

Climate Energy Finance

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Raw Power:

China locks-in global dominance of critical minerals and metals with \$120bn outbound investment surge

China's 'going global' strategy to secure value chains in zero-emissions industries is also boosting its partner economies, with lessons for Australia.

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About Climate Energy Finance

[Climate Energy Finance](#) (CEF) is an Australian based, philanthropically funded think tank established in 2022 that works pro-bono in the public interest on mobilising capital at the speed and scale needed to accelerate decarbonisation and the energy transition consistent with the climate science.

We conduct research and analyses on global financial issues related to the energy transition from fossil fuels to clean energy, as well as the implications for the Australian economy, with a key focus on the threats and opportunities for Australian investments, regional employment and value-added exports. Beyond Australia, CEF's geographic focus is the greater Asian region as the priority destination for Australian exports, particularly India and China. CEF also examines convergence of technology trends in power, transport, mining and industry in accelerating decarbonisation. CEF is independent, works with partners in the corporate and finance sector, NGOs, government and the climate movement.

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Foreword By Prof. Marina Zhang UTS-ACRI

I first came to know Tim Buckley and Climate Energy Finance in 2023, when I attended a roundtable discussion on the clean energy transition involving stakeholders from both Australia and China. What struck me then was not only Tim's command of the numbers, but also the force of his conviction: that the energy transition would be shaped as much by capital flows and industrial strategy as by climate ambition alone. This report proves the point. It is rigorous, data-rich, and unusually alert to the way capital, technology, and state strategy are converging in the race to net zero.

The race to net zero is often described as a race for technological innovation. In truth, it is also a race for minerals, metals, processing capacity, and industrial control. Wind turbines, solar panels, green hydrogen, electric vehicles, batteries, power grids, and data centres do not run on ambition alone. They run on lithium, nickel, cobalt, rare earths, bauxite, copper, and high-grade iron ore—plus the refineries, smelters, ports, railways, and factories that turn geology into power.

Too much of today's discussion of critical minerals is framed narrowly through the lens of national security and military competition. Those concerns are real, especially in a period of rising geopolitical tension and strategic mistrust. But this framing obscures a more fundamental reality: critical minerals are no longer merely industrial inputs. They have become the building blocks of the zero-emissions economy and, increasingly, a source of geopolitical leverage.

That is why this report matters. It shows that China grasped this reality earlier, and pursued it more systematically, than many others. Drawing on extensive datasets—from BloombergNEF and the International Energy Agency to Benchmark Minerals Intelligence, the US Geological Survey, Australia's Bureau of Resources and Energy Economics, and the World Bank—the report argues that China's large-scale outbound investment in critical minerals and strategic metals is inseparable from its broader push into clean-energy industry. In other words, China is not merely securing supply; it is helping to shape the industrial geography of the energy transition.

That is what gives Beijing's position unusual strength. China is not dominant at just one point in the value chain; it is increasingly present across it—from mine to refinery, from precursor materials to battery cells, and from steel inputs to electric vehicles.

The report shows how this strategy works on the ground. Its case studies—from lithium in Africa and South America to nickel in Indonesia and iron ore in Guinea—reveal a pattern worth close attention. Over the past decade, especially since 2023, Chinese investors have moved well beyond the traditional extractive model towards a more integrated one, linking resource acquisition with processing, manufacturing, logistics, infrastructure, technology transfer, brands and long-term industrial partnerships. For many host governments, especially in the Global South, that is more appealing than the old dig-and-ship model, because it offers not only funding but also a stake in downstream value creation and industrial development.

This does not make the model risk-free or free of contradiction. The report is clear-eyed about the environmental, social, and political tensions these investments can generate, as well as the risks of market distortion, overcapacity, and strategic dependence. Nor does it ignore the geopolitical backlash. America and Europe are responding with tariffs, subsidies, industrial policy, and "friend-shoring" strategies of their own, while resource-rich countries are demanding more domestic value-added.

For Australia, this makes the report especially timely.

Australia's strength lies in geology, not yet in industrial depth. It is rich in the minerals that underpin the zero-emissions economy, but for too long it has relied on a familiar formula: dig, ship, and hope prices stay high. That model brought prosperity, but it also bred complacency. In a world where value lies increasingly not in extraction alone but in refining, processing, manufacturing, and system integration, being a quarry is no longer enough.

On that front, the report is both practical and provocative. It advances what it calls "Green Energy Statecraft", moving the debate beyond the binary choice between naive openness and blunt geopolitical exclusion. Its argument is clear: countries such as Australia need a more strategic approach—one that deploys public capital more effectively, aligns industrial policy with long-term national capability, and pursues international partnerships without surrendering strategic agency. The task is not simply to "de-risk" from China, nor to depend on it uncritically, but to build the institutional capacity and policy clarity to act in Australia's own economic, security, and sustainability interests.

That means treating critical minerals and strategic metals not merely as a mining story, but as an industrial one. It means linking renewable power, infrastructure, finance, and manufacturing strategy instead of leaving them in separate silos. It also means being clearer about where foreign capital is welcome, on what terms, and to what national end. And it means recognising that selective cooperation with China, where it serves Australia's interests and can be managed prudently, may be more effective than reflexive exclusion.

As someone who has spent years studying China's innovation system, supply chains, and industrial transformation—especially at the intersection of critical minerals, geopolitics, and Australia-China relations—I find this report especially valuable for its balance. It avoids both complacency and alarmism. It neither romanticises China's rise nor reduces it to a simple threat narrative. Instead, it offers a grounded account of how China is using outbound investment and industrial scale to reshape the economic geography of the green transition.

The report thus poses a harder but more insightful question: how can countries build resilience, capture more value, and accelerate decarbonisation without turning the energy transition into a zero-sum geopolitical contest?

That is the right question. The geopolitics of minerals will shape not only the future of energy, but also the future of trade, industry, and statecraft. Countries that grasp this early will fare better than those that merely react to it.

For that reason, I warmly commend this report. It is a timely contribution to one of the defining debates of our age: how to secure the material foundations of a net-zero future in a more contested world. For Australia, in particular, it is a reminder that critical minerals are not just a source of export revenue, but a test of whether the country can turn resource wealth into long-term industrial capability and national resilience.

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Executive Summary - Global Context

1. Integral to its program of Green Energy Statecraft, the world's overwhelming decarbonisation leader, China, is rolling out a structural, state-directed strategy to secure dominance of global supply chains underpinning the emerging zero emissions world economy. This includes the mining and upstream value-adding of these value chains – critical minerals, strategic metals, and the processing capacity that converts raw resources into battery-grade materials and refined industrial inputs. Key to its strategy is its accelerating program of outbound foreign direct investment (OFDI) into resource-rich nations around the world, which this report maps. **CEF has tracked over US\$120bn in resource mining and upstream resource processing investments since 2023 in lithium, rare earths, nickel, copper, high grade iron ore, bauxite, precious metals and other materials essential for cleantech and industrial decarbonisation (see graphs on page 16).**

2. The above focus complements China's staggering >US\$220bn in outbound FDI since the start of 2023 into midstream and downstream cleantech manufacturing and renewables infrastructure – battery materials, batteries, EVs, grid and transmission, solar PV, wind (see CEF's 2025 report, *Rising Tide*).¹ China's resource OFDI is inseparable from its cleantech OFDI, which together form a vertically integrated global green industrial strategy.

3. Together with its scale, a defining feature of China's OFDI surge is its approach to delivering tangible benefits to partner nations. The large, infrastructure- and fossil fuel-heavy Belt and Road Initiative (BRI) model – extractive and often asymmetric in its outcomes for host countries – has been replaced by a more mutually beneficial model of resource and energy diplomacy with an increasing focus on the Global South. **Critically, Chinese firms are now collaborating with host governments on in-country value-adding, processing facilities, skilled employment opportunities, and nation-building enabling infrastructure, including ports, rail and power, in exchange for long-term resource access and offtake agreements, boosting partners' export revenues (see case studies below).** This approach aligns Chinese national, energy security, geopolitical and economic interests with partner governments' development, industrial and energy transition goals, as it collectively drives global decarbonisation, a critical imperative in the escalating climate crisis.

4. China now holds approximately 90% of global rare earth refining capacity, 60% of lithium processing, >70% of cobalt refining, 60% of aluminium smelting, and 54% of global steelmaking. The IEA projects these shares will increase further to 2030. It controls over 90% of production for battery cathode and anode active materials. While China's share of global nickel processing is lower, at 35%, its strategic capital investment into Indonesia's nickel mining and processing industry means Indonesia entered 2026 as the world's #1 nickel miner and processor, a product of the exceptionally close China-Indonesia partnership. This dominance is underpinned by an approach to statecraft that leverages the speed and expertise of private enterprise with the long-term, consistent strategic direction of the centralised state model of governance and capital support through state entities.

5. China's Going Global strategy takes place in the context of an increasingly dynamic, complex and contested geopolitical landscape. Under the Trump Administration, the US has escalated trade and investment barriers, including targeted excessive tariffs on Chinese imports, as it pursues economic isolationism and protectionism and retreats from decarbonisation. China is increasingly offshoring its manufacturing capacity to circumvent these export restrictions. For example, Chinese battery makers Contemporary Amperex Technology Co., Limited (CATL), Gotion, EVE Energy, Envision AESC, and others are collectively committing tens of billions to European and other international battery

¹ Climate Energy Finance, [Rising Tide: China's Outbound Cleantech Capital Surge Drives Global Collaboration Toward Net Zero](#), 8 December 2025

production facilities. In response to resource nationalism in host countries, China negotiates in-country processing arrangements. This trend is continuing, as China's trajectory is one of adaptation and acceleration rather than retreat.

6. The concentration of China's control over resource extraction and upstream processing of critical minerals and strategic metals creates significant risks for supply chain security, geopolitical stability and the economic viability of competitors. Key emerging themes to counter China's near unassailable lead have been greater global collaboration in the strategic diversification of supply chains, evident in, for example, the US-led multinational Minerals Security Partnership; and a renewed focus on preservation and enhancement of domestic capability, playing out in policy initiatives such as the EU Critical Raw Materials Act, and national critical minerals, strategic metals, and renewables-led reindustrialisation investment programmes in nations including the US, EU, Japan and Australia. **However, China's cleantech dominance also creates a strategic opportunity for resource-rich nations to adopt a "win-win-win" partnership model with China, leveraging China's capital firepower and technical expertise as they rapidly scale domestic value-adding industries, accelerating their own green industrialisation.** This involves combining this resource extraction with new enabling zero emissions energy and transport infrastructure, generating sustainable economic returns in future-facing sectors, and enhancing domestic supply chain and energy security.

Case Studies

Critical minerals: rare earths and lithium

China's dominance of rare earths is being actively deployed as policy leverage, alongside broader export controls across critical minerals and strategic materials. Since 2023, Beijing has periodically imposed export controls on gallium, germanium, antimony, graphite, tungsten and rare earth magnets, timed to coincide with restrictions on Chinese tech exports, with the tungsten ban in February 2025 tripling prices. Its licencing regime put in place in December 2025 imposes detailed end-use compliance, enabling China to exercise discretionary control over supply.

Chinese firms have equity positions in lithium extraction and processing across Argentina, Australia, Chile, the DRC, Mali, Namibia and Zimbabwe, building processing capacity to convert brine and spodumene to battery grade lithium hydroxide and carbonate. As minerals host nations like Zimbabwe have placed bans on exports of concentrate, Chinese entities invest in in-country value-adding rather than ceding control. Chinese companies including Zhejiang Huayou Cobalt, Sinomine, Sichuan PD Technology, Canmax Technologies, and Chengxin Lithium have completed construction or upgrades of lithium processing plants in Zimbabwe in compliance with its Vision 2030 plan, which targets a domestic value-adding mining industry generating US\$12 billion a year in revenue. The Sandawana mine's Build-Operate-Transfer agreement with Chinese investors is structured to transfer ownership of the processing facility to the Zimbabwean government after 5-6 years, with the plant estimated to create 300–400 permanent jobs including high-skilled roles in chemical engineering, process control, and environmental management.

Australia's Kwinana lithium hydroxide refinery closure in February 2026 is a direct consequence of the lower processing price and integration advantage China's model has built.

Nickel and Indonesia

The transformation of Indonesia's nickel industry following its 2020 ban on raw ore exports is an instructive case study of the power and impact of Chinese resource OFDI.

Tsingshan's Indonesia Morowali Industrial Park (IMIP) alone represents more than US\$30bn in investment in the last decade across over 3,000 hectares, reportedly employing almost 100,000

workers, though the social and environmental damage of this development is well documented, with costs accruing to the community and profits privatised.

Beyond IMIP, CATL, Zhejiang Huayou Cobalt, CNGR Advanced Material, GEM, and others have committed billions more – including CATL's US\$6bn expanded JV with state-owned Antam and Indonesia Battery Corporation (IBC), and CNGR's proposed US\$10bn vertically integrated nickel facility – transforming Indonesia from a raw metal quarry into the world's leading nickel producer and processor, with HPAL smelters, battery precursor plants and battery manufacturing facilities operating and under construction. The CATL JV is projected to create 8,000 direct and 35,000 indirect jobs as it secures Indonesia position across the full EV battery value chain spanning mining, battery materials, battery manufacturing and battery recycling.

However, the rapidity and scale of Chinese investment inflow has driven oversupply such that global nickel prices plunged 40% by 2024 from their 2021 peak, rendering Western competitors, such as Australian miner BHP's planned Nickel West, unviable, while Chinese firms continued investing, backed by state liquidity.

In January 2026, nickel hub Weda Bay Industrial Park was designated a United Nations Industrial Development Organisation (UNIDO) sustainable nickel zone pilot, prompting plans for a US\$2bn renewable energy project comprising 2GW of solar and 500MW of wind energy. This model is now being replicated in other nations including Guinea, Zimbabwe and Morocco.

Iron ore

The US\$23bn Simandou project in Guinea, anchored by equity from China's Baowu and Chinalco, alongside Rio Tinto and Singapore's Winning International Group, delivered its first 200,000 tonne iron ore shipment to China in January 2026. Once fully ramped up by 2029 to 120Mtpa it will make Guinea the third largest iron ore exporter in the world, producing high-quality ore suitable for iron and steel decarbonisation. The project encompasses the 650km TransGuinean railway and the new Morebaya port, the largest greenfield integrated mine and infrastructure investment in Africa's history.

The Guinean government holds a direct 15% equity stake and is pressing for further in-country benefits, with the current agreement requiring the consortium to conduct feasibility studies for a pellet plant or steel mill within two years of commencing exports to maximise value-added returns as enshrined into law in March 2026 in its '2026–2040 Plan Law'.

Chinese capital is simultaneously developing projects in Cameroon, Algeria and Liberia as part of its strategy to reduce the 80% plus over-reliance on Australian and Brazilian supply, which has historically delivered BHP and Rio Tinto exceptional gross profit margins of up to 60 to 70%. Meanwhile China's Mineral Resources Group is moving to centralise iron ore purchasing, and Chinese buyers are pushing Australian exporters towards renminbi-denominated settlement, with BHP now settling 30% of its iron ore contract value in RMB, up from 5%. The strategic direction of this trend is unmistakable and has dramatic implications for nations economically reliant on iron ore exports.

Executive Summary - Implications for Australia

Australia's position in this rapidly shifting global landscape is under threat unless it takes strategic action to leverage its competitive advantages now. Australia holds world-significant reserves of the critical minerals and strategic metals – iron ore, lithium, bauxite, copper, rare earths – that underpin the zero emissions economy. It is the world's #1 exporter of lithium, with 97% of that destined for China. It is also #1 in the world in iron ore, with China the overwhelmingly dominant export destination. Australia should have a competitive advantage in resource value-adding as and when it develops low cost zero emissions firming renewable energy at world scale, particularly for energy-intensive smelting and refining products like green iron and aluminium. Renewables' share of Australia's electricity market exceeded 50% for the first time in Q42025, and Australia became the world's third largest installer of batteries in 2025 – early steps toward realising that advantage.

Yet Australia ranks a lowly 105th of 145 countries on Harvard's Atlas of Economic Complexity, behind Botswana and Côte d'Ivoire, reflecting an overreliance on dig-and-ship, zero-value-add exports of iron ore, LNG, and coal, with manufacturing accounting for just 7% of GDP in 2025. Further, many of Australia's aging refineries and smelters are under growing financial distress, with a series of temporary or permanent closures announced across alumina, aluminium, nickel, copper, lithium hydroxide (LHM) and steel.

The February 2026 announcement of the closure of Albemarle's LHM processing plant in Western Australia after only four years is a case in point. China has been systematically investing in lithium in Africa and South America to reduce its dependence on Australian imports, even as its own domestic production now outstrips Australia's output. Notable also is that whilst coinvestment built this sector, the absence of new investment from China into Australian lithium reflects its strategic repositioning.

Against this background, the Future Made in Australia (FMIA) initiative is directionally correct – the government has allocated over A\$81bn of budget and capital support to zero emissions industries, grid modernisation and resource value-adding since the start of 2023, with another A\$6bn from state governments – representing the right policy instinct in response to these pressures. But the scale and speed of China's global resource and manufacturing OFDI documented in this report underscores that ambition and urgency of implementation must both increase significantly.

Australia is also a US security partner, which means that absent stronger cooperation and co-investment with Australia, China will continue to diversify its resource supply sources to Australia's detriment, as both an economic and national security imperative. The Simandou project and China's broader African iron ore investment program, combined with its buildout of lithium supply across Africa and South America, demonstrates this process is already underway, and presents a clear and present risk to Australia.

As we wrote in our December 2025 report, *Rising Tide*, Chinese OFDI into Australia has collapsed by 85% since 2018, making up only 1.5% of the total OFDI from all countries, a decline from the already exceptionally weak 1.87% in 2024. 2024 recorded the third lowest value and number of transactions since 2006 at just US\$882m, a fraction of the peak of US\$16bn in 2008.

At the same time, Australian two-way trade with China in 2025 reached an all-time record high of A\$300bn, and Australia's economy remains highly complementary to China's. The strategic challenge for Australia is to leverage this complementarity with China to build the domestic value-adding industrial capacity that will make it a resilient and prosperous leader in the zero emissions economy, rather than a passive quarry to the world, left behind in the race to global decarbonisation.

Recommendations for Australian Policymakers

Australia has a time-critical opportunity to collaborate and partner on advancing Green Energy Statecraft to deploy scarce public capital capacity wisely and to best effect. Lynas Rare Earth's new agreement with Japan in March 2026 is a good case study on a win-win positive outcome.

Balance policy support for foreign investment with targeted anti-dumping tariffs, local content mandates and onshore processing as a condition of new partnerships

Australia has a strong and positive relationship with our key North Asian trade partners, including China. Australia needs to adopt a Green Energy Statecraft approach to maximise the value of government policy and public finance support and encourage cooperation and onshore investments in Australian value-adding capacities to our resources pre-export. This includes the deployment of firmed renewable energy infrastructure to power these facilities so we export 'embodied decarbonisation' to support our trade partners' decarbonisation efforts. This requires partnership with global cleantech leaders such as China, to bring expertise, whole-of-supply chain support and automation, so as to keep costs as close to globally competitive as possible.

Australia should avoid import tariffs, but should consider rapid deployment of anti-dumping tariffs – applied where imported goods are sold below their cost of production, thereby damaging local industries – and bring in local content mandates, which require that a defined proportion of inputs and components of a product be sourced or produced domestically, to protect strategic industries e.g. steel manufacturing and associated downstream processing. Mandating a progressive policy to ensure onshore processing should be a condition of new partnerships.

Accelerate public capital deployments

CEF strongly advocates building on the federal public investments of a cumulative \$81bn plus \$6bn from the states to date since 2023 into zero emissions industries, grid modernisation and resource value-adding to derisk and crowd-in further private investment. BCG estimates Australia needs upwards of \$500bn investment in the decade to 2035, suggesting we need a 5:1 private to public crowding-in. This necessitates both domestic and foreign capital, accelerating new firmed renewables and value-adding manufacturing in strategically important sectors e.g. resource refining and processing. It is encouraging to see A\$15bn of capital and budget support allocated over the year to December 2025, showing increasing ambition, speed and risk-tolerance.

We need to far better leverage the \$4.5 trillion Australian superannuation pool, which is currently preoccupied with investing offshore, aligning carbon pollution pricing and policies to provide the market signal required.

Strategic public capital deployment is particularly important in protecting and modernising key manufacturing sectors like aluminium (CEF applauds the public capital support to decarbonise and lower the electricity costs of Tomago) that are vulnerable to rising fossil fuel energy prices and in the absence of an explicit price on embodied decarbonisation in international trade. The EU CBAM is a critical policy lever to rectify this.

Enable zero emissions industries of the future

Public financial support for distressed refineries, smelters, and manufacturing facilities should be conditional on a binding commitment to zero-emissions transformation. The A\$2 billion Whyalla Steelworks taxpayer bailout, for example, should only proceed if it drives a transition to green iron through magnetite iron ore value-adding, and green steel through replacement of the blast furnace with a renewable energy powered electric arc furnace (EAF). Ownership of facilities receiving public support should be vested in strategically aligned partners committed to zero-emissions transformation – such as China Baowu Steel or Korea Zinc – with the NRF or Future Fund taking

strategic equity stakes where needed in alignment with Australia's national interests. Too many of Australia's refineries are owned by largely foreign, myopically short-term-focused firms (Rio Tinto, Glencore, Trafigura, GFG).

