner, North Carolina-headquartered Albemarle, announced they would be investing \$320 million to expand Greenbushes’ output. The following year, they tipped in a further \$516 million to more than double the mine’s capacity (Smith, 2018). Tianqi was joined by other Chinese investors, such as Jiangxi Ganfeng, in putting its capital at risk and expanding Australia’s productive capacity while many other domestic and foreign investors stayed on the sidelines.

Chinese partnerships are also evident further downstream. Australia currently has only one facility capable of transforming lightly processed lithium spodumene into battery-grade lithium hydroxide. This \$700 million project was announced by Tianqi in 2016. In 2020, Tianqi brought in an Australian company, IGO, as a joint-venture partner. In 2023-24, the value of locally produced lithium hydroxide exports is forecast to reach \$478 million, and by 2029, Australian supply will jump to 15% of the global total (DISR, 2024a).

Some commentators appear to imagine that Australian companies can simply switch away from partnerships with Chinese companies to ones that are headquartered in geopolitically “like-minded” countries. This ignores the contemporary economic reality that China is not only a supplier of capital but also world-leading technology. Australia’s ability to establish globally competitive local operations will be seriously challenged without access to such know-how, particularly given the high-cost domestic business environment more broadly.

An analysis by the Sydney-based financial services firm, Canaccord Genuity puts the capital cost per unit of output at China-based lithium processing plants at less than half that of those being built outside of China (Ganfeng Lithium Group, 2022). Tianqi and IGO's local lithium processing facility has involved not only capital but also the transfer of intellectual property and specialist construction skills (Ker, 2023). The experience of Australia's second under-construction lithium processing facility owned by Albemarle, a "like-minded" investor, is also instructive. Albemarle explained that China "has some of the best know-how in the world to build these plants" and "a lot of the knowhow that we learn by operating in China is how we built these plants in Australia" (Thompson, 2023). Nonetheless, still facing teething problems, Albemarle announced earlier this year that it was bringing in capital equipment and technicians from China to get its local facility up and running (Thompson, 2024).

In rare earths, China's technology advantage is even more pronounced. Last year, a report prepared for U.S. Congress and government departments estimated that there are now 12,000 full-time researchers in China focused on rare earths, spread across four national labs. This compares with just 300 in the U.S. The commercial rare earths sector in China is also estimated to host over 300,000 full-time employees, compared with 405 in the U.S., generating enormous process knowledge (Bauk, et al., 2023).

Commentary also sometimes seems to imagine that approving Chinese investment means that Australian supply will be removed from global markets and sent to China at artificially low prices. This flies in the face of publicly available facts. In the case of the Greenbushes mine, for example, off-take is proportional to the joint-venture owners' shareholdings. If most of Greenbushes' lithium is going to China, that is because an American company is also wanting to send their allocation there. The lithium hydroxide produced by Tianqi's joint-venture is now exported globally, including to South Korea's LG Chem, SK Innovation and EcoPro, as well as Sweden's Northvolt (IGO, 2022). Rare earths aspirant, Hastings not only recently renewed its off-take agreement with China's Baotou Sky Rock, but also with Germany's thyssenkrupp Materials Trading (Rogan, 2024). The Australian Tax Office is well-placed to enforce long-established rules around transfer pricing. It is unlikely to be troubled, however. When Pilbara Minerals extended an existing off-take agreement with Ganfeng in January for output from its Pilgangoora lithium mine, this included the routine provision that it would be sold "based on the prevailing market price" (Pilbarra Minerals, 2024).

The key policy point is that if Australian regulators wish to condition future Chinese investment approvals on stipulations, such as off-take agreements being non-exclusive arrangements, then they can do so.

Rather than locking up supply at below market prices, Chinese interest in Australian critical minerals assets is more readily explained by a commercial hedge that Japanese, Korean and other foreign buyers of Australian minerals and energy goods have long

pursued. When the price of lithium spodumene spiked in 2022 and 2023, Chinese importers, such as lithium processors Tianqi and Ganfeng, had to pay higher prices for imported raw materials. This financial cost was defrayed, however, by the higher profits earned from their equity stakes in Australian lithium mines.

The contention here is not that unfettered markets must always be favoured over policy intervention. Few would quibble with Treasurer Chalmers' judgement that if a Chinese investor is seeking to evade previous foreign investment directives issued against it, then intervention is appropriate (Chanticleer, 2024). Such instances, however, fall well short of justifying why China can no longer be recognised as a potential partner more generally.

4. How like-minded are “like-minded” partners?

Other factors also undercut the notion that Australia's critical minerals sector can best be developed, and the risks to global supply chains mitigated against, by working exclusively with “like-minded” partners.

Any viable Australian critical minerals project must first and foremost have a market to sell to. No investors, domestic or foreign, will be motivated to set up operations in Australia to simply supply the local market. Australia's limited manufacturing ecosystem and high-cost business environment also means that being a competitive global producer in any downstream, commodified space is at odds with economic reality. The implication is that the weight of Australia's contribution to resilient critical minerals supply chains will inevitably be concentrated upstream at the mine site where it holds a comparative advantage, or perhaps one or two steps downstream, such as minerals processing. For supply chains to be more resilient in their entirety – and for Australia to have access to a diversified customer base – “like-minded” partners must deliver further downstream. To date, however, such contributions have been lacklustre.