Prioritise carbon pricing to value embodied decarbonisation

Australia needs to widen and deepen the Safeguard Mechanism, including a progressive lowering of the baseline threshold towards 25,000tpa and an extension to cover the electricity generation sector. This would accelerate a pathway towards a whole-of-economy explicit carbon price that will penalise emitters and value green industrial production that embodies decarbonisation, such as green iron, in which Australia has an opportunity to lead the world. Australia also needs to leverage Federal Energy and Climate Minister Chris Bowen's COP31 Presidency in 2026 to advocate for carbon pricing internationally ie. use this opportunity of global climate and energy policy leadership to establish a path to an Asian CBAM.²

Develop an Australia–China Green Transition Cooperation Framework

Driven by an Australia–China Green Transition Investment Cooperation Working Group chaired by the China Australia Free Trade Agreement (ChAFTA) Committee, this would create the institutional framework required to enable knowledge sharing and access to energy transition industry and technology trends in China to identify and facilitate investments into Australia's green industrial priority sectors.

Progress foreign investment regime reform

Streamlining and increased transparency in foreign investment review rules and decision-making would reduce investor uncertainty, building on recent developments in Treasury's Single Front Door Portal and greater DFAT engagement to improve understanding of the rules of engagement. This could include defining clear criteria for national-interest assessments of projects; developing a "green lane fast track" for strategic projects informed by evidence-based assessment of technology-specific risks to national security in consultation with independent experts and institutions; and publishing reasons for decisions (positive and negative), as recommended in previous parliamentary and government reports.

² CEF, [A Price on Carbon: Building Towards an Asian CBAM](#), 5 June 2025

Introduction

As Canadian PM Mark Carney says, the US-dominated ‘rules-based international order’ of the last few decades is out, and we need a new balanced multi-lateral approach.³

We need Green Energy Statecraft.⁴ International collaborations and partnerships to provide the price signal in international trade to value embodied decarbonisation – that is, value-added resources and products produced using renewable energy – and accelerate the deployment of technologies and capital in zero emissions growth industries of the future.

But first, we need a better current context of the world position we are in. Even as the US doubles down on fossil fuels and climate science denialism, other countries are embracing the energy independence and reduced addiction to imported fossil fuels that is rapidly emerging from the rapidly scaling, technology-led disruption of zero emissions industries of the future. 2025 was a record year for cleantech deployments, with US\$2.3 trillion invested globally, +8% yoy.

As we have previously written, including in our December 2025 report, “Rising Tide: China’s outbound Cleantech Capital Surge Drives Global Collaboration Toward Net Zero”,⁵ China dominates most zero emissions industries of the future, from renewables to grid transmission to batteries and new energy vehicles (NEV), as well as nuclear and hydro-electricity, and is the world’s largest investor in zero emissions industries.

While western mining majors still dominate the upstream resource extraction underpinning zero emissions industries, the mid and downstream resource processing areas are typically the areas facing the biggest challenges in competing head-on with China. Western projects are now burdened with a significant capital intensity disadvantage. China now has cost, scale, integration and technology advantages right across the mining value chain, as well as geopolitical policy certainty and consistency and public capital markets support from China EXIM (The Export-Import Bank of China) and Sinosure (China Export & Credit Insurance Corporation). And a clear long term strategic government framework and direction.

This has profound implications for the global mining and energy sectors. Mining is transitioning from the dig-and-ship fossil fuel past into the critical minerals and strategic metals critical for emerging zero emissions industries in alignment with the climate science. This means less mining in volume terms given the massive overburden removal and sheer bulk of coal mining, but with more value. There are similar risks of concentration of control, but with a pivot in terms of the nations set to benefit most. Even as the OPEC cartel is now progressively diminishing, we need to ensure sufficient diversity of global supply chains to avoid a different concentration of control.

This report is China-centric. While the west has been distracted by the fossil fuel industry vested interests preaching their climate science denialism and more recently delay, China has invested in research and development (R&D), and using their massive domestic market to build largely automated, integrated manufacturing and export model at a scale and technology leadership unimaginable even a few years ago.

Given its less than plentiful domestic resource base, China has also stolen a march on other countries by developing whole-of-supply chain global integration, using long term offtakes and strategic investment in enabling rail and port infrastructure to develop and secure long term access to the critical minerals, strategic metals and to a lesser degree precious metals needed for zero emissions

³ AFR, [Carney declares rules-based order dead as Greenland row escalates](#), 21 January 2026

⁴ Prof. Elizabeth Thurbon, [Green Energy Statecraft for Comprehensive National Security](#), December 2024

⁵ Climate Energy Finance, [Rising Tide: China’s Outbound Cleantech Capital Surge Drives Global Collaboration Toward Net Zero](#), 8 December 2025

industries of the future. A more recent trend is countries pushing back on the capital light, dig-and-ship export model so dominant in Australia, and demanding investment in-country in value-add pre-export. An interesting newer trend is for China to run with this to ensure a win-win outcome, a very different “small and beautiful” policy approach to the ham-fisted Belt Road Initiative of last decade that was more often than not a win-lose outcome.

China’s flagship outbound foreign direct investment (FDI) infrastructure finance program increased by 74% yoy to a record US\$213bn in 2025 as Beijing takes advantage of wavering US influence around the world by pouring funding into development projects, according to new research by Australia’s Griffith University and the Green Finance & Development Center in Shanghai.⁶ Within this, energy is the leading sector, and cleantech is increasingly prominent.

Climate Energy Finance’s (CEF) new report builds on our work on China’s FDI into cleantech to look at cleantech related resources mining and upstream processing and comes to the same conclusion. The west needs to understand ‘China Speed and China Scale’, and their long term strategic planning, so we can respond effectively and successfully, and ensure the current over-reliance on Chinese technology and manufacturing leadership moves to a more geopolitically sustainable outcome.

This report examines the global supply chain implications of this technology and manufacturing driven energy system transformation strategy, particularly as it relates to critical minerals and strategic metals, as China accelerates its “Going Global” strategy to lead on all zero emissions industries of the future.

China has an authoritarian government structure that both reduces endless debate and allows a long term strategic clarity and consistency of direction. China also has a massive domestic market to build economies of scale and learning by doing, and to defray massive ongoing R&D investments.

But with China registering a record high trade surplus of US\$1.2 trillion in 2025, despite President Trump’s trade war, China needs a new path forward to ensure its increasingly technology driven trade surplus doesn’t become “unbearable”, to cite French President Emmanuel Macron.⁷ February 2026 reports reference China’s renewed investment in going global, with a significant pickup in outbound mergers and acquisitions (M&A).⁸

CEF highlights that a win-win-win solution needs to emerge. Since the start of 2023, CEF has tracked over US\$220bn of outbound FDI by China in cleantech sectors,⁹ with much of this involving technology and manufacturing know-how transfer from China as it invests in building out overseas manufacturing capacity. A win for the recipient countries building energy security, domestic jobs and manufacturing capacity. A win for China as it builds global market share in cleantech sectors of the future through collaboration and partnerships. But we also need to ensure this is a win in building cooperation and investment in global decarbonisation and energy independence from our collective addiction to fossil fuel imports. There is a long way still to go on the latter. CEF strongly encourages China to accelerate this trend of collaboration, particularly with the EU and Global South at a time the US is increasingly isolating and driving deglobalisation.

⁶ FT, [Beijing pours cash into Belt and Road financing in global resources grab](#), 18 January 2026

⁷ FT, [We urgently need to rebalance EU-China relations](#), 17 December 2025

⁸ Bloomberg, [China Is Snapping Up Overseas Assets Again From Puma to Metals](#), 13 February 2026

⁹ Climate Energy Finance, [Rising Tide: China’s Outbound Cleantech Capital Surge Drives Global Collaboration Toward Net Zero](#), 8 December 2025

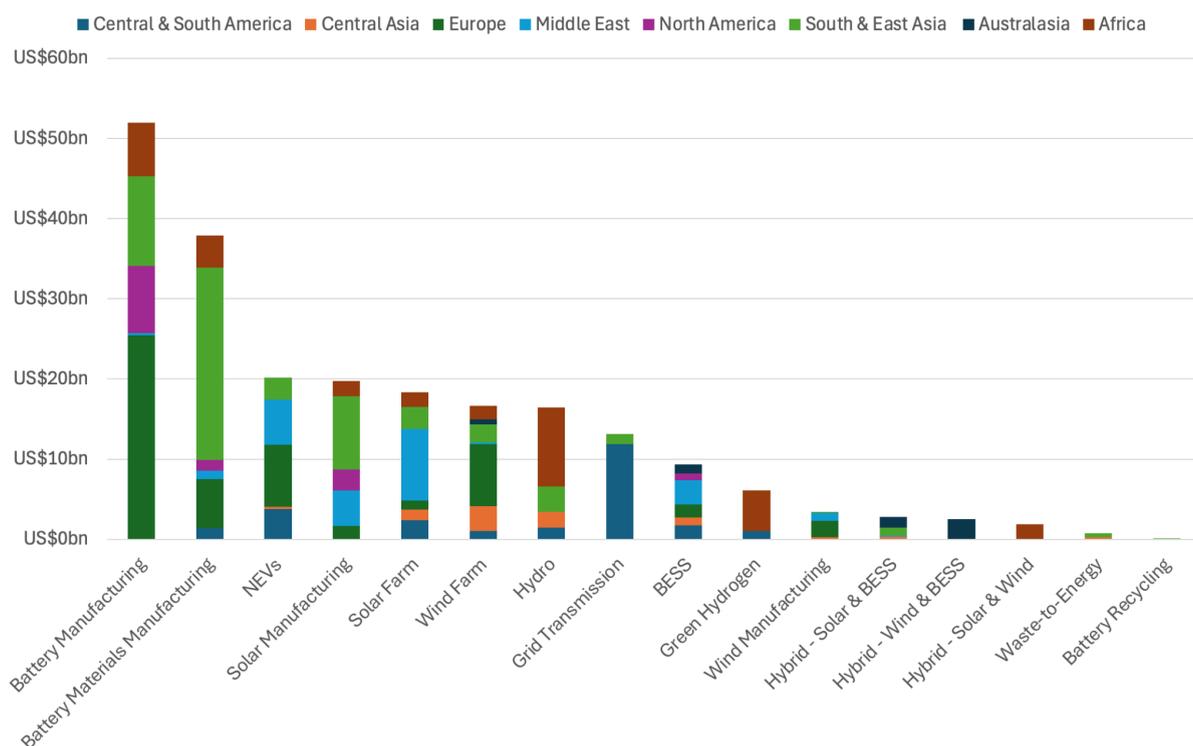
Section 1. China's 'Going Global' Strategy

Section 1.1. China Outbound Foreign Direct Investment

CEF estimates that China is the world's largest cleantech outbound direct foreign investment (OFDI) investor. CEF has tracked over US\$220bn of cleantech OFDI by China since the start of 2023. CEF tracks this OFDI by sector, with the major categories being: battery materials, battery manufacturing, EV manufacturing, wind and solar manufacturing, and investments in hydro, wind, solar and BESS infrastructure - Figure 1.11.

CEF sees this investment as of a very different nature to the mega-projects and fossil fuel bias of the Belt and Road Initiative (BRI). China's more recent 'Going Global' is more aligned with the 'Small and Beautiful' guidance of President Xi, and CEF views this as creating a more win-win-win outcome. China's leading cleantech firms are growing in global significance, and China is circumventing a growing tariff backlash. But we see many of these investments as creating a win for the recipient countries, bringing investment, local skilled employment, energy independence and increased value-add exports. And the more nations that embrace this massive cleantech opportunity, the faster the world will collectively deploy zero emissions solutions in response to the climate science.

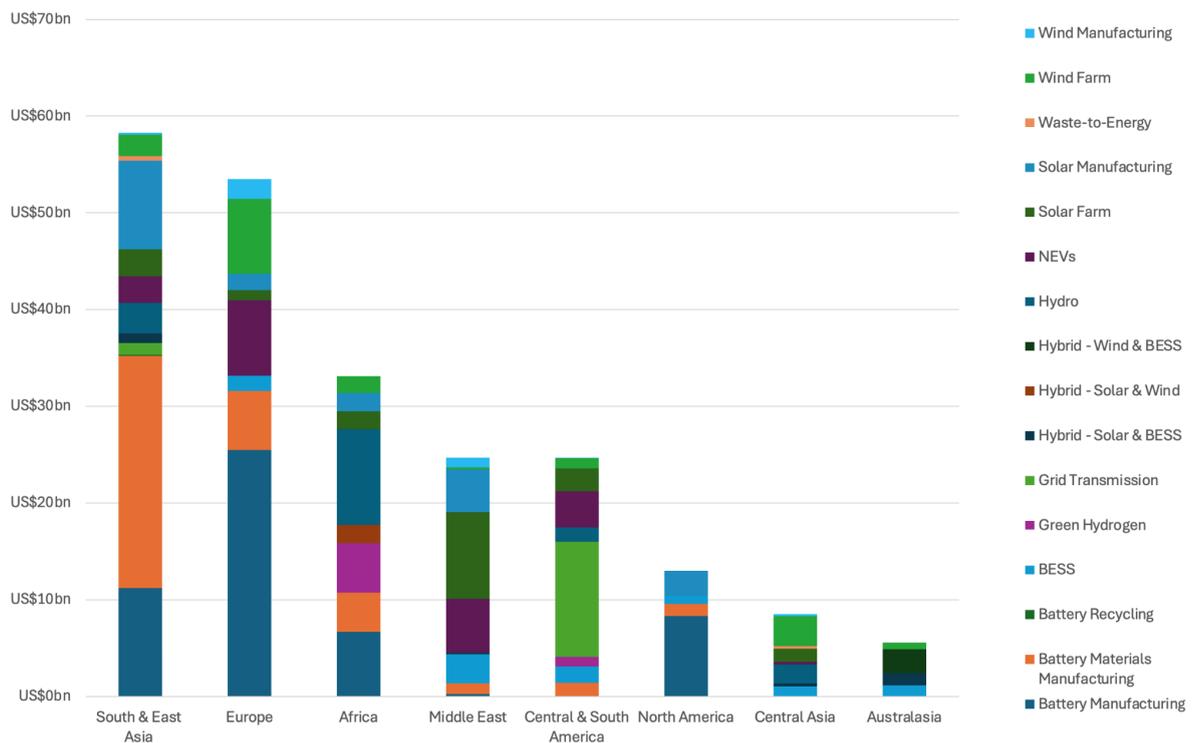
Figure 1.11: China's Cleantech OFDI by Region (2023-2025, US\$bn)



Source: Corporate announcements, media reports, CEF database

CEF notes that while Europe is the largest geographic region for China's OFDI in cleantech, the majority of investments since 2023 have been in the Global South, with South & East Asia and Africa rising in priority – as implied by the level of announced and completed investments – Figure 1.12.

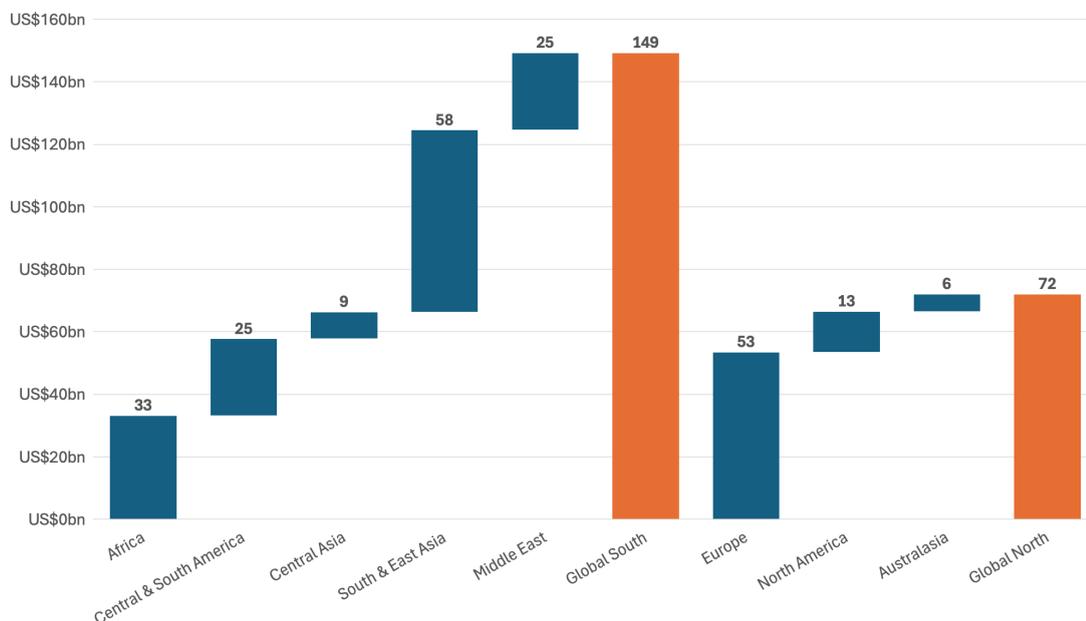
Figure 1.12: China's Cleantech OFDI by Region (2023-2025, US\$bn)



Source: Corporate announcements, media reports, CEF database

The Global South is a major beneficiary of China's going global in cleantech sectors manufacturing - Figure 1.13, building new geopolitical alliances and cooperation even as the US turns inward.

Figure 1.13: China's Cleantech OFDI into Global North and South (2023-2025, US\$bn)

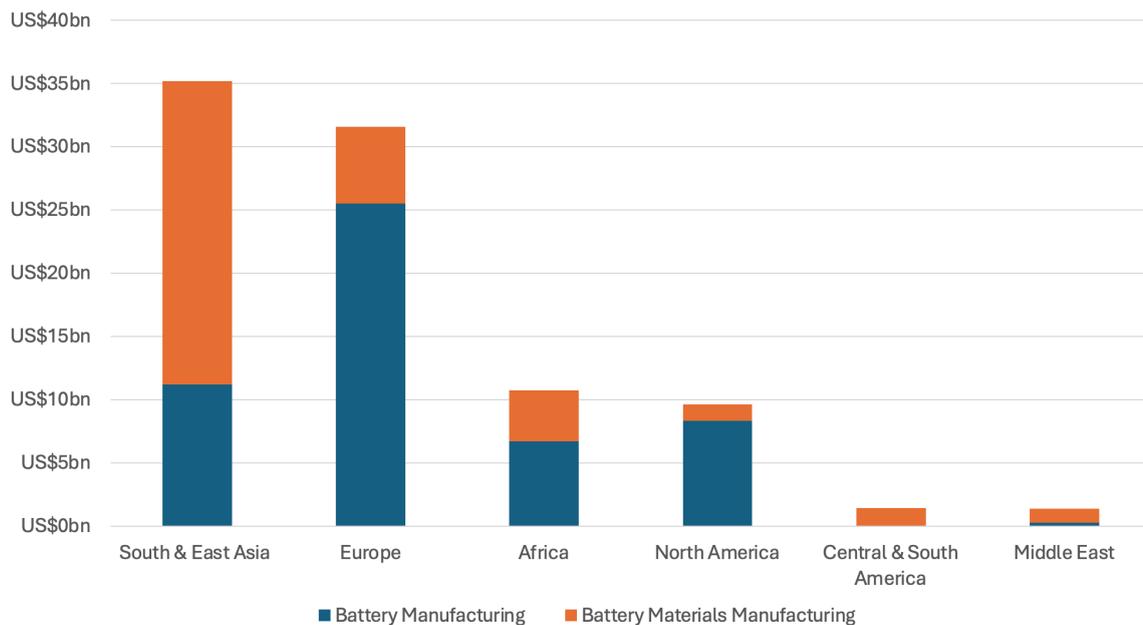


Source: Corporate announcements, media reports, CEF database

Beyond Europe, China's growing investment in battery materials manufacturing in South East Asia is designed to leverage lower-cost energy and labour markets to produce the more industrial/upstream components of batteries, co-located with the critical mineral supply chains.

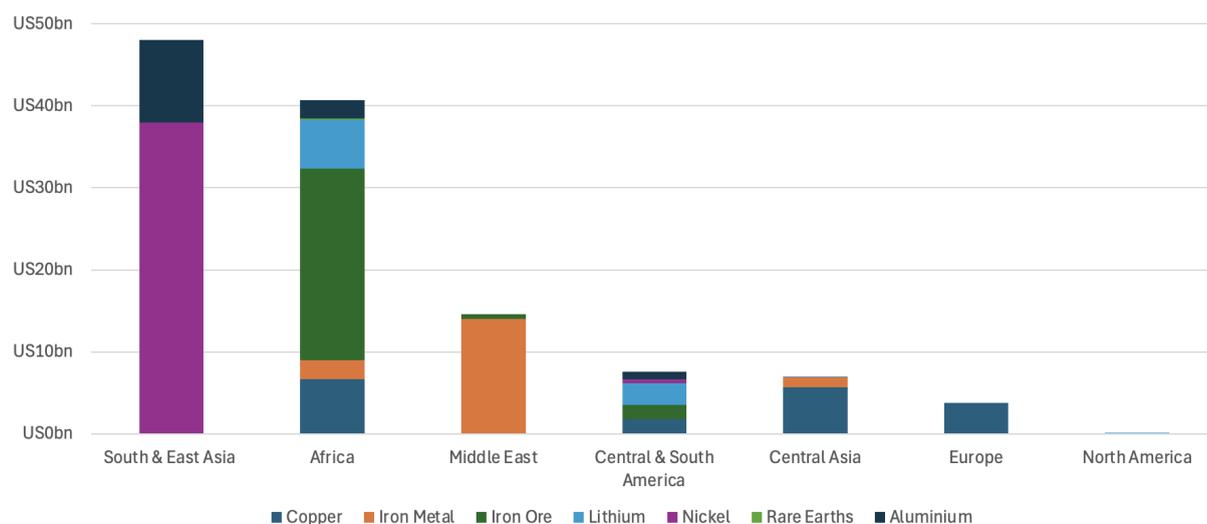
The concentration of final battery assembly/manufacture in Europe, co-located with a significant and growing EV manufacturing base to supply from within the region this rapidly growing market sector is very clear - Figure 1.14. This strategy of collaboration and investment in manufacturing within the EU is undermining the existing EU manufacturing firms of old, but also providing scope to help build stronger EU-China bridges, given the growing European concerns on further deindustrialisation following hyper-inflation of EU energy prices thanks to Putin’s invasion of Ukraine, and China’s growing technological lead in the global EV automotive sector. This potential was highlighted in the February 2026 bilateral dialogue in Beijing between German Chancellor Friedrich Merz and President Xi Jinping, aiming to reset trading relations.¹⁰

Figure 1.14: China FDI into Battery and Precursor Manufacturing (2023-2025, US\$bn)



Source: Corporate announcements, media reports, CEF database

Figure 1.15: China FDI into Mining and Upstream Processing (2023-2025, US\$bn)



Source: Corporate announcements, media reports, CEF database

¹⁰ FT, [Friedrich Merz urges China’s Xi Jinping to reset trade relations](#), 25 February 2026

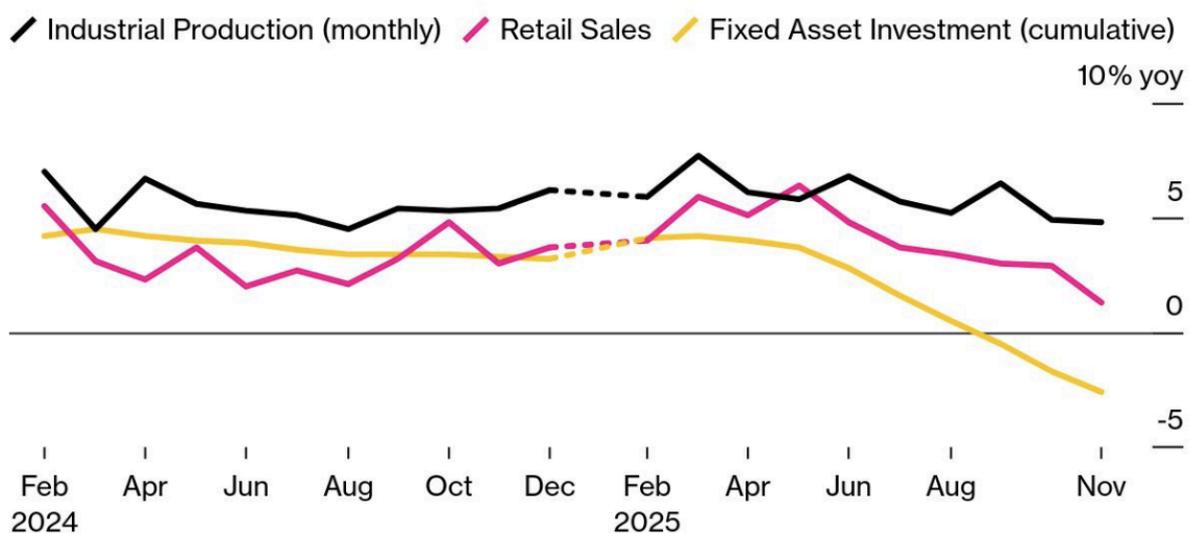
Section 1.2. China's Economic & Energy Profile

President Xi Jinping has made a very public call for “high-quality” growth and renewed a campaign to curb “involution” (seeking to stop companies engaging in destructive price competition), with a greater focus on stability, well-being and longer term resilience.¹¹ In 2025, Beijing has doubled down on production, technological innovation, and energy self-sufficiency.

December 2025 saw China announce 2026 public spending plans worth a total of US\$51bn to boost consumption and investment, moving early to shore up demand and cushion the economy against rising external headwinds. The National Development and Reform Commission (NDRC) said Beijing will front-load 295bn yuan (US\$42bn) in 2026 to support national strategic and security initiatives, in addition to 62.5 billion yuan to fund its consumer goods trade-in subsidies program.¹²

Economic growth is set to achieve a robust +5% yoy in CY2025,¹³ although retail sales have trended down over 2HCY2025, as has fixed asset investment – Figure 1.21. January 2026 saw the IMF raise its forecast for Chinese GDP growth to 4.5% in 2026 (albeit below the Chinese government's ~5.0% target) as concerns over the US trade war impact fade.¹⁴

Figure 1.21: China's Industrial Output, Retail Sales & Fixed Investment (% change yoy)



Source: Bloomberg

January 2026 saw the Chinese Academy of Engineering release a report, “Green Paper on Technological Innovation in Key Sectors of China’s Manufacturing Industry”, detailing Beijing’s target to become the world’s “leading manufacturing power” by 2035, with a focus on 13 sectors – including robotics, energy storage equipment, power equipment, new energy and intelligent connected vehicles – marking the next evolution of Beijing’s “Made in China 2025” strategy.¹⁵

Whilst China’s 2025 global trade surplus growth to a record US\$1.2 trillion highlights its resilience to increasing isolationism by the US,¹⁶ this export-led economic growth model at the expense of China’s trade partners is unsustainable.

¹¹ FT, [Why China is doubling down on its export-led growth model](#), 2 January 2026

¹² Bloomberg, [China Unveils \\$51 Billion in Early Spending to Support Economy](#), 31 December 2025

¹³ Bloomberg, [China Factory Activity Grows, Ending Longest Slump on Record](#), 31 December 2025

¹⁴ SCMP, [IMF raises China's 2026 growth forecast to 4.5%, citing US 'truce' and stimulus roll-out](#), 19 January 2026

¹⁵ SCMP, [China's next decade to cement status as hi-tech manufacturing powerhouse](#), 1 January 2026

¹⁶ Bloomberg, [China's Export Boom Far From Over After Record Trade Surplus](#), 14 January 2026

This report focuses on the growing outbound FDI in upstream critical minerals and strategic metals to build China's global cleantech supply chain security, but also the increasing Chinese investment in resource value-adding offshore to ensure a more win-win outcome.

January 2026 saw China record zero inflation over CY2025, the lowest reading since 2009,¹⁷ and keeping nominal borrowing costs low, supporting the value of firmed renewable energy infrastructure and highlighting the need for China to deal with widespread industrial overcapacity.

China's overall economic growth remains resilient, with total electricity demand in 2025 +5.3% yoy to 10,436TWh, with a record 41.5% share generated by zero emissions sources – Figure 1.22.

Figure 1.22: China's Electricity Generation, by Fuel Type, CY2025

| TWh | Jan-Dec 25 | Jan-Dec 24 | % change yoy | Share of CY25 Generation | Dec-25 | Dec-24 | % change yoy |
|-------------------------------------|---------------|--------------|--------------|--------------------------|--------------|--------------|--------------|
| Coal | 5,802 | 5,853 | -0.9% | 55.6% | 535.5 | 553.4 | -3.2% |
| Gas | 288 | 283 | 1.8% | 2.8% | 27.5 | 26.8 | 2.7% |
| Other fossil | 17 | 17 | 1.3% | 0.2% | 1.6 | 1.6 | 1.9% |
| Thermal | 6,107 | 6,153 | -0.7% | 58.5% | 564.6 | 581.7 | -2.9% |
| Bioenergy | 198 | 197 | 0.7% | 1.9% | 18.8 | 18.7 | 0.3% |
| Hydropower | 1,327 | 1,280 | 3.7% | 12.7% | 87.0 | 83.1 | 4.7% |
| Nuclear Power | 482 | 446 | 7.9% | 4.6% | 44.8 | 43.3 | 3.6% |
| Wind Power | 1,128 | 993 | 13.6% | 10.8% | 114.4 | 100.4 | 13.9% |
| Solar Power | 1,193 | 846 | 41.0% | 11.4% | 91.0 | 64.6 | 40.8% |
| Total power generation (TWh) | 10,436 | 9,914 | 5.3% | 100.0% | 920.5 | 891.8 | 3.2% |
| Variable Renewable Energy | 2,321 | 1839 | 26.2% | 22.2% | 205.4 | 165.0 | 24.4% |
| Zero Emissions | 4,329 | 3761 | 15.1% | 41.5% | 356.0 | 310.1 | 14.8% |

Source: China National Bureau of Statistics, EMBER, CEF calculations,
Note - this includes distributed energy resource generation

China's electrification and decarbonisation drive continues to be world leading, with a world record 446GW of renewable energy capacity added in CY2025, +20% yoy – Figure 1.23. 2025 saw China's national emissions decline by a modest but exceptionally important 0.3% yoy, a trend that if sustained, means China has delivered on peak emissions six years ahead of its 2030 target.¹⁸

Figure 1.23: China's Electricity Capacity Expansion, by Fuel Type, CY2025

| Gigawatts (GW) | Dec'2025 Total Capacity | Share of total capacity | Jan-Dec'25 Net Adds | % Share of new adds | % yoy change in net adds | Dec'25 Net Adds for month |
|------------------------------|-------------------------|-------------------------|---------------------|---------------------|--------------------------|---------------------------|
| Fossil Power | 1,539.0 | 40% | 95 | 17% | 75% | 16.8 |
| Hydropower | 448.0 | 12% | 12 | 2% | -16% | 3.1 |
| Nuclear Power | 62.5 | 2% | 2 | 0% | -58% | - |
| Wind Power | 640.0 | 16% | 119 | 22% | 50% | 37.4 |
| Solar Power | 1,201.7 | 31% | 315 | 58% | 14% | 40.5 |
| Total capacity | 3,891.3 | 100% | 543 | 100% | 27% | 97.8 |
| Renewable Energy adds | | | 446 | 82% | 20% | 81.0 |
| Zero Emissions Capacity Adds | | | 448 | 83% | 20% | 81.0 |

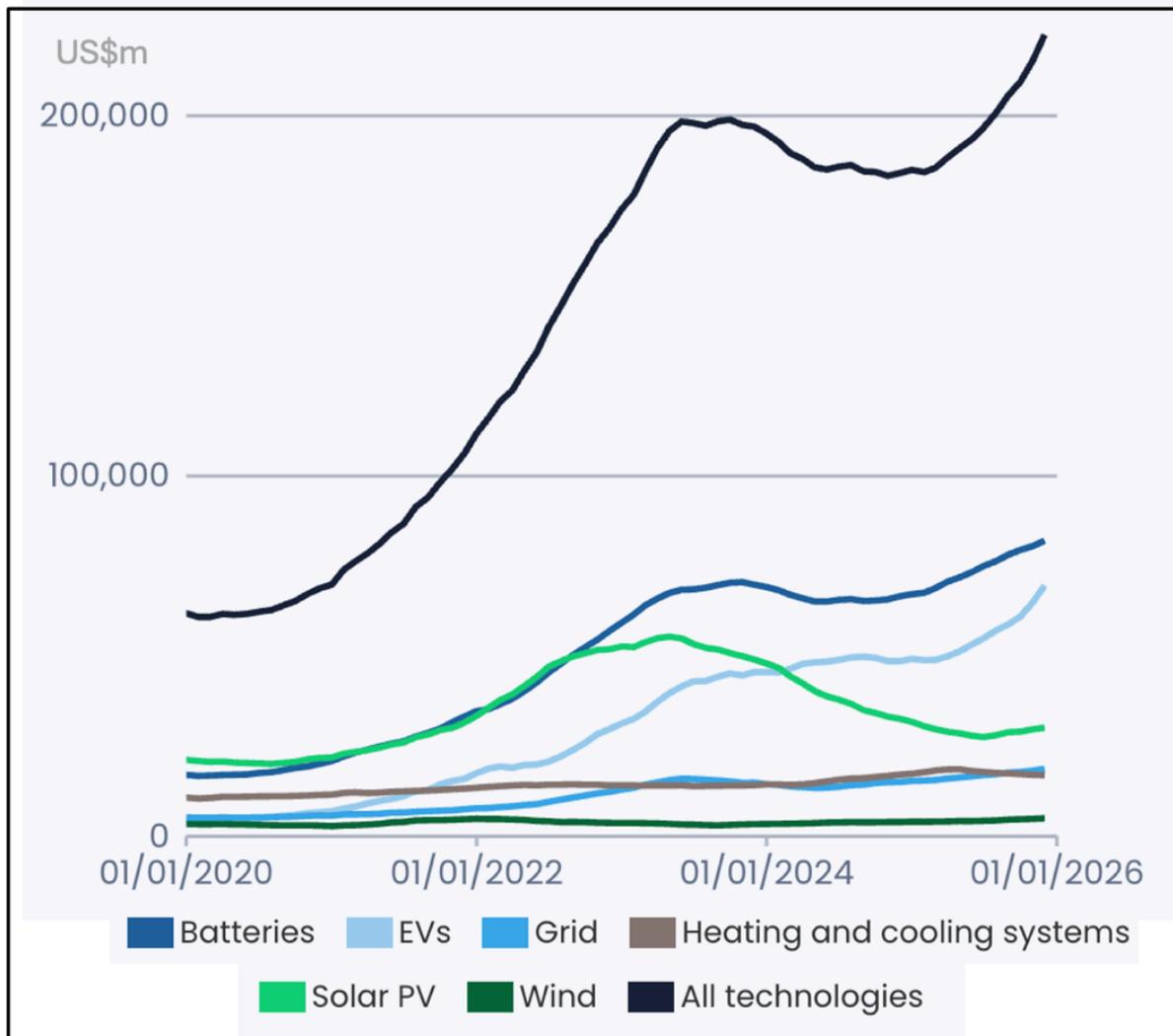
Source: China National Bureau of Statistics, CEF calculations

¹⁷ Bloomberg, [Chinese Rebound in Consumer Prices Masks Deflationary Risk Ahead](#), 9 January 2026

¹⁸ FT, [China solar boom helps energy emissions fall slightly in 2025](#), 2 March 2026

China is the world's largest investor in zero emissions industries of the future. China dominates cleantech R&D, cleantech manufacturing and cleantech domestic deployments. China also now leads the world in terms of total cleantech exports, reaching US\$222bn in CY2025 – Figure 1.24.

Figure 1.24: China's Cleantech Exports Continue to Surge (12 month rolling, US\$m)



Source: China's General Administration of Customs, [EMBER](#)

China's zero emissions exports profile is changing, even as it is accelerating. In 2025 China exported 2.6 million electric vehicles worth US\$70bn, up 43% yoy. The widening global reach of these EV exports is phenomenal, covering at least 150 countries. This also means China is increasingly invested in branded consumer goods. Along with growing tariff barriers, the nature of China's role is shifting to a country offering to build significant EV manufacturing capacity in destination markets, along with supporting investments in battery supply chains.¹⁹

January 2026 saw estimates that China's green finance sector has grown seven-fold over the last decade to reach a financial balance of exposures across green bonds, loans and equities of a record US\$6.8 trillion by end-2025. China is leveraging its enormous financial system reserves to build and enhance its world-leadership in zero emissions growth industries of the future.²⁰

¹⁹ Reuters, [China tightens clean tech grip with growing EV export reach](#), 6 February 2026

²⁰ Bloomberg, [China's \\$6.8 Trillion Green Finance Boom Seen Advancing Further](#), 29 January 2026

Section 1.3. China's Industrial Ecosystem: State-Owned and Private Enterprises

In 1990, private enterprise accounted for a negligible share of China's economic output. At this time, the perspectives and prospects of China's two distinct corporate structures, state owned enterprises (SOE) and private firms, were starkly disparate. Large SOEs benefitted from state guarantees and contracts, low costs of capital and, in strategic industries of telecommunications and energy, benefitted greatly from monopolistic powers.

Conversely, Chinese economist Keyu Jin, tenured professor at the London School of Economics and former economist at the World Bank, IMF and China Banking Regulatory Commission, describes the world of small to medium-sized private enterprises (SME) as a "jungle", facing significant barriers to entry, exorbitant costs of capital, and endless bureaucratic red tape within a byzantine network of district, municipal and provincial governments.²¹

Despite the overwhelming advantages to SOEs, private enterprise and entrepreneurialism have successfully taken root, scaled, matched and now surpassed the contributions to China's economic output through the last decade. Through the mid 1990s, Premier Zhu Rongji implemented a series of measures that drastically overhauled large, bloated and unprofitable SOEs, with smaller SOEs left to sink or swim. In 1998, 60% of SOEs were loss-making. Major SOEs were forced to undergo significant restructures, selling off minority interests to the public or strategic private investors, or listing on domestic stock exchanges. More than 80% of SOEs operating in 1998 were shut down or privatised by 2007, with the annual exit rate of the smallest SOEs (10th percentile) exceeding 30%.

The reforms resulted in significant market consolidation, improving the profitability of the largest state firms without sacrificing employment and economic output. By 2007, the steel sector had consolidated into 5 major industrial groups, and the automotive industry had evolved into 6 state-owned conglomerates. Through the privatisation and consolidation at the beginning of the 21st century, national share of state-owned assets fell from 70% to 50%. Economic output and the productivity gap between state enterprises and private firms narrowed significantly, as the Chinese economy overall more than doubled in size.

Private enterprises now contribute over 50% of China's annual tax revenues, generate more than 60% of China's national GDP, generate over 80% of urban employment and account for more than 90% of national high-tech businesses and 80% of national 'little giant' firms – SMEs recognised for specialised expertise and innovation in technological industries.²²

The rapid emergence of private enterprise in China over the 21st century has resulted in China's economic model becoming far more complex than most in the west understand. The growth of private enterprise has not shifted industrial and economic policies towards a freer market-based capitalist structure, but rather a blended, or hybrid, model of public-private collaboration and cooperation. Over the past few decades, the boundary between SOEs and private firms in China have become opaque. In recent years, private firms, SOEs and local governments have developed a symbiotic relationship, finding new pathways to collaborate, compete and coexist, with their synergies generating significant multiplier benefits. As profitable private enterprises generated employment, tax revenues and local GDP – scoring political points for local government officials, subnational governments provided resources to private firms to overcome a plethora of regulatory barriers.²³

The successes of China's hybrid economic model lie in its integration of free market economics alongside the power and strategic direction allowed by a highly centralised authoritarian regime.

²¹ Keyu Jin, [The New China Playbook: Beyond Socialism and Capitalism](#), 16 May 2023

²² China State Council, [Private Sector to Play a Key Role in Major Projects](#), 6 December 2024

²³ Keyu Jin, [The New China Playbook: Beyond Socialism and Capitalism](#), 16 May 2023

Markets work in China's domestic economy: goods and services operate on the basis of supply and demand, individual consumption and private investment and innovation. China's state planning and mobilisation equally plays a defining role in the shaping of China's industrial and financial markets. Innovation and entrepreneurship have become defining features of the Chinese economy alongside its in-state coordination and resource allocation. System-wide changes can be enacted at speed and scale with state guidance at the macro-level, with market mechanisms at the micro-level.

China's rapid growth in the manufacturing development and deployment of clean energy technologies, as well as its global integration across their respective value chains – from raw materials processing and value-add to solar PV and battery cell and module manufacturing – is a function of its strategic use of public-private partnerships, investing in technology and leveraging the massive scale of its domestic market and clear home firm bias. When markets are inchoate and disorderly, strong state coordination and intervention has proved effective in China's world leading mobilisation of capital into EVs, solar PV, wind turbines, batteries, steel, aluminium and critical minerals. Excessive price competition and drive for volume growth ahead of profitability remains a challenge that needs to be addressed, but the strength of China's dual corporate structures has underpinned China's world leading 7-8% CAGR in GDP growth for two decades.

When it comes to China's cleantech sector's success, there is a lesson for Australia and other nations, similar to the long-term success evident in Japan and South Korea. Professor Elizabeth Thurbon calls this public-private collaboration a Green Energy Statecraft. As China is Australia's top trade partner, there is much here for Australia to learn and adjust to. Above we discuss the key corporate entities underpinning China's resource sector going global, and it illustrates this dual structure.