In 2023, Australia's most valuable critical mineral export was lithium spodumene, worth \$US13.3 billion. Nearly all of it went to China. This did not reflect naivety by private companies around geopolitical risk. Rather, while China's total purchases of lithium spodumene last year stood at \$US15.8 billion, Australia's “like-minded” partners collectively imported just \$US1.1 billion. Compared with 2018, China's imports rose by \$US14.3 billion, while that of Australia's strategic partners edged upwards by just \$US216 million (ITC, 2024). The main reason for this is that China is leading the net-zero transition globally and has established itself as the hub of clean energy manufactured goods, like solar panels, wind turbines, batteries and electric vehicles (EV's) (IEA, 2023).

The hope that the markets of “like-minded” countries might become major customers for Australian critical minerals is also likely to be dashed for another reason. While

Australia and China enjoy clear production complementarities, Australia and “like-minded” partners are oftentimes closer to being competitors. U.S. production of rare earths, for example, is already 2.5 times that of Australia, and owing to a lack of domestic demand nearly all of it is exported (USGS, 2024). In other words, American supply competes with Australian supply in international markets.

Furthermore, it would be naïve to imagine that “like-minded” partners have an overriding commitment to “friend-shoring” critical minerals supply chains with Australia, despite whatever “vibe” might be emanating from diplomatic initiatives like the Biden administration’s Minerals Security Partnership. Just as Canberra wishes to secure more higher value-added downstream activities, so too do “like-minded” capitals. The quantum of policy support available in many of these capitals far exceeds that available to Canberra. Rather than relying on Australia to meet its future upstream lithium demand, in March the U.S. Department of Energy announced a \$US2.3 billion loan to develop lithium reserves in Nevada with the intent to “secure reliable, sustainable *domestic* supply chains for critical minerals [emphasis added]” (Xie, 2024).

Some hopes have been expressed that policy initiatives unfurled by “like-minded” partners might also be a boon for Australian critical minerals companies. Much has been made of amendments to the U.S. Defense Production Act that added Australia as a “domestic source” (USC, 2023). The IRA also offers a tax credit when a battery in a qualified EV contains critical minerals above a specified threshold that have been extracted and processed in the U.S. or in a country with which the U.S. has a free trade agreement, like Australia (US Treasury, 2023). U.S. ambassador Caroline Kennedy has claimed that in the year after the IRA became law, American investment in Australia’s critical minerals and clean-tech sector exceeded \$5.5 billion (Kennedy, 2024), although two requests by this author to contacts at the U.S. embassy seeking clarification on this figure have gone unanswered.

Yet qualifications around these “friend-shoring” initiatives routinely escape mention. The amendments passed to the U.S. Defense Production Act specify that an Australian company may only be treated as a “domestic source” if U.S. demand “cannot be fully addressed” by domestic companies and those in Canada (USC, 2023). Meanwhile, output from major Australia-based operations like the Greenbushes mine are not eligible for IRA subsidies because it features a Chinese equity stake, albeit only at a 26% level (Thompson and Fowler, 2024). The IRA also contains two tax credits of equal value and to qualify for the second requires final battery assembly to take place in North America. The bigger picture of the IRA then has been to drive a diversion of capital in clean energy supply chains, as well as “people and expertise to the US and know-how which is migrating to the US and not coming to places – places such as here [Australia]” (Poljak and Tran, 2023). Australian business leaders invested in the clean energy transition explain that “you now have to allocate capital where it’s most competitive,

and that means we have to allocate capital away from Australia into North America” (Hewett, 2023). Academic experts in the clean energy transition assess that the IRA’s “protectionist character is bad news for Australia” (Garnaut, 2023). In August, following a sharp decline in global lithium prices and in view of Australia’s high-cost business environment, Albemarle announced it would no longer proceed with plans to construct a third and fourth trains at its under-construction lithium processing facility, while the second train would also be mothballed (Rauso, 2024).

4. Conclusion

Unlocking the potential benefits from partnering with China will require not only a willingness on the part of Canberra but also flexibility by Beijing. Canberra would be on firm ground reminding Beijing that some of its policy settings appear to limit cooperation. For example, Beijing has long controlled the export of technology relating to the extraction and processing of rare earths, while more recently it added technology for the manufacture of rare earth magnets. In June, China’s State Council promulgated new “Rare Earth Management Regulations”, due to take effect on October 1. Article 15 specifies that, “The import and export of rare earth products and related technologies, processes and equipment shall comply with the provisions of relevant laws and administrative regulations...” (State Council, 2024).

That said, the prominence that the treatment of Chinese investment in Australia’s critical minerals sector receives in the talking points and itineraries of visiting senior Chinese officials, including Chinese Premier Li Qiang in June, suggests scope exists for creative and professional diplomacy to unlock mutually beneficial outcomes. In August, China’s ambassador to Australia, Xiao Qian, said that China’s domestic development agenda “aligns perfectly with the concept of the Albanese government’s “Future Made in Australia” plan” (Xiao, 2024). If Australia’s political leaders are intent on viewing China only as a threat, however, the possibility of capitalising on such potential is precisely zero.

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