Section 1.4. China's Resource Company Model

In contrast to the privately owned Chinese cleantech majors like BYD, CATL, Gotion, EVE Energy, Sungrow and JinkoSolar, and the western markets being dominated by the privately owned mining majors, the Chinese government plays a significant role in their major mining houses:

1. Zijin Mining Group Co. is 28% state-owned, the fourth largest global metal mining firm;
2. China Baowu Steel Group is 100% state-owned, via the State-owned Assets Supervision and Administration Commission (SASAC);
3. CMOG Group Ltd is 30% state-owned (as well as 25% owned by CATL);
4. Aluminium Corporation of China (known as Chinalco) is owned by SASAC;
5. Aluminium Corp. of China Ltd (Chalco) is 32-36% owned by Chinalco;
6. Shandong Xinha Aluminium Group (Xinha Group) entirely private;
7. Metallurgical Corporation of China (MCC) 64% owned;
8. Zhaojin Mining Industry Co. is a 37% SOE (via its parent, Shandong Zhaojin Group Co., Ltd.)
9. China Rare Earth Group (CREG) a 100% SOE;
10. Guandong Rare Earths Group is a 100% owned SOE (via CREG); and
11. Jinchuan Group is owned by the Gansu province SASAC.

As with a lot of mis-perceptions about China, there is no single rule, and there is a duality of public and private structures, and a growing base of retail investors via stock exchange listings, and even the presence of major western investors (largely via the passive index firms like BlackRock and Vanguard). Chinese cleantech leaders are also partnering with western firms: Stellantis owns 15% of China's Leapmotor since 2023, and VW is the largest single shareholder of Gotion High-Tech, with a 26% stake, along with a 5% stake in XPeng Motors.

Of the Chinese specialist mining majors, Tsingshan Holding Group Co., Ltd., Zhejiang Huayou Cobalt, Zhejiang Huayou Cobalt, CNGR Advanced Material Co., GEM Co., Ltd., Sinomine Resource Group Co., Ltd., Xinha Group, Tianqi and Ganfeng Lithium Group are all privately controlled, albeit generally stock exchange listed firms.

However, it is important to acknowledge the role of Green Energy Statecraft in Chinese public-private collaborations and the resulting state financial support. During the 2022 "Nickel Squeeze" crisis, for example—where Tsingshan Holding Group Co. faced multi-billion dollar losses on the London Metal Exchange—the Chinese government and state-owned banks like China Construction Bank (CCB) played a vital role in providing liquidity and credit to prevent the company's collapse.

Private mining majors like BHP, Rio Tinto and Anglo American are very focused on profit and return on investment maximisation to meet the myopically short term focus of stock markets. They don't work in the national interest, and when the going gets tough, they generally exit or pivot. Regulatory obligations for end of mine- or well-sites rehabilitation are generally avoided by divestment to minnows. Without the explicit protection of state backing, these majors avoid countries destabilised by civil unrest and/or controlled by dictators, or where resource extraction is tied to investment in within-country value-adding and/or the provision of enabling power, rail and port infrastructure.

As an illustration, as the western mining majors like BHP progressively exited Indonesia, Chinese resource firms moved in, agreeing to invest in value-adding within country as part of the long term agreement for sustained resource access, but also showing some of the worst aspects of historical colonialism in terms of lack of regard for local communities' rights building massive coal-fired power plants for powering their operations, in contrast to their domestic China focus on pivoting towards clean energy. CEF notes with interest a small point of light with the January 2026 announcement by the United Nations Industrial Development Organization (UNIDO) designating the Indonesia Weda Bay Industrial Park (IWIP) as a pilot project for sustainable management of a nickel industrial zone. This in turn saw IWIP dust off plans to develop a US\$2bn renewable-energy project that includes a

2GW solar plant and a 500-MW wind facility, as a potential first material step away from behind the meter coal fired power plants.²⁴

It is also worth noting, China's mining majors are not hiding their global expansion plans, they announce them to the (Chinese) stock market regularly. This report documents the growing OFDI trend in upstream mining and midstream processing of critical minerals and strategic metals.

February 2026 saw Zijin Mining Group outline its three year plans (2026-2028). Zijin is now a top 4 global metal mining house, having delivered a staggering compound annual growth rate (CAGR) of total assets of 67% over 2022–2025, and a CAGR in net profits of 155% to Rmb52bn (US\$7.5bn - compared for BHP's FY2025 net profit of US\$10.2bn). Relative to 2025, Zijin targets to expand its gold production 50% to 135tpa by 2028, copper by 50% to 1.55Mtpa, silver by 48% to 650tpa, lithium tenfold to 300ktpa and molybdenum threefold to 30ktpa.²⁵

February 2026 saw a state-owned consortium led by Wanwei Group (an Anhui government SASAC SOE) sign a restructuring investment agreement to acquire a controlling 22% stake in the previously privately controlled Shanshan, which had been placed in bankruptcy restructuring a year earlier due to excessive financial leverage and the death of the founder, Zheng Yonggang. Shanshan is a key global battery supply chain player, holding a 21% global share of battery anode manufacturing.²⁶

²⁴ Petromindo.com, [IWIP to invest \\$2 billion in renewables at Weda Bay nickel hub](#), 17 November 2025

²⁵ Zijin Mining Group press release, [Announcement in relation to the Three-Year \(2026-2028\) Major Mineral Products](#), 8 February 2026

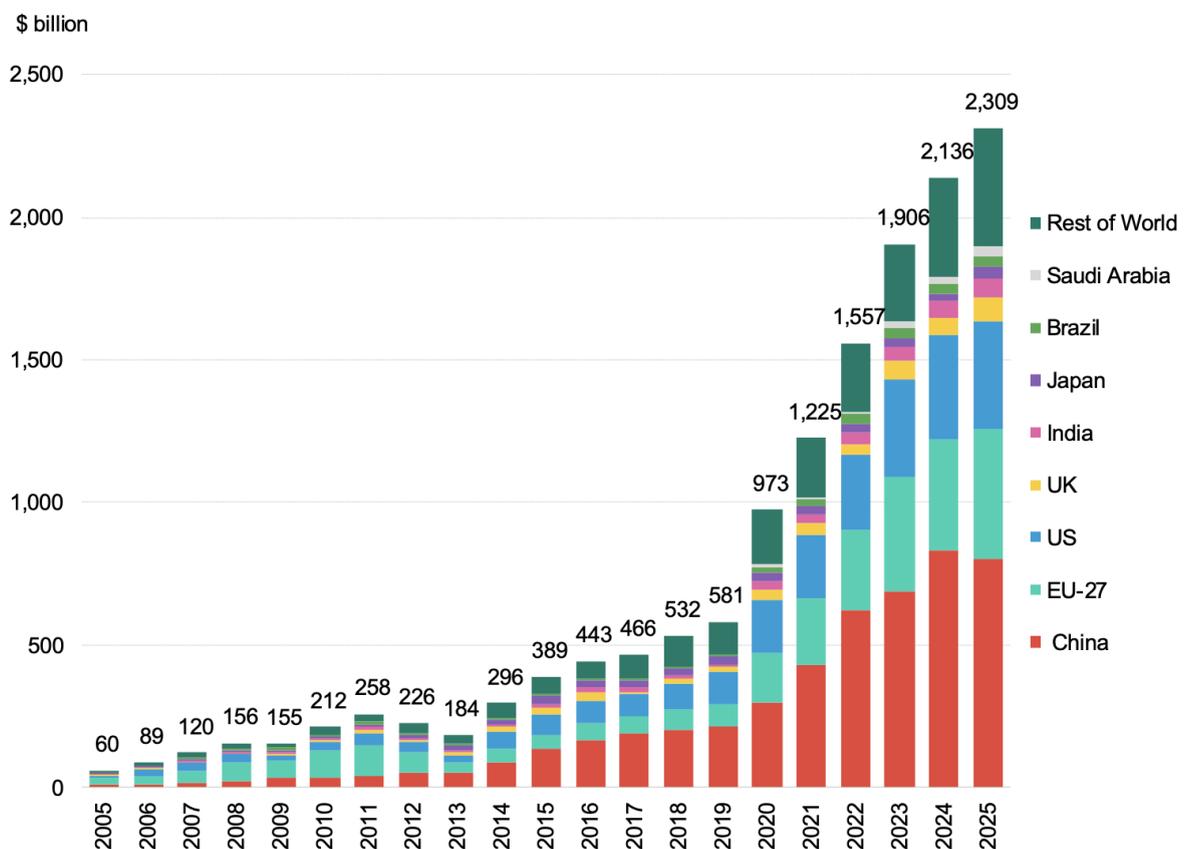
²⁶ Futubull, Shanshan Co., Ltd. [Restructuring Concluded: Anhui State-Owned Assets Invests 72 Billion Yuan to Take Control](#), 10 February 2026

Section 2. The Global Energy System Transformation that Underpins China's Capital Deployment

In January 2026, Brookfield's 2026 outlook projected a global infrastructure supercycle, fueled by the converging megatrends of digitalization, decarbonization and deglobalization.²⁷ In addition to this, Climate Energy Finance (CEF) projects electrification as an additional major growth industry in 2026, driven by increasing geopolitical objectives of energy security & energy independence, led by the unstoppable drive towards electric vehicles (EVs).

BloombergNEF estimated global investment into the energy transition achieved another record high of US\$2,309bn in 2025, +8% yoy – Figure 2.1. China maintained its word leadership in the deployment of energy transition capital, investing US\$800bn in 2025. While investments in the US only grew by 3% from 2024, the European Union (EU) continued to embrace decarbonisation and energy security infrastructure investment, increasing deployment 18% to US\$455bn.

Figure 2.1: Global Energy Transition Investment, by Country, US\$bn



Source: BloombergNEF, [Energy Transition Investment Trends](#), January 2026

Whilst the US, under President Trump, continues to introduce isolationist and nationalist policies through government intervention and the erection of trade barriers and tariff regimes, China has taken advantage of the massive opportunity to help drive a global geopolitical reorientation. Through China's Green Energy Statecraft, 2025 has seen a significant step change in China's collaboration with other countries, particularly in the Global South, to scale clean energy technology (cleantech) manufacturing and deployment capacities, curbing emerging economies and developing markets

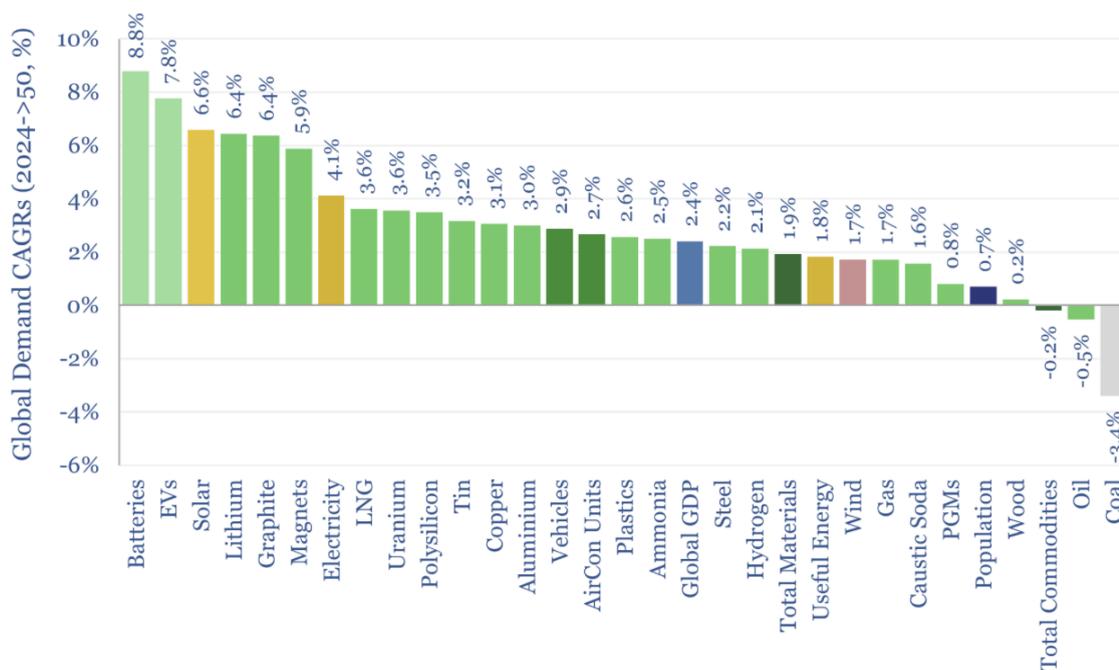
²⁷ Brookfield [2026 Investment Outlook](#), January 2026

exposure to inflationary and volatile fossil fuel imports via domestic electrification and decarbonisation.

The US attack on Iran in March 2026 has highlighted once again the massive importance of energy security and hence the benefits of rapid, scaled deployments of firmed renewable energy infrastructure to build domestic energy capacities. This is further accentuated by the ongoing deflationary nature of cleantech solutions, compared to the volatility and expense of reliance on imported high emissions fossil fuels. BloombergNEF estimates that the levelised cost of electricity (LCOE) of a typical fixed-axis solar farm globally increased by 6% year-on-year in 2025 to stand at US\$55/MWh, but innovation and competition are expected to see costs fall by another 30% in the coming decade to 2035.²⁸

Thunder Said Energy forecasts the CAGR for **batteries** (8.8%), **EVs** (7.8%) and **solar PV** (6.6%) as the fastest growing sectors across energy, materials capital goods, reflecting the accelerating global energy system transformation. The progressive electrification of everything – including transport, powered by renewables (solar, wind, hydro) and battery firming – underpins a strong, sustained growth for critical minerals and strategic metals, including lithium, graphite, rare earth magnets, copper and aluminium – Figure 2.2.²⁹

Figure 2.2: Energy, Materials and Capital Goods Demand, CAGR 2024-2050



Source: Thunder Said Energy

Electrification and decarbonisation have fast become global megatrends, which combine to drive a progressive loss of oil, coal and methane gas' influence and contribution to global energy demand. As the world shifts away from the extraction and burning of fossil fuels and pivots to processing and value-adding of critical minerals and strategic metals, volume growth of all commodity mining and extraction will progressively decline. The commodity intensity of global GDP has fallen at -1.2% pa over the past half-century, and is forecast to continue as the world increasingly displaces fossil fuels.

²⁸ PV Magazine, [Solar LCOE to fall 30% by 2035, says BloombergNEF](#), 24 February 2026

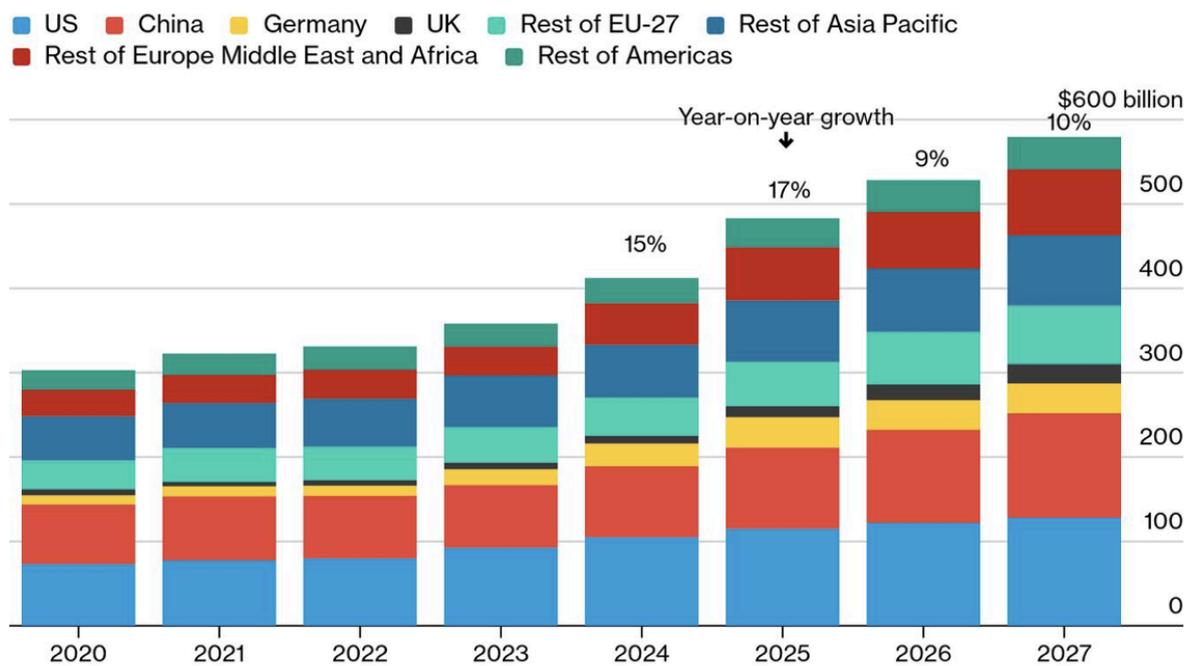
²⁹ Thunder Said Energy, [TSE Supply-Demand Models](#), 18 December 2025

A key theme of 2025 highlighted through this report was the diverging trade, energy and investment policies of the US and China. Under President Trump, the US has doubled down on fossil fuel production and consumption, undermining the growth of cleantech manufacture and deployment. The regression of the Trump Administration's climate and energy policy was highlighted by its abrogation of its responsibilities on climate action as it walked away from the Paris Agreement.

In contrast, 2025 saw China double down on electrification and decarbonisation, increasing its industry dominance in all cleantech sectors – from renewables, nuclear, batteries and hydro to grid infrastructure, as well as EVs.³⁰ The rest of the world, led by China's global leadership in technological development, manufacturing capacity and export of cleantech, has started to embrace the climate, economic and national energy security benefits that result from electrification and decarbonisation.

BloombergNEF estimated global solar and wind installations exceeded 800GW in 2025, a tripling in annual deployments since 2021. Globally, BNEF expects 4,500GW of new wind and solar installations over the next five years – a 67% increase on the preceding five-year period.³¹ Driven by electrification of transport, industry and heating & cooling, in addition to rapidly increasing energy demands as a result of artificial intelligence (AI) infrastructure trends, global power grid investment is set to continue accelerating, having risen by 16% in 2025 to US\$479bn – Figure 2.3.³² BloombergNEF projects the growth in global grid infrastructure investment to continue in the coming years, rising 10% yoy to US\$525bn in 2026, and again to US\$577bn in 2027.

Figure 2.3: Power Grid Investment is Surging Globally (nominal US\$bn)



Source: BloombergNEF

³⁰ Bloomberg, [How China's Engineering Mindset Won the Clean-Tech Race](#), 4 December 2025

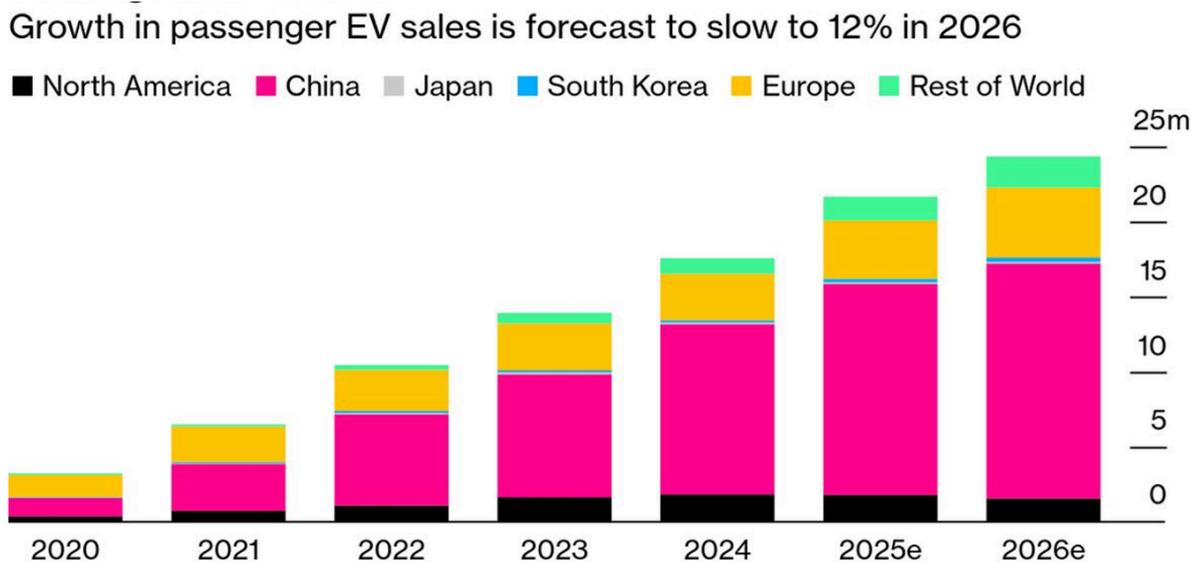
³¹ BNEF, [Progress Despite Fragmentation: The Energy Transition to 2030](#), 6 January 2026

³² Bloomberg, [Grid Tech Stocks Are Poised to Soar Even Further Amid AI Bubble Fears](#), 8 December 2025

Section 2.1. The Electrification of Transport

A key aspect of the electrification and decarbonisation of energy systems is the sustained rise of new energy cars, 2-wheelers, trucks and buses deployments. BloombergNEF estimates global new energy vehicle (NEV) sales grew 23% yoy in 2025, reaching 21.7 million. NEV sales, comprising battery-electric and plug-in hybrid EVs (PHEVs), are forecast to grow 12% in 2026 to 24.3 million – Figure 2.11. The US attacks on Venezuela and Iran have pushed up global oil prices dramatically, adding an economic incentive to growing concerns over energy security to underpin domestic powered NEV adoption.

Figure 2.11: Global Passenger EV & Plug-in Hybrid Sales (Millions)



Source: BloombergNEF

In recent years, western media has repeatedly reported the stalling of EV adoption, such as automakers facing an “EV Winter”,³³ showcasing the slowing of NEV sales in the US. The stagnation of US NEV deployments have become a misrepresentation to the deployment rates of global markets.

The rhetoric of a stalling global NEV industry was then amplified by the EU’s December 2025 walk back of its landmark ban of internal combustion engine (ICE) vehicles by 2035 as a result of heavy lobbying from fossil fuel dominated EU automanufacturers and nations, including Germany and Italy, which warned of further massive lay-offs and plant closures without an easing of climate targets.³⁴ An ICE ban beyond 2035 was seen as too ambitious, too costly, and risked the erosion of European industry due to the significant strategic advantage in NEV technology of Chinese rivals. German vehicle exports to China had already slumped 70% from 2022 to 2024, the EU’s trade deficit with China doubled to US\$296bn in the five years to 2024.³⁵

Despite this, technological and economic improvements have driven consumer behaviours in NEV uptake in the EU, and continue to drive a structural change in uptake globally. Over 2025, the EU saw very strong growth, surging 33% yoy to 3.9 million, with EVs reaching a record high 17.4% share in CY2025, up from 13.6% in CY2024. For the month of December 2025, EU EV sales exceeded ICE auto sales for the first time ever.³⁶

³³ Bloomberg, [Automakers Face an ‘EV Winter’ in 2026 as Sales Growth Slows](#), 6 January 2026

³⁴ Financial Times, [Carmakers hail EU climbdown on 2035 combustion engine ban](#), 16 December 2025

³⁵ Bloomberg, [Europe’s Naivety About the China Export Shock Is Tragic](#), 18 December 2025

³⁶ CarbonBrief, [Analysis: EVs just outsold petrol cars in EU for first time ever](#), 27 January 2026

The reduced trade drag of continued reliance on imported oil is a major geopolitical driver of NEVs. Ethiopia banned the import of ICE cars in 2024, and EV import tariffs were cut.³⁷

February 2026 saw Rhodium Group examine the cost advantages evident in the Chinese auto sector relative to western competitors, concluding that subsidies are only a small part of the differential, with lower labour costs in China, greater vertical integration, larger volumes due to the size of China's domestic market and lower factory capex costs all key drivers.³⁸

February 2026 revealed the cost of the transition, with Stellantis NV flagging €22bn in charges linked to reversing course on its EV strategy, and the pricing pressure inflicted by ever-cheaper Chinese EVs. This follows Ford taking a US\$19.5bn charge in 4QCY2025.³⁹

In China, more than 16 million NEVs were produced and sold in 2025, a growth of 17% from 2024, securing China's position as the world's largest producer and consumer.⁴⁰ NEV sales growth in China continued to outpace ICE vehicles, with China producing 34.4 million vehicles across all powertrains in 2025, up 9.4% from 2024. Furthermore, China's exports of NEVs doubled in 2025 to 2.6 million, even as China continues to scale offshore NEV manufacturing capacity.⁴¹ By 2025, Chinese EVs accounted for 89% of all EVs sold in Mexico.

China's automotive industry has shown no indication of throttling this trend, with automakers setting ambitious sales targets for CY2026. Across the industry, average sales growth of nearly 20% yoy is projected. Leading this charge, Leapmotor have forecasted a 67% growth in sales for CY2026 after an incredible 103% surge in sales over CY2025, alongside NIO (40-50% yoy growth forecast) and Xiaomi (34%) which realised a threefold growth in sales in 2025.⁴²

March 2026 saw Honda of Japan announce it expected to make a net loss of ¥360-630bn in FY2025/26 and an overhaul of its electrification strategy, becoming the western auto industry's latest casualty from a souring outlook for EV sales in the US and fierce competition from China. Stellantis and Ford have announced US\$26bn and US\$19.5bn writedowns respectively, after cancelling electric model launches and overhauling their global strategies. Failure to adapt to the speed and scale of China's auto market leaders is proving a financially destructive outcome.⁴³

Globally, NEV hold a record share of total passenger vehicle sales. In contrast, ICE vehicle sales achieved a new record low share of total sales, as well as a more than decade low in total production volume - see Figure 2.12.⁴⁴ As NEV adoption growth continues to outpace total vehicle sales growth, ICE vehicle manufacturers will continue to lose market share.

³⁷ Bloomberg, [Electric Vehicle Sales Boom as Ethiopia Bans Fossil-Fuel Car Imports](#), 18 February 2026

³⁸ Rhodium Group, [Why Are Chinese EVs So Cheap?](#) 19 February 2026

³⁹ Bloomberg, [Stellantis Plunges on €22 Billion Charges Tied to EV Retreat](#), 6 February 2026

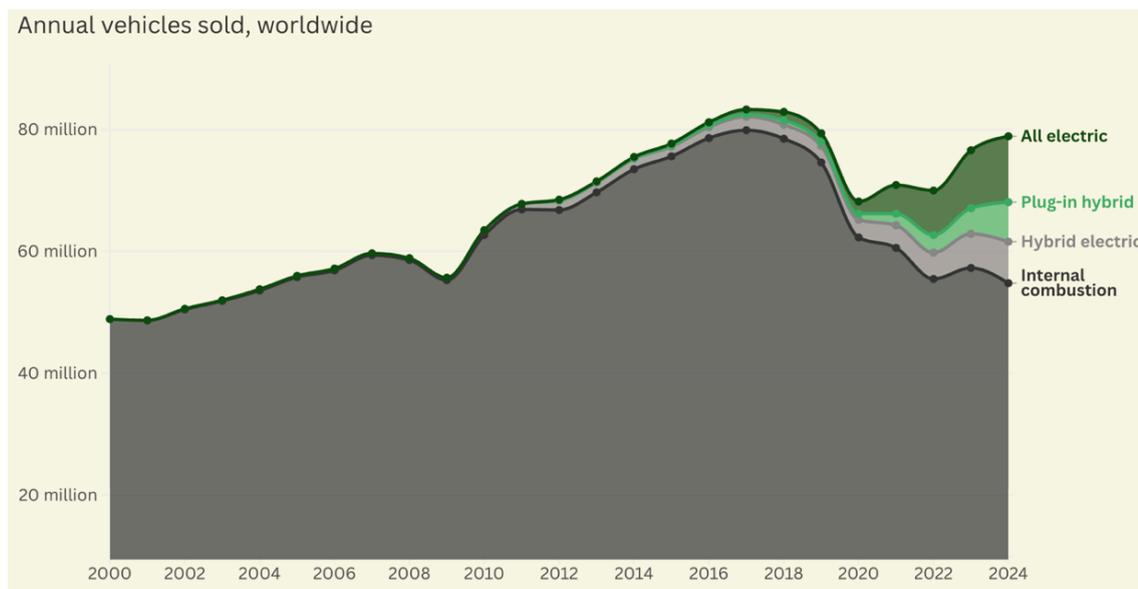
⁴⁰ BMI, [Global EV sales reach 20.7 million units in 2025, growing by 20%](#), 14 January 2026

⁴¹ SCMP, [China's EV makers face slowdown in export growth after doubling in 2025](#), 15 January 2026

⁴² Yicai Global, [Leapmotor Leads as 11 Chinese Automakers Set 2026 Sales Growth Targets](#), 19 January 2026

⁴³ FT, [Honda slumps to first annual loss since going public in the 1950s](#), 12 March 2026

⁴⁴ Canary Media, [Chart: EVs are ascendant — and gas cars are past their prime](#), 21 November 2025

Figure 2.12: Global Passenger Vehicle Sales - Record High EVs and Record Low ICEs

Source: IEA, Canary Media

China's automanufacturing industry is leading the charge on transport electrification in the EU. In December 2025, Chinese automakers built nearly one in ten of all passenger cars sold in Europe. When including imported non-Chinese brands, such as Tesla, Volkswagen, BMW and Renault, that were manufactured in China, Chinese vehicles accounted for one in seven. Chinese brands accounted for 16% of Europe's passenger EV market in December, and 11% for all of 2025.⁴⁵

Heavy vehicle electrification became a strong trend in 2025, dominated by the electrification of trucks in China. Battery-electric truck share of sales more than tripled from 8% in 2024 to 28% by August 2025 in China. Analysis by Benchmark Minerals Intelligence (BMI) forecasts battery-electric truck sales to surge to a record 60% share of sales by 2026-27.⁴⁶

Despite the deferral of the International Maritime Organisation's (IMO) mandatory fuel standard and emissions trading scheme as a result of the disruption and delay sown by the Trump Administration to protect its lagging incumbent fossil fuel-based interests,⁴⁷ China's CATL and A.P. Moller Maersk have continued collaborative efforts towards the electrification and decarbonisation of global shipping. Electrification of transport as part of the global shift towards electrification of everything remained a significant and positive global trend in 2025 despite instances of climate and energy policy regression.

⁴⁵ Bloomberg, [One in 10 Cars Sold in Europe Is Now Made by a Chinese Brand](#), 30 January 2026

⁴⁶ Associated Press, [China's diesel trucks are shifting to electric. That could change global LNG and diesel demand](#), 19 November 2025

⁴⁷ CleanTechnica, [From Riverboats To Global Ports: CATL Is Winning The Shipping Electrification Race](#), 5 January 2026

Section 2.2. Battery Energy Storage

The global energy system transformation is accelerating, driving a sustained displacement of fossil fuels by renewables and zero-emission technologies, including the profound impact of medium to long duration battery energy storage systems (BESS). This transformation has underpinned strong, continued demand for lithium-ion (Li-ion) batteries, surpassing the milestone threshold of 1.0TWh in 2024 and projected to reach nearly 1.6TWh in 2025.

McKinsey analysis forecasts battery demand to surge to 4.2TWh in 2030 and 6.8TWh by 2035, with Li-ion accounting for 85% of demand. EVs are expected to remain the dominant demand-driver with 85% of market demand for all battery technologies in 2025, with increasing demand from BESS (12%), dwarfing the share of batteries used in consumer electronics (2%).⁴⁸

The continued electrification and decarbonisation megatrends have underpinned the surging demand for critical minerals and strategic metals necessary for the energy transformation, in particular for copper in grid infrastructure, as well as lithium, nickel, graphite and cobalt in batteries.

The rapid deflation of battery energy installation costs, as well as increasing electrification of transport and industrial heat, will continue to drive deployments of stationary battery storage systems to firm variable renewable energy generation. JPMorgan projects battery storage systems to account for a third of lithium demand in 2026, and reach 42% by 2030. Morgan Stanley projects lithium carbonate equivalent (LCE)⁴⁹ demand to exceed 1.5Mtpa in 2026 and surpass 2Mtpa before 2030 - Figure 2.21.⁵⁰

Figure 2.21: Structural Lift in Demand for Battery Materials

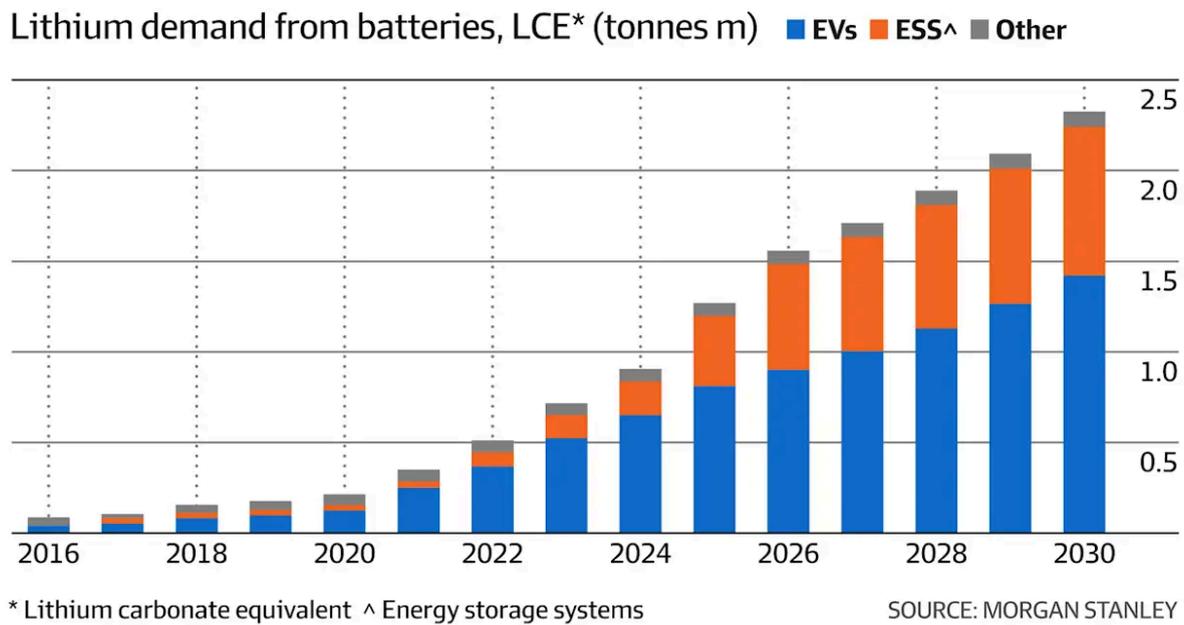


Chart: AFR

BloombergNEF's Energy Storage System Cost Survey of December 2025 shows global turnkey storage system costs in 2025 dropped 31% yoy to US\$165/kW, a record low, whilst Lithium-ion Battery Pack costs continue to decline. BloombergNEF calculates battery cell pack costs in 2025 fell 8% yoy to

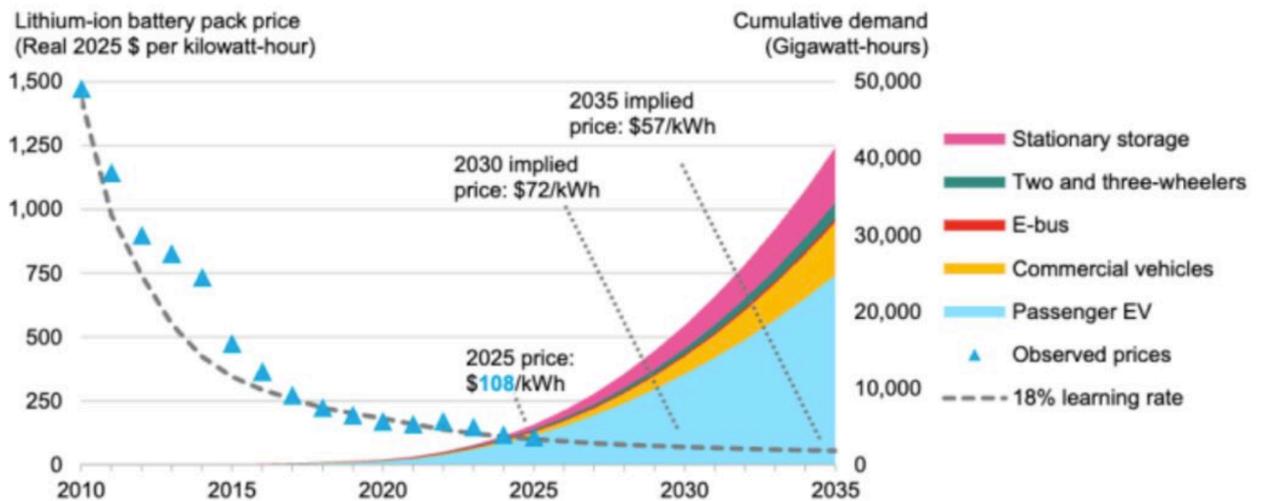
⁴⁸ McKinsey, [Battery 2035: Building new advantages](#), 1 January 2026

⁴⁹ LCE is an industry standard for determining total lithium content of extracted minerals across multiple extractive processes, allowing consistent production benchmarking.

⁵⁰ AFR, [Lithium markets hit fever pitch as China revokes more permits](#), 18 December 2025

US\$108/kWh – Figure 2.22.⁵¹ Since 2016, battery prices have experienced a more than 95% decline in prices. BNEF reports global benchmark cost for four-hour duration battery projects fell 27% yoy to US\$78/MWh in 2025.⁵² China remains the cheapest market, but Europe saw the steepest cost decline, narrowing the gap for the first time. Larger-format cells, higher-capacity containers and continued oversupply kept downward pressure on system prices across regions.

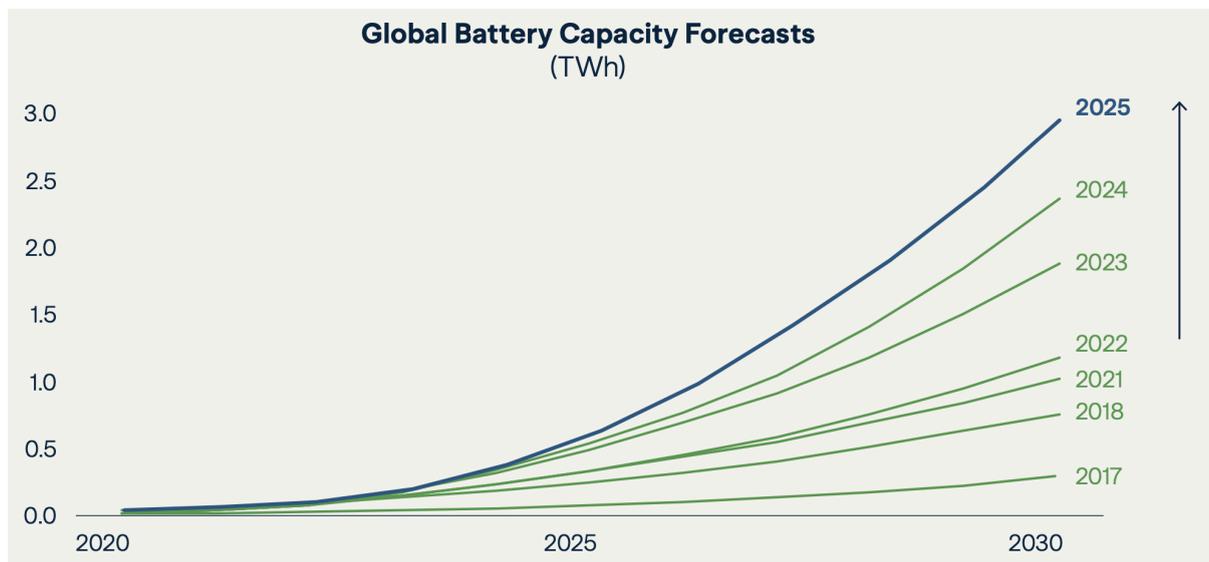
Figure 2.22: Lithium-ion Battery Pack Costs Continue to Plummet As Demand Booms



Source: BloombergNEF Battery Cost Survey 2025

China’s lithium battery exports are estimated to have grown 75% yoy in 2025.⁵³ As battery prices have continued down the cost curve and massive manufacturing capacity expansion has continued to accelerate globally, battery storage systems have rapidly become a cornerstone of power systems - Figure 2.23.

Figure 2.23: Batteries Have Become the Cornerstone of Power Systems



Source: BloombergNEF via Brookfield⁵⁴

⁵¹ BloombergNEF, [Lithium Battery Pack Prices Fall to \\$108/kWh, Despite Rising Metal Prices](#), 9 December 2025

⁵² BloombergNEF, [Battery Storage Costs Hit Record Lows](#), 18 February 2026

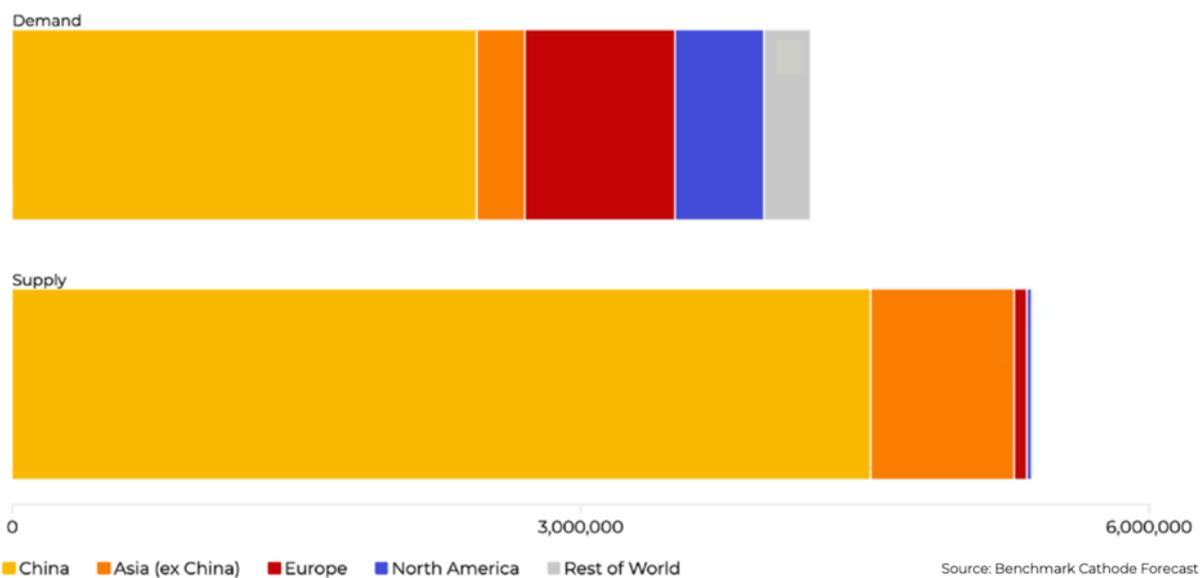
⁵³ Reuters, [China’s power reforms, global data centre buildout ushers battery boom](#), 22 December 2025

⁵⁴ Brookfield [2026 Investment Outlook](#), January 2026

China dominates the world's battery manufacturing capacity for both stationary energy storage and use in EVs with six of the top 10 firms, led by CATL, BYD, CALB, EVE Energy, Gotion and SVOLT, which have a combined global share in 2025 of some 70%.^{55 56} South Korea has three battery manufacturers in the global top 10 – LG Energy Solution (LGES), SK on and Samsung SDI. Japan's Panasonic rounds out the top 10.

Manufacturing concentration and China's dominance within the battery value chain becomes far more evident when analysing global battery midstream products. China's share of production in battery Cathode Active Material (CAM) and Anode Active Material (AAM) exceeded 90% in 2025, with BMI estimated China's CAM capacity exceeded total CAM demand globally in 2025 - Figure 2.24.

Figure 2.24: China Dominates Battery Materials Manufacturing Capacity: Cathode Active Material (CAM) Demand and Supply (t, 2025)



Source: BMI Mine to Grid: 2025 Year in Review

Despite having higher labour, electricity, and raw material costs, both the US and the EU are encouraging domestic manufacturing capacity build-outs. The US, and to a lesser degree the EU, are have enacted high import tariffs, as well as the significant industrial support policy suites designed to scale onshoring of manufacturing capabilities, including the US Inflation Reduction Act (IRA) / One Big Beautiful Bill Act (with its increasingly stringent foreign entity of concern (FEOC) material requirements) and the EU Critical Raw Materials Act (CRMA) / Green Deal Industrial Plan / EU Innovation Fund, respectively.

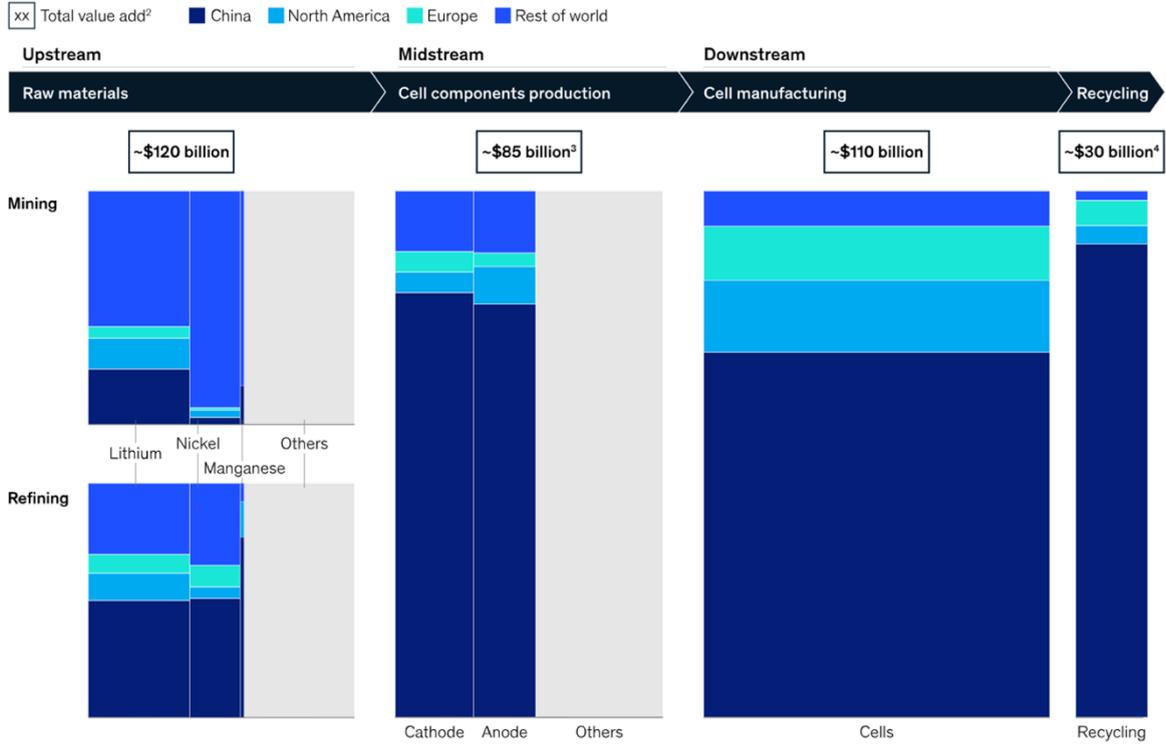
China absolutely dominates the manufacturing capacity of battery cell components (CAM, AAM), cell manufacturing as well as recycling – the latter reflecting efforts to use circularity to reduce raw material import dependence – Figure 2.25. As we detail in this report (particularly Section 7.1-7.2), China is increasingly offshoring its manufacturing capacity to circumvent export restrictions, meaning their global battery supply chain control is far higher than Figure 1.25 illustrates.

⁵⁵ Visual Capitalist, [EnergyRanked: Battery Manufacturing Investment by Country](#), 22 December 2025

⁵⁶ CNEVPOST, [Global EV battery market share in Jan-Jul 2025: CATL 37.5%, BYD 17.8%](#), 3 September 2025

Figure 2.25: China Dominates Battery Materials Manufacturing Capacity: Cathode Active Material (CAM) Demand and Supply (t, 2025)

Share of core steps along lithium-ion (Li-ion) value chain by project location, 2035 (estimated),¹ %



Source: McKinsey, [Battery 2035: Building new advantages](#), 1 January 2026

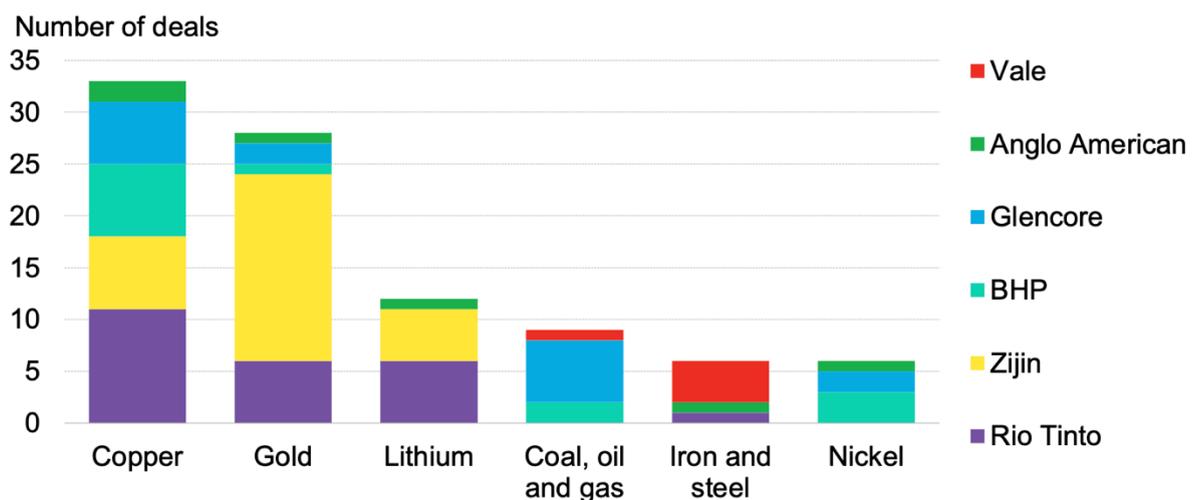
Section 2.3. Mergers & Acquisitions (M&A)

The global energy system transformation is seeing a range of global mining majors pivoting from fossil fuels towards future facing minerals and metals, both through greenfield developments but also M&A. Notable M&A transactions and proposals include:

- **December 2021:** Rio Tinto enters binding agreement for the US\$825m acquisition of the Rincon lithium project in Argentina. In December 2024, Rio Tinto approved a US\$2.5bn investment to expand Rincon, Rio Tinto's first commercial scale lithium operation.⁵⁷
- **October 2024:** Rio Tinto bid US\$6.7bn for Arcadium Lithium.⁵⁸ Rio Tinto successfully completed the acquisition in March 2025.
- **November 2025:** BHP unsuccessfully bid for the acquisition of Anglo American.⁵⁹
- **December 2025:** Anglo American and Teck Resources of Canada gain shareholder approval for a US\$60bn merger, set to become one of the largest copper producers globally.⁶⁰
- **January 2026:** Glencore temporarily renewed merger discussions with Rio Tinto as Glencore rebrands from a global coal conglomerate into a copper growth company. Glencore produces 1Mtpa of copper, while Rio supplies 800,000tpa. Together, it would hold 7% of global production.⁶¹

BloombergNEF has tracked the rapid mergers and acquisitions (M&A) spree of global mining majors since 2020, particularly in copper, gold and lithium – Figure 2.31.

Figure 2.31: Global Mining Majors Accelerate their M&A (2020-2025)



Source: Bloomberg NEF, [Transition Metals Outlook 2025](#), January 2026

⁵⁷ Rio Tinto, [Rio Tinto to invest \\$2.5 billion to expand Rincon lithium project capacity to 60,000 tonnes per year](#), 12 December 2024

⁵⁸ Rio Tinto, [Rio Tinto completes acquisition of Arcadium Lithium](#), 6 March 2025

⁵⁹ AFR, [BHP makes fresh takeover bid for Anglo American](#), 24 November 2025

⁶⁰ Financial Times, [Canada clears way for \\$60bn Anglo Teck merger](#), 16 December 2025

⁶¹ Financial Times, [Glencore and Rio Tinto resume talks on \\$260bn mining megadeal](#), 9 January 2026

Section 3. The Impact of China’s Export-Oriented Growth on Global Commodity Pricing

This report aims to look at China’s global investment in critical minerals and strategic metals mining and upstream processing to better understand the strategic implications of China’s ongoing and dramatic battery and EV supply chain vertical integration and control, driven by a focus on ongoing market share and volume growth as the priorities. CEF first examined this issue back in 2024 when the immediate outcome was a flooding of the global market with new supply sources at a pace ahead of renewables, battery and EV demand growth. The general consequence was dramatically lower prices and refinery margins, with this most evident in nickel, rare earths and lithium.

The end of 2025 saw this reverse, at least in the upstream mining sectors for many critical minerals, strategic and precious metals, with a rapid strengthening of many energy transition commodity prices (lithium, rare earths, copper, silver). Underlying global demand is seeing sustained structural growth, with resulting fears of supply shortages. CEF is not into commodity price forecasting. We note the best solution to high prices is high prices, and note the numerous references in January 2026 to consideration to re-open mothballed lithium mines as a result of higher prices.⁶²

Growing supply faster than demand means lower prices, everything else being equal. CEF often grapples with the higher prioritisation of investment, employment, exports, technology development and market growth over the near term focus on profitability relative to western firms. This is evident in the long lead times of mining, and the associated enabling infrastructure required to unlock these resources. But there is another angle here. Lower commodity prices can leverage and accelerate market development by underpinning sustained lower prices, which spurs higher growth. Chinese majors are increasingly vertically integrated, allowing one part of the global supply chain to sustain lower prices whilst profit margins might be higher elsewhere e.g. lower lithium prices is offset by higher battery and EV manufacturing margins. A western mining firm does not have this protection.

We witnessed massive over-investment by Chinese firms in Indonesian nickel supply, both in the mining and downstream processing, which nearly halved the global nickel price over 2022-2024, and saw capacity closures extending from Australia to New Caledonia, as well as financial distress even for Chinese majors like Jiangsu Delong Nickel Industry Co.

2025 ended strongly, with prices rising robustly as Indonesian government efforts to more strategically manage supply have taken effect. Similarly the cobalt price has ratcheted strongly upwards as the Congo DRC put in place export restrictions. Meanwhile, greater understanding of the long term strategic growth opportunities of electrification and decarbonisation have seen copper prices surge to record highs in 2026, whilst lithium prices have recovered somewhat from a cash loss-making position in 2024.

Despite the massive Chinese property sector correction, iron ore prices have remained robust over 2020-2026, with the resulting exceptionally high mining company profit margins of the last five years standing for now in stark contrast to critical minerals. CEF notes most forecasters, including the Australian Federal Treasury, expect a relatively rapid decline back to the long term average, driven both by China’s steel consumption falling (having already peaked back in 2020), and with new supply coming on at the huge new Simandou complex in Guinea.

BMI reports that heavy rare earth element (HREE) pricing over 2H CY2025 rose significantly as trade tensions rose, with reports of up to a 250% premium equivalent to China prices, a widening “China versus ex-China” market bifurcation (refer Section 6).⁶³ A similar situation is evident in processed steel products (refer Section 10), battery cathodes, anodes and cells (Section 7.1) plus polysilicon for

⁶² AFR, [MinRes considers lithium mine restart after prices rebound](#), 29 January 2026

⁶³ BMI, Mine to Grid, [2025 Year in Review](#), December 2025

solar (Appendix C). This serves to give Chinese magnet, processed steel and solar module manufacturers a cost advantage over their non-Chinese competitors.

December 2025 saw reports from China's battery producers that they are trying to raise prices in response to the dramatic, ongoing recovery in lithium and critical minerals prices over 2025.⁶⁴

January 2026 saw Bernstein forecast global battery supply prices will rise an average 10% yoy.⁶⁵

January 2026 saw an implied direct contradiction of this, with CATL signing a new supply contract with Ningbo Ronbay New Energy Technology with an estimated value of Rmb120bn (US\$17bn), with an average supply of 610,000tpa, suggesting a price per tonne below recent market averages. CATL also plans to commercialise sodium-ion batteries (which don't require lithium) this year which can also be read as an attempt to limit lithium's pricing power.⁶⁶

The Molycorp US pricing deal is an excellent strategic response in terms of guaranteed minimum price and offtake underwritten by the US government of global note. Western investment requires revenue visibility and acceptable return expectations – this landmark deal provides both (see Section 6). With this transaction being so strategically logical, the January 2026 signs that the irrational White House would yet-again undermine US interests by a policy reversal on rare earth price underwritings is noteworthy.⁶⁷

CEF's core focus is the accelerating global energy system transformation. Batteries and EV plus the enabling grid transmission and distribution (T&D) infrastructure are all expected to play a rapidly escalating role in decarbonisation as they facilitate fossil fuel replacement. Whilst the US has regressed by doubling down on domestic fossil fuel production, China and Europe have accelerated investments in both electrification and decarbonisation, in large part motivated by the need for energy independence. What is equally profound is the implications for the Global South to also embrace energy system independence via the drive towards electrification and decarbonisation, as illustrated by Pakistan with rooftop solar⁶⁸ and Nepal with EVs⁶⁹ over 2024-2025. This has profound long term global geopolitical implications.

⁶⁴ SCMP, [Can rising lithium costs save China's energy storage firms from a brutal price war?](#) 19 Dec 2025

⁶⁵ Bernstein, [Global Energy Storage 2026 Outlook](#), 7 January 2026

⁶⁶ Henry Sanderson, [Who really controls China's battery market?](#) 15 January 2026

⁶⁷ AFR, [Floor falls out: Rare earth stocks sink as US cools on price supports](#), 29 January 2026

⁶⁸ PV Magazine, [Pakistan's installed PV capacity estimated above 27GW](#), 20 January 2026

⁶⁹ The Rising Nepal, [EV imports slow in Nepal after years of strong growth](#), 22 February 2026

Section 3.1. Additional Impacts to Global Commodities

Greater minerals exploration

As nations race to secure lithium, cobalt and rare earths for green tech supremacy, investments into minerals exploration and resource modelling continue to expand. In January 2025, China's Geological Survey (CGS) reported China's lithium reserves had tripled, surging China to become the second-largest lithium jurisdiction in the world, with a 16.5% global share. CGS' revision means China is behind only Chile, and ahead of other lithium producing nations Australia, Argentina and Bolivia. A massive new lithium discovery in Tibet is a key part of this upward revision. Chinese scientists have also overcome technical challenges in extracting lithium from lepidolite, a mineral that has been difficult and expensive to process.⁷⁰

January 2025 also saw reports of the discovery of a major copper deposit in the Tibet Plateau of China, potentially containing north of 20Mt of copper resources. The revelation comes as China's copper consumption is estimated to have risen to 55% of global demand in 2025, supported by the growth of low-carbon energy and new-energy infrastructure.

Another study in CGS, published in August 2025, revealed Chinese geologists are deploying new high-powered electromagnetic tools to detect ore and energy resources buried kilometres deep. As surface-level deposits have been exhausted, the search has moved deeper into what geologists now call the "second mineral space", between 500 and 2,000 metres underground. For example, in Tibet's Jiama copper mine, a high-power tensor CSAMT (controlled-source audio-magnetotellurics) survey is reported to have achieved unprecedented resolution at depths of over 3,000 metres.⁷¹

Similarly, countries, mining geologists and researchers are increasingly investigating deep sea mineral mining and Arctic mining rights. As regulatory frameworks remain underdeveloped and nascent relative to the growing market and geopolitical enthusiasm for the respective jurisdictions, there are significant risks for environmental and economic exploitation in territories of emerging and developing economies.⁷² However, if sustainable frameworks are able to be implemented and enforced, there is potential for such new deposits to dramatically reduce the feared lack of critical minerals needed to power the energy system transformation.⁷³

March 2026 saw China ratify the UN Biodiversity Beyond National Jurisdiction treaty for the high seas, even as the US refused.⁷⁴

Cleantech supply chain circularity

China is thinking about circularity and recycling as a way of permanently reducing its reliance on ongoing imports of critical minerals and strategic metals. China is currently accounting for some 80% of global battery material recycling, showing this is a clear national strategic priority.

Shenzhen-listed GEM Co., Ltd. is a leading enterprise in the circular economy and a global leader in waste recycling, specialising in extracting and processing rare metals from discarded batteries, waste from electrical and electronic equipment (WEEE) and scrap cars to produce new energy battery materials. GEM operates 16 industrial parks across China and internationally, with the Durban Park in South Africa, ECOPRO GEM Co. in South Korea (a JV of GEM Co. and Korea's ECOPRO Co), and PT QMB New Energy Materials plant at IMIP in Indonesia. It processes a total waste treatment capacity

⁷⁰ SCMP, [New discoveries raise China's lithium reserves to second largest in the world](#), 8 January 2025

⁷¹ SCMP, [China is killing the race for critical minerals with the largest antenna on Earth](#), 22 September 2025

⁷² White & Case, [Diving in for critical minerals? Is the era of deep sea mining upon us?](#) 1 July 2025

⁷³ Kevin Walmsley, [China races a generation ahead in metals race with deep-sea rovers and 3-D mapping of ocean floors](#), 1 February 2026

⁷⁴ FT, [The geopolitics of the global oceans treaty](#), 6 March 2026

of over 5Mtpa. GEM recycles more than 30 kinds of scarce resources, including cobalt, nickel, lithium, tungsten, gold, silver, and platinum. GEM technology achieves high recovery rates, with a recovery rate of 96.5% for lithium metal.⁷⁵

January 2026 saw the perverse outcome that high EU recycling rules were resulting in recycling material exports, particularly to China. Aluminium scrap collected in the EU is exported to China, where it is smelted into new aluminium products then re-exported back to Europe. This is largely due to the very high industrial price of electricity in the EU following sanctions against Russian fossil fuel exports after Putin's invasion of Ukraine. Combined with high scrap prices from exporters, the result is that an estimated 15% of EU recycling aluminium capacity is idle. Once closed, it is very hard to rebuild this system capacity, as Australia has also found.⁷⁶ EU battery recyclers like Poland's Element Group, operating across 40 countries, see the majority of their black mass output exported to China for further processing and resource recovery.⁷⁷

January 2026 saw China halve its import duty on black mass (critical minerals recovered from spent Li-ion batteries) to just 3% to incentivise the battery recycling industry growth. BMI forecasts China has an excess black mass refining capacity of 1.5Mtpa in 2025, and is set to grow to 5.3Mtpa by 2030. BMI's Beatrice Browning says: "This will enable China to maintain its control over global critical mineral supply and enhance recycler profit margins."⁷⁸

January 2026 saw China's Ministry of Industry and Information Technology (MIIT) finalise the "Interim Measures for the Management of Recycling and Comprehensive Utilization of Retired Power Batteries of NEVs," effective 1 April 2026. These regulations target the "gray market" of illegal dismantling workshops and prepare for an estimated 1 million tonnes of retired batteries expected by 2030. This is part of a wider national battery recycling focus.⁷⁹

China's control over its key resource supply chains is clear, from the upstream mining, to refining and smelting, through to closed loop recycling to lower the need for imported virgin materials. The problem is that China is building recycling capacity ahead of demand, crushing the processing margin and undermining other nations' efforts.

It is good to see this strategy being called for in the US as a way of expediting supply chain diversity as well.⁸⁰

Emerging battery compositions

With rapid investment in battery technology R&D, and accelerating global demand for batteries in both EV and BESS, new battery compositions are emerging to compete with lithium-ion. However, this is unlikely to provide a strategic reset for western battery supply chains.

BMI estimates China has over 90% of the 90GWh of annual global manufacturing capacity for solid-state batteries at the end of 2025, and China has even greater dominance with over 95% of the global 123GWh pa of sodium-ion battery manufacturing capacity.⁸¹

March 2026 saw CATL and Changan launch the first EV powered by a sodium-ion battery commercially, leveraging cost, cold weather performance benefits as well as the better supply chain

⁷⁵ GEM Co, [Recycling Industries Across China and Spread All Over the World. Becoming a Green Industry Group that Affects the World](#), accessed December 2025

⁷⁶ FT, [EU recycling backfires as Chinese buyers snap up aluminium scrap](#), 5 January 2026

⁷⁷ Bloomberg, [Polish Recycler Bets Millions on Europe's Critical Metals Push](#), 14 January 2026

⁷⁸ BMI, [China reduces import tariffs for recycled black mass](#), 9 January 2026

⁷⁹ [CarNewsChina.com](#), [China implements strict EV battery recycling rules for 2026](#), 16 January 2026

⁸⁰ BMI, Mine to Grid, [2025 Year in Review](#), December 2025

⁸¹ BMI, Mine to Grid, [2025 Year in Review](#), December 2025

resilience, notwithstanding the disadvantages of lower energy density and hence lower range for EVs.⁸²

The smaller current global market capacity of 28GWh for redox-flow batteries is better diversified, with China at 40%, Australia at 28% and the US at 15%. China is also by far the largest domestic market globally for both EV and BESS deployments, giving a massive domestic scale advantage in developing new battery composites.

A September 2025 report featured a potential hydride-ion battery breakthrough where the Chinese research team claimed 6 times the capacity of lithium-ion.⁸³ Another September 2025 report highlighted the potential for a graphene battery breakthrough in China, claiming rapid charging rates, lower over-heating risks and no scarce critical mineral issues.⁸⁴ CEF's focus is to follow the money, we are not scientists, but we note significant ongoing interest in everything from sodium-ion to vanadium battery technologies.

February 2025 saw BYD flag it would begin 'demonstration use' of all-solid-state batteries by 2027 but noted large scale deployments are not expected till after 2030.⁸⁵

December 2025 saw CATL flag its expectation that sodium batteries will gain widespread application in battery swap, passenger vehicles, commercial vehicles, and energy storage. CEF sees this as likely only if lithium prices continue to increase significantly over 2026, given the inferior energy density of sodium. This comes amid a surge in lithium battery raw material prices, with battery-grade lithium carbonate prices in China rising over 50% in 4QCY2025. Sodium battery technology development went on the backburner when lithium pricing collapsed over 2022-2024.⁸⁶

January 2026 saw the China Green Development Investment Group (CGDI) officially commission the 60MW/600MWh Super Air Power Bank, the world's largest liquid-air energy storage (LAES) facility, located in the Gobi Desert near Golmud, Qinghai Province.⁸⁷

February 2026 saw the World's largest compressed air energy storage facility go online in China salt caverns. The Guoxin Suyan Huai'an Salt Cavern Compressed Air Energy Storage Power Generation Project has an installed power output of 600MW/2.4GWh, showing China is pushing the technology boundaries in energy storage on all fronts.⁸⁸

And synthetic graphite continues to gain share in the high growth battery anode active materials sector (refer Section 7.1).

Breakthrough bauxite beneficiation technology

December 2025 saw reports that China has completed an industrial facility in Shanxi province to prove up a new technology to transform previously unusable low-grade bauxite into high-quality feedstock for aluminium production. The project is a partnership between French-Swiss firm IB2 and Shanxi Senze Energy Technology Group, and marks the world's first large-scale deployment of this revolutionary silica-removal technology. It allows China to tap into its vast domestic reserves of low-grade bauxite, reducing reliance on imports from Guinea and Australia. But beyond aluminium

⁸² Electrek, [The world's first sodium-ion battery EV could be a game changer](#), 5 February 2026

⁸³ SCMP, [Hydride ion battery breakthrough: Chinese team claims 6 times the capacity of lithium ion](#), 25 Sep 2025

⁸⁴ EVWorld.com, [Charging Ahead: China's Graphene Battery Breakthrough Is a Wake-Up Call for the West](#), 5 September 2025

⁸⁵ CNEVPOST, [BYD expects to begin 'demonstration use' of all-solid-state batteries by 2027](#), exec says, 16 February 2025

⁸⁶ CNEVPOST, [CATL expects sodium batteries to see widespread adoption in 2026](#), 29 December 2025

⁸⁷ Enerdata, [China launches 60 MW/600 MWh liquid-air storage facility in the Gobi Desert](#), 5 January 2026

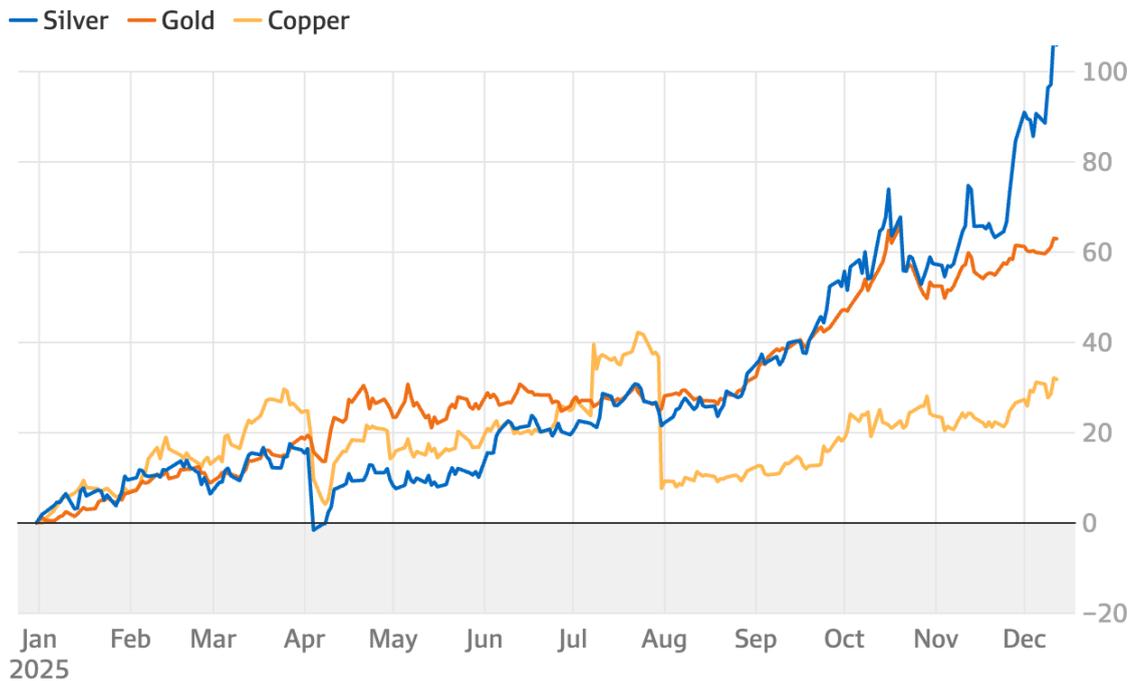
⁸⁸ Renew Economy, [World's largest compressed air energy storage facility goes online in China salt caverns](#), 2 February 2026

independence, greater value lies in this currently waste ore providing new sources of gallium, vanadium, lithium, niobium and some rare earths.⁸⁹

Base metal-silver substitution in solar modules

January 2026 saw Longi Green Energy Technology Co. (Longi) begin substituting base metals like copper for silver in its solar cells to mitigate the surging cost of the precious metal (refer Appendix A). This follows similar moves in December 2025 by Jinko Solar and Shanghai Aiko Solar Energy Co.⁹⁰ The shift is driven by record prices of silver, which tripled in 2025 (Figure 3.11) due to investor demand and constrained supply. Solar modules are the largest industrial use of silver globally.

Figure 3.11: Commodity Prices over 2025 – Gold, Silver & Copper (% change)



Source: Australian Financial Review, 12 December 2025

⁸⁹ SCMP, [How China pulled off a critical mineral production tech revolution in just 10 months](#), 10 December 2025

⁹⁰ Bloomberg, [Longi Joins China Solar Push to Cut Costs by Reducing Silver](#), 5 January 2026

Section 4. Global Foreign and Industrial Policy Responses to Curb China's Global Influence

Under the Trump Administration, the US's foreign policy is dominated by attacks on China, predominantly through trade and investment barriers, including targeted, excessive tariffs on Chinese imports and the forced divestiture of strategic infrastructure, including key ports in the Panama Canal⁹¹ and the restriction and export controls of chips to China, and actions aimed at encouraging development of non-Chinese supply chains.⁹²

This report focuses on China's growing globalisation strategies in the supply chains of zero-emissions cleantech industries of the future. With the ever-higher global market share by Chinese firms in most of these industries, a key theme is the need for greater collaboration and partnership, particularly in the strategic diversification of supply chains. Restructuring of global supply chains has been increasingly difficult as the Trump Administration pursued economic isolationism and protectionism.

As a result, national protection and preservation of domestic capability has become a strengthening theme in the face of growing global trade wars, particularly for export-oriented middle power economies like Australia and Canada. While economies like the EU and India have large domestic markets to facilitate the scaling of domestic industrial capacity, middle power economies and emerging markets must leverage comparative advantages and global trade for demand of goods and services. In the context of Australia, this has concentrated into globally significant resources and financial sectors, and a potential comparative advantage in leveraging renewable energy resources.

As the Trump Administration's colonialist attacks on Venezuela and Greenland highlight, the world is increasingly shifting towards a multipolar reality as the global energy transformation converges petrostates and electrostates, and the respective controls of fossil fuel and critical mineral resources.

BloombergNEF reports a record US\$2.3 trillion was invested in renewable energy, grid and decarbonisation in 2025, +8% yoy, showing the world is shifting in the right direction, but not at the speed and scale required to address the climate crisis. Additionally, the pace of the global energy transformation continues to be hamstrung by fossil fuel vested interests that leverage their vast influence and economic power to disrupt and delay electrification and decarbonisation.⁹³

CEF sees a potentially radical redefining of geopolitics and relationships. As the US's fossil fuel interests continue to weaponise US economic and political power, undermining global trade, abrogating the global leadership and dismantling the old world order it created,⁹⁴ CEF believes President Xi Jinping will harness this profound opportunity to "take centre stage in the world," aiming to redefine and restructure the world order and rules which have, in recent decades, been defined by western dominated structures such as the US controlled WTO, IMF and World Bank.⁹⁵

When President Trump emerged from his October summit with Chinese President Xi Jinping in Busan, South Korea, he declared it a "12 out of 10" success. Washington claimed it had won a major concession: in exchange for tariff relief, Beijing agreed to pause its escalating export controls on rare earth elements for a year, granting US industry a vital reprieve (discussed in Section 6).⁹⁶

⁹¹ FT, [Panama Canal ports deal at risk after China's Cosco demands majority stake](#), 23 December 2025

⁹² Npr, [In the shadow of U.S. export controls, China rallies its own chip industry](#), 19 December 2025

⁹³ The Conversation, [The battle over a global energy transition is on between petro-states and electro-states – here's what to watch for in 2026](#), 7 January 2026

⁹⁴ SCMP, [Forget China threat as real disruption is from Trump: 'old order not coming back'](#), 31 Jan 2026

⁹⁵ Bloomberg, [The US Is Giving Its Enemies What They Want](#), 18 December 2025

⁹⁶ The Diplomat, [Why the West Can't Escape China's Rare Earth Dominance – Yet](#), 8 Nov'2025

But global supply chains have become challenged as the US and EU progressively realise they have been asleep at the wheel for decades whilst China has built its global domination of the supply chains underpinning cleantech industries of the future.

December 2025 saw Korea Zinc commit to a JV with the US Government for a new US\$7.4bn critical minerals smelter in the US to build onshore capacity that has been progressively hollowed out over the last few decades. The plant will produce antimony, germanium and gallium — elements used in semiconductors and electronics — as well as non-ferrous metals (zinc, lead and copper) and precious metals. Korea Zinc aims to produce 300,000tpa of zinc, 35,000tpa of copper, 200,000tpa of lead and 5,100tpa of rare earths. The project comes after South Korea agreed to invest US\$350bn in the US in return for lower tariffs as part of a trade deal signed in October 2025 and underscores Korea Zinc's strategic importance as the materials become central to US national security and industrial policy.⁹⁷

Competing with China is increasingly difficult

The world is struggling to negotiate how to compete with China's speed and scale, and its clear long-term vision when it comes to Green Energy Statecraft.

We also note the complexity of Chinese corporate strategies, which align more with the national government priorities and seem far more motivated by investment capacity, employment, technology dominance, market growth and market share plus exports, rather than any near or medium term profit focus evident in most western firm competitors (outside of the tech sector). Chinese investment aimed at increasing global supply of commodities and midstream processing capacity sees supply often expanded ahead of market growth, and hence lowering prices and hence profits. Given China is by far the largest buyer, this serves to underpin Chinese rapid expansion of global market dominance in downstream cleantech value-added sectors even as western firms struggle to compete, and drives the cycle of Chinese led deflation that strengthens market growth.

In Australia the debate is about the impossibility of competing with China, with many industry practitioners suggesting we see our national manufacturing capacities further permanently diminished as we take the benefits of cheaper superior Chinese exports instead. This rationale even holds in upstream resource value-adding endeavours, leaving Australia to be a very profitable but vulnerable dig-and-ship quarry and farm to North Asia.

The global strategic implications of China winning this 'minerals war' are only now being more widely debated. Henry Sanderson concludes: "That will require new tools which are unfamiliar to Western governments - stockpiling, price floors, and government support. Trump has already accelerated down this path by launching a \$12 billion mineral stockpile and a proposed mineral trading bloc with allies. But since China has spent decades mastering these tools, catching up will require a level of government commitment — and money — that Western democracies have rarely sustained."⁹⁸

January 2026 saw Reliance Industries Ltd, the most power industrial conglomerate in India led by Mukesh Ambani (one of the richest and politically powerful billionaires in the world), notify the market it had paused efforts to make battery cells in India to compete against China and Korea's battery cell leadership, having failed to secure access to Chinese technology. Reliance had been in discussions with a Chinese lithium iron phosphate supplier Xiamen Hithium Energy Storage Technology Co. to license cell technology,⁹⁹ having committed to a US\$10bn cleantech in India investment program back in 2021.

February 2026 saw US-listed Albemarle Lithium announce it would close its recently commissioned lithium hydroxide refinery at Kemerton in West Australia, saying it was unable to compete.¹⁰⁰

⁹⁷ Financial Times, [US backs \\$7.4bn critical minerals smelter to counter China](#), 15 December 2025

⁹⁸ Henry Sanderson, [China won the mineral war. 2 books show how the West let it happen](#), 1 March 2026

⁹⁹ Bloomberg, [Reliance Halts Cell-Making Plans After Failed Bid for China Tech](#), 12 January 2026

¹⁰⁰ AFR, [Lithium refinery shuts in another blow to 'Made in Australia'](#), 12 February 2026

One strategy that is rapidly emerging to address the increasing challenges of competing with China is the move by countries to accelerate strategic collaboration and cooperation with China, as an investment and technology leader. Spain is a strong example of this, with its €4bn CATL / Stellantis battery manufacturing joint venture (JV).¹⁰¹

US Inspired Tariffs Disrupt Global Trade and Co-operation

December 2025 saw pressure from the US result in Mexico imposing new tariffs ranging from 5-50% on imports from China and other Asian countries effective 1 January 2026¹⁰² front running the country's preparations for the 2026 review of the United States-Mexico-Canada Agreement after US allegations Mexico was being used as a transshipment hub for Asian exports into the US.

Likewise Canadian industry, particularly in steel, aluminium and auto sectors, is being smashed by over-reliance on exports to the US, given Trump's imposition in 2025 of 50% steel and aluminium imports tariffs, since overruled in February 2026 by the US Supreme Court.

January 2026 saw the Trump administration's military strike to seize Venezuelan President Nicolás Maduro, a move focused on trying to secure US fossil fuel vested interests with selective access to Venezuelan oil resources, the largest in the world.¹⁰³ This clearly undermines the global rule of law and further diminishes US geopolitical standing.

Tariff Backlash Against “involution”

As discussed in Section 3, President Xi Jinping has made a very public call for “high-quality” growth and a campaign to end “involution”, seeking to stop companies engaging in destructive price competition with a race-to-the-bottom pricing tactics.

There is some evidence of new China policy efforts to discourage destructive price competition, led by China's State Administration for Market Regulation (SAMR).¹⁰⁴ We discuss the moves in the polysilicon sector to illustrate this (refer Appendix C).

January 2026 saw China's Ministry of Finance and the State Taxation Administration announce that VAT export rebates for battery products would be reduced from 9% to 6% from 1 April 2026 and then abolished from 1 January 2027. The aim appears to be to reduce export subsidies.¹⁰⁵

CEF strongly advocates for free trade globally, and sees the US instigated trade war and deal-making as an unprecedented form of bullying, particularly as the US strongly benefited from outsourcing much of its supply chains to China over the last few decades. Against this, Chinese industry has a history of overbuilding capacity ahead of demand growth, flooding the global market and at times crushing the viability of mostly private foreign competitors. This is evident in many cleantech sectors, particularly solar, batteries and EVs.

¹⁰¹ Bloomberg, [Spain Courts China in New Asia Strategy as US Ties Sour](#), 20 February 2026

¹⁰² SCMP, [Mexico stands by 50% tariffs on Chinese goods, says move will protect 350,000 jobs](#), 16 December 2025

¹⁰³ Bloomberg, [A World Split in Two Is Just What China Wants](#), 6 January 2026

¹⁰⁴ FT, [China battles price wars in fight against deflation](#), 18 January 2026

¹⁰⁵ Shanghai Metal Market, [Has the Reduction of the VAT Export Rebate Rate for Lithium Batteries to 6% Become a Response to "Anti-Involution"?](#) 9 January 2026

Following record high steel exports in 2025, China is seeing a raft of anti-dumping tariffs being applied in response:

- June 2025 saw the Trump administration expand the use of Section 232 to lift US steel import tariffs from 25% to 50%.¹⁰⁶
- October 2025 saw the European Commission propose to halve the volume of steel that can be imported tariff-free into the EU, and to double the duty applied to further imports.¹⁰⁷
- December 2025 saw India's Ministry of Finance impose an anti-dumping duty on imports of cold-rolled non-oriented electrical steel from China of US\$224-415/t for a period of five years, following findings that low-priced imports were causing material injury to domestic steel manufacturers.¹⁰⁸
- December 2025 saw Mexico formalise import tariffs on over 1,400 products, including steel for countries Mexico does not have a Free Trade Agreement (FTA) – notably China.¹⁰⁹
- December 2025 saw Türkiye set anti-dumping import tariffs in tinplate of 6-50%.¹¹⁰
- January 2026 sees pressure on Canada to protect its domestic steel industry, which exports 90% of its output to the US and is being smashed by Trump's 50% tariffs, notwithstanding a C\$500m Canadian government bailout. Canada imports two-thirds of its domestic steel use, supporting allegations of dumping.¹¹¹
- January 2026 saw Australia's Treasurer Jim Chalmers reference an inquiry into allegations of dumping in the steel industry.¹¹² China is a key trade ally, and we need the high quality, low cost supply China offers, but can't allow our existing industry capacities to be gutted.

¹⁰⁶ The White House press release, [Fact Sheet: President Donald J. Trump Increases Section 232 Tariffs on Steel and Aluminum](#), 3 June 2025

¹⁰⁷ Euractiv, [European steel buyers rage against planned import tariff hike](#), 6 January 2026

¹⁰⁸ KNN, [India Imposes 5-Year Anti-Dumping Duty On Chinese Electrical Steel Imports](#), 19 December 2025

¹⁰⁹ White & Case, [Mexico formalizes and expands import tariffs to more than 1,400 products—key impacts for the automotive sector and beyond](#), 29 December 2025

¹¹⁰ Eurometal, [Türkiye imposed anti-dumping measures on cold-rolled stainless steel imports from China](#), 30 December 2025

¹¹¹ FT, [Canada's 'man of steel' calls for US-style protectionism](#), 1 January 2026

¹¹² AFR, [Government weighs emergency tariffs on Chinese steel imports](#), 21 January 2026

Section 4.1. The Geopolitics of Rare Earths

China's US Rare Earth Export Embargoes

China has built up a dominant global position in the rare earth supply chain, from upstream production – which involves the mining of elements and the extraction and separation of their oxides – to downstream processes, which include the production of magnets used in EV and wind turbines. Even if ores are mined by other countries, they are mostly sent to China for processing.¹¹³

Somewhat like the long running OPEC cartel's global control of oil, China has long invested to gain strategic control of most of the world's rare earths supply chains (as well as solar and batteries, and increasingly wind supply chains), and just as importantly, the associated technical knowledge.

Over 2025 the Trump administration has increasingly grappled with China's growing domination of these zero emissions industries of the future by trying to boost US energy dominance, prioritising and doubling down on US domestic fossil fuel production and subsidising the belated development of domestic US critical minerals and strategic metals production and stockpiles, implementing an interventionist government approach such as the utilisation of US import tariffs and overriding US environmental issues in the process. There is also a growing US government recognition that strategic investments will be needed to rebuild critical minerals supply chains.¹¹⁴

This strategic power was first mobilised by China against Japan back in 2010 in retaliation for territorial disputes. Japan was at the time China's top rare earths export destination.

In 2023 Beijing imposed export controls on two rare earth elements — gallium and germanium — used in computer chips and solar panels, in retaliation for the US and Europe restricting chip exports to China. China accounts for 90% of the world's production of gallium and germanium.¹¹⁵

December 2023 saw Beijing ban the export of rare earth extraction and separation technologies.¹¹⁶

August 2024 saw Beijing announce curbs on antimony exports as a warning shot to the threat of US tariffs against Chinese exports and technology disputes. China accounted for 48% of global mined output in 2023 of antimony, a strategic metal used in military applications such as ammunition, infrared missiles, nuclear weapons and night vision goggles, as well as in batteries and photovoltaic equipment. Beijing also tightened export controls of some graphite products.¹¹⁷

December 2024 saw Beijing respond to a fresh U.S. crackdown on China's computer chip industry by ratcheting up pressure, imposing an outright ban on exports of gallium, germanium and antimony to the US. China's export squeeze has triggered a surge in prices for many strategic minerals.¹¹⁸

April 2025 saw China enact new export licence controls that allowed it to withhold supplies of rare earths and rare-earth magnets in response to President Trump's proposed 'Liberation Day' tariffs.

February 2025 saw China impose an export ban on tungsten, a key input to military applications. China produces >70% of the world's tungsten, and in the subsequent year, the commodity price has tripled as a result of the ban.¹¹⁹

July 2025 saw the US Department of Defense (DoD) finalise a landmark multibillion-dollar partnership with MP Materials, serving as a global template for a new era of government intervention in critical mineral markets that has since been replicated e.g. in Australia – refer below.

¹¹³ SCMP, [Why China may be better placed than US in tussle for rare earths](#), 6 December 2025

¹¹⁴ SAFE, [Resources for Resources: Financing Critical Minerals Supply Chains](#), January 2025

¹¹⁵ FT The Banker, [Banks' role in securing minerals for a low-carbon future](#), April 2024

¹¹⁶ Reuters, [China bans export of rare earths processing tech over national security](#), 22 December 2023

¹¹⁷ Reuters, [China to limit antimony exports in latest critical mineral curbs](#), 16 August 2024

¹¹⁸ Reuters, [Rattled by China, West scrambles to rejig critical minerals supply chains](#), 6 December 2024

¹¹⁹ Kevin Walmsley, [This is what a Chinese export bank looks like after one year](#), 13 February 2026

October 2025 saw China's Ministry of Commerce (MOFCOM) issue several notifications to impose export controls on products, equipment, and technologies related to extraction and processing technologies for rare earth elements, semiconductors, superhard materials, and lithium batteries. This included a presumptive denial for foreign military end use and end users.¹²⁰

October 2025 saw Chinese President Xi Jinping and US President Donald Trump meet. As a result, China agreed to suspend the implementation of the upgraded rare earth export controls.¹²¹

December 2025 saw China's Ministry of Commerce grant general licenses with lengthier terms for exports of rare earth elements to foreign companies. While this is a positive development, the licensing regime requires exporters to submit a "compliance application" providing detailed specifications on how the materials will be used, allowing Beijing to decide which companies can receive shipments and in what quantities.¹²² This easing of supply restrictions was confirmed by a report from China's General Administration of Customs that exports of permanent magnets to the EU for the month of November 2025 rose 60% yoy to reach US\$107m, even as US sales rose just 4% yoy to US\$27m (-9% yoy in volume terms).¹²³

The US-led Mineral Security Partnership (MSP)

June 2022 saw the launch of the Mineral Security Partnership (MSP), a US-led effort covering the EU, UK, Canada, Australia, Korea and Japan that: "strives to promote responsible growth across the critical minerals sector via a shared commitment to high environmental, social, and governance (ESG) standards; sustainability; and shared prosperity." Whilst ESG, stewardship and human rights are central to the MSP, a key priority is to also boost critical mineral supply chain diversity, to reduce China's global dominance i.e. a "friend shoring" initiative by the US.¹²⁴

September 2024 saw the launch of the MSP Finance Network, involving development finance institutions ("DFIs") and export credit agencies ("ECAs") of MSP partners to strengthen cooperation, information exchange and co-financing among participating institutions in the implementation of MSP projects.¹²⁵

We note that the largest deal by far announced by September 2024 by the MSP was that the US EXIM had issued a non-binding Letter of Interest to Australian Strategic Materials (ASM) to provide potential debt financing up to US\$600m for the construction of ASM's rare earths and critical minerals Dubbo Project. Yet as of this report, this proposal is still focused on delivering a Pre-Feasibility Study in 1H CY2026,¹²⁶ with the issue likely to be influenced by the US Energy Fuels' proposed takeover of ASM in January 2026.

February 2026 saw the US trying to build a coalition to collaborate on rare earth developments. As part of this, the US, EU and Japan published a joint statement pledging to "explore a plurilateral trade initiative with like-minded partners on trade in critical minerals".¹²⁷ Hard to see the substance underpinning this discussion, particularly given the other concurrent US antics.

¹²⁰ White & Case, [China imposes extraterritorial jurisdiction and a 50% Rule for export controls on rare earth elements and other items](#), 13 October 2025

¹²¹ SCMP, [Explainer | US-China trade agreement: what did both sides commit to do?](#) 3 November 2025

¹²² SCMP, [China confirms issuing of first general licences for rare earth exports](#), 18 December 2025

¹²³ SCMP, [China's rare earth magnet exports to EU jump 60% as approvals take effect](#), 22 December 2025

¹²⁴ White & Case, [Critical Minerals Supply Chains: The Minerals Security Partnership and Trade-Related Challenges](#), 7 October 2024

¹²⁵ US Department of State, [Joint Statement on Establishment of the Minerals Security Partnership Finance Network](#), 23 September 2024

¹²⁶ ASM, [2025 AGM Investor Presentation](#), 26 November 2025

¹²⁷ FT, [White House seeks critical minerals trade zone to curb China's dominance](#), 4 February 2026

US Attempts at Rare Earth Supply Chain Diversification

The US has responded to its belated acknowledgement of growing dependence on China supply chains by seeking new collaborations, particularly in rare earths. Whilst the US claims it can overcome its China rare earths dependence within 2 years, to CEF this seems naïve, particularly given the US Military informed the US Congress of this strategic threat 15 years ago,¹²⁸ and since then, China's dominance and scientific, technology and manufacturing leadership has only grown.

September 2024 saw the United States and Uzbekistan sign an MoU for a Critical Minerals Partnership.¹²⁹

February 2025 saw the Trump administration form the National Energy Dominance Council with the aim of "improving" permitting and accelerating projects deemed vital for national security, effectively rescinding existing regulatory burdens imposed by the US National Environmental Protection Act.¹³⁰

April 2025 saw the US and Ukraine signed a landmark minerals and natural resources agreement, aiming to leverage Ukraine's significant mineral wealth for its reconstruction, along with the proposed establishment of a United States-Ukraine Reconstruction Investment Fund to extract strategic value from Ukraine in return for defence assistance so as to reduce US dependence on other suppliers, primarily China and Russia.¹³¹

October 2025 saw US President Trump highlight the importance of critical minerals and rare earth supply chains in Whitehouse announcements about new trade deals with Malaysia and Thailand.¹³²

December 2025 saw US President Trump's attempted military coup on Venezuela, clearly motivated by massive oil and critical mineral resources.¹³³

January 2026 saw US President Trump step up rhetoric about invading Greenland, with the White House claiming annexation of semi-autonomous territory from Denmark is 'national security priority'.¹³⁴ Zero coincidence that Greenland hosts rich, largely untapped deposits of critical and rare earth minerals, including graphite, copper, nickel, zinc, tungsten, and lithium.¹³⁵

While many MoUs have been announced as a result, the substance of this is yet to become materially evident, given the US is decades behind China across the entire supply chain from mining to processing then magnet manufacturing, along with the technical and engineering skills required.

And in CEF's view, absent sustained western government financial and policy interventions, Beijing is better poised to court many alternative sources of rare earth mining relative to Washington, since China has long engaged with resource-rich nations across the Global South and Beijing is seen as a "partner that actually builds",¹³⁶ particularly in more recent investments involving also building and financing the enabling power, port and rail infrastructure, and resource value-adding in-country.

US Government US\$12bn Strategic Reserve

February 2026 saw the US government announce it would set up a US\$12bn strategic reserve of critical mineral stockpiles - e.g. rare earths, copper and lithium, funded by the US Exim Bank.¹³⁷

¹²⁸ American Diplomacy, [Rare Earth Elements and U.S. Foreign Policy](#), October 2013

¹²⁹ US Department of State, [United States and Uzbekistan Sign MOU on Critical Minerals Partnership](#), 16 September 2024

¹³⁰ White & Case, [Shovel-ready? Building US critical mineral resilience](#), 7 October 2025

¹³¹ CSIS, [Six Months Since the U.S.-Ukraine Minerals Deal Was Signed—What Now?](#) 30 October 2025

¹³² SCMP, [Why China may be better placed than US in tussle for rare earths](#), 6 December 2025

¹³³ SCMP, [Behind the Venezuela crisis, a US-China tussle over critical minerals](#), 6 January 2026

¹³⁴ FT, [US says using military is among 'options' to acquire Greenland](#), 7 January 2026

¹³⁵ BBC, [The story behind the scramble for Greenland's rare earths](#), 5 November 2025

¹³⁶ SCMP, [Why China may be better placed than US in tussle for rare earths](#), 6 December 2025

¹³⁷ FT, [US to launch \\$12bn critical minerals stockpile to counter China's dominance](#), 3 February 2026

US Government Investment in MP Materials

July 2025 saw a landmark DoD investment in US-based rare earths producer MP Materials – which included a minimum price floor to support the project’s economics – was designed to provide funding to accelerate the buildout of a domestic mine-to-magnet supply chain, including a second manufacturing facility (10X Facility) to take capacity to 10,000tpa.¹³⁸

CEF considers that this transaction provides an excellent blueprint for Western government public-private intervention in critical mineral markets.

Key aspects of this included:

1. The DoD entered into a 10-year agreement establishing a price floor commitment of US\$110/kg for MP Materials’ NdPr products stockpiled or sold (Figure X), reducing vulnerability to non-market forces and ensuring predictable cash flow with shared upside.
2. For 10 years following the completion of the 10X Facility, the DoD agreed to ensure that 100% of the magnets produced at the 10X Facility will be purchased by defence and commercial customers.
3. MP Materials obtained a commitment letter from JPMorgan Chase and Goldman Sachs to provide US\$1.0 billion of financing for the costs of constructing and developing the 10X Facility. In addition, the DoD extended a US\$150m loan to fund MP Materials’ expansion of its heavy rare earth separation capabilities at Mountain Pass.
4. DoD acquired US\$400m of MP Materials’ convertible preferred stock, and a warrant permitting DoD to purchase additional shares of the Company’s common stock. The initial conversion price and exercise price are \$30.03 per share.

As a result of the strategic investment, DoD became MP Materials’ largest shareholder with a 15% equity holding.

July 2025 saw Apple strike a US\$500m rare earths offtake agreement with MP Materials, and jointly fund a new neodymium magnet manufacturing factory in Texas for use in supplying iPhones.¹³⁹

Figure 4.11: Historical NdPr pricing vs US\$110/kg offtake floor (US\$/kg)



Source: Lynas Rare Earths [Investor Presentation](#), 26 February 2026

¹³⁸ MP Materials press release, [MP Materials Announces Transformational Public-Private Partnership with the Department of Defense to Accelerate U.S. Rare Earth Magnet Independence](#), 10 July 2025

¹³⁹ Bloomberg, [Apple to Buy Rare Earths From Pentagon-Backed US Producer MP](#), 15 July 2025

US Government Investment in Lithium Americas, Vulcan Elements

October 2025 saw the U.S. Department of Energy (DOE) Loan Program Office take a 5% equity stake in Lithium Americas Corp. and an additional 5% ownership in its Thacker Pass lithium mine. The total equity injection was US\$100m. This represented a key part of a financial debt restructuring, allowing the US DOE to secure the financial viability of a critical domestic US lithium source, thereby supporting national security by reducing reliance on China. LPO and LAC entered into a financial loan agreement in October 2024. This deal helps finance the construction of facilities at Thacker Pass for manufacturing 40,000tpa of battery-grade lithium carbonate for use in lithium-ion batteries, the only developed domestic US source of lithium.¹⁴⁰

November 2025 saw the Trump administration and private investors partnering in a US\$1.4bn deal to take stakes in two rare earth startups, Vulcan Elements and ReElement Technologies. Vulcan Elements manufactures rare earth magnets, while ReElement processes rare earth mineral ores and recycles old batteries and other products made with rare earths. The deal includes a US\$620m loan from the Department of Defense and \$50m of federal incentives from the Department of Commerce plus \$550m in private capital to firms associated with Trump's family. The Defense Department will receive warrants in both Vulcan and ReElement, with Commerce getting a \$50m equity stake in Vulcan.¹⁴¹

US-Australia Critical Minerals Framework

October 2025 saw the US and Australia sign a new bilateral framework on critical minerals and rare earths with the aim of accelerating a pipeline of priority projects with a proposed US\$1bn investment from each government to support private developments. Australia announced a planned US\$200m in concessional equity finance for the Alcoa-Sojitz Gallium Recovery Project in Wagerup, WA, which includes a right of offtake for the Australian Government. The US Government also proposed an equity investment with a right of offtake, alongside the Japanese government.¹⁴²

January 2026 saw critical minerals feature highly in the G7+ ministers meeting. Australia's Treasurer Jim Chalmers highlighted that "Everyone benefits from stronger and more diverse critical minerals supply chains, but especially Australia, ... my focus will be on showcasing Australia's strengths as an investment destination," meaning Australia will work with all key partners to supply their needs.¹⁴³ CEF would be more explicit: Australia needs to attract investment and capacities to ensure value-adding in Australia, powered by renewables to allow us to export embodied decarbonisation as well as the minerals and metals needed to accelerate the global energy system transformation.

January 2026 saw Australian Resource Minister Madeleine King update on the Albanese Government A\$1.2bn Critical Minerals Strategic Reserve for on-sale as required to support international collaborations. The Reserve will be largely drawn from the expanded A\$5bn Critical Minerals Facility managed by Export Finance Australia, which provides government-backed loans and equity support for Australian projects. A further A\$185m has been allocated for selective stockpiling of minerals.¹⁴⁴

February 2026 saw ASX-listed minnow Ardea Resources Ltd secure a non-binding A\$500m letter of support from Export Finance Australia, plus a US\$350m Export-Import Bank of the United States (EXIM) for a proposed \$3bn capex to develop the Goongarrie Hub Nickel-Cobalt project in WA. Ardea is the eighth Australian critical minerals prospect to receive US backing since October 2025.¹⁴⁵

¹⁴⁰ DOE press release, [Department of Energy Restructures Lithium Americas Deal to Protect Taxpayers and Onshore Critical Minerals](#), 1 October 2025

¹⁴¹ Finance & Commerce, [Trump administration backs \\$1.4B deal with rare earth startups](#), 5 Nov 2025

¹⁴² Prime Minister of Australia press release, [Historic critical minerals framework signed by President Trump and Prime Minister Albanese](#), 21 October 2025

¹⁴³ Australian Treasurer, [Critical minerals the focus of G7+ ministers meetings in the US](#), 11 January 2026

¹⁴⁴ Australian Resources Minister, [Delivering Australia's critical minerals supply](#), 12 January 2026

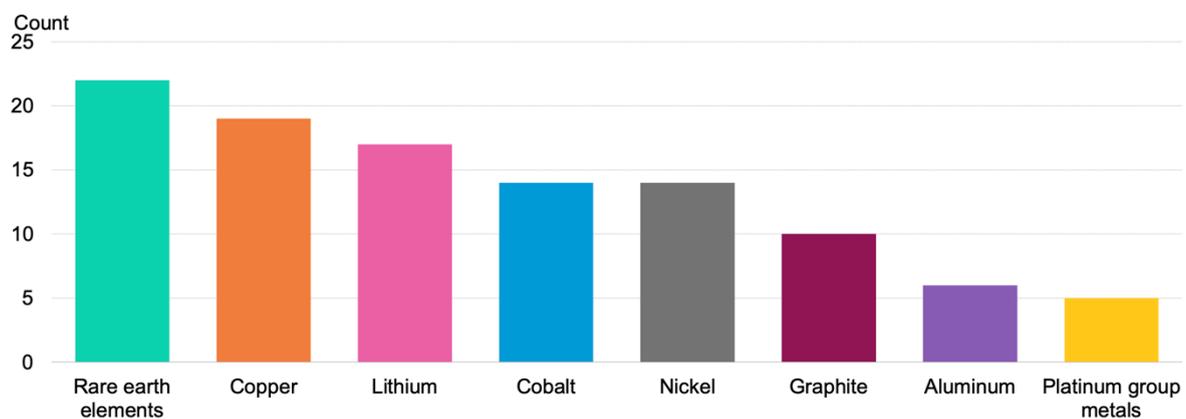
¹⁴⁵ Ardea Resources ASX release, [Kalgoorlie Nickel Pty Ltd Receives Conditional and Non-Binding](#)

UK Critical Minerals Strategy

November 2025 saw the UK release its critical minerals strategy, “Vision 2035”. The Department for Business and Trade sets out a target that by 2035, 10% of the aggregate annual demand for critical minerals in the UK should be met by domestic production, 20% by recycling and that no more than 60% of critical mineral demand be met by a single country. For most minerals in the battery and magnets space, the UK has no production and very few projects beyond the early stage mark. The exceptions to this are in nickel, with Vale’s Clydach Nickel Refinery in Wales, and a range of lithium projects in Cornwall and the North East. The government committed £50m funding to support early-stage domestic critical minerals projects, as well as plans to leverage the National Wealth Fund (NWF) and the UK Export Finance (UKEF).¹⁴⁶

BloombergNEF reports that as the global energy transition accelerates, rising demand for some critical metals is outpacing supply chain capacity, creating structural market imbalances that threaten to constrain decarbonisation efforts. Copper, graphite, aluminium, lithium, cobalt and manganese are all seeing sharp demand increases in EVs, energy storage, grid expansion and data centres. Of all critical minerals, strategic metals and precious metals, national policies to develop and protect supply chains for rare earths dominated geopolitical discussions over 2025 – Figure 4.12.

Figure 4.12: The Rising Policy Incentives for Critical Minerals across selected Producers (2015-2025)



Source: Bloomberg NEF, [Transition Metals Outlook 2025](#), January 2026

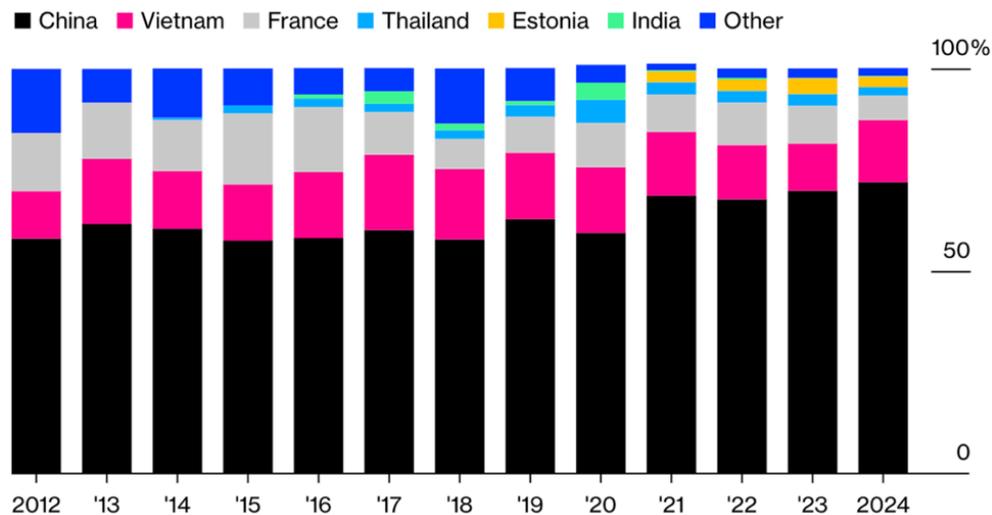
[Letter of Support from EFA and Letter of Interest from U.S. EXIM for the Goongarrie Hub](#), 5 February 2026

¹⁴⁶ BMI, [How ambitious is the UK’s critical mineral strategy?](#) 10 December 2025

Section 4.2. Growing China-Japan Tensions

Japan is the second largest industrial customer of rare earths products behind China, and in 2024 sourced over 70% of its supply from China, the highest share in over a decade – Figure 4.21.

Figure 4.21: Japan's Rare Earths Sources



Source: Japan Organization for Metals and Energy Security, via Bloomberg

January 2026 saw Japan seeking greater G7 country support over mounting concerns about China's growing dominance of rare earth supply chains and the growing threat export restrictions by China as a geopolitical tool. As China-Japan tensions build over the threat to Taiwan, Japanese Finance Minister Satsuki Katayama said: "The fundamental consensus among the G-7 nations is that it is unacceptable for countries to secure monopolies through non-market means. This poses a crisis for the global economy and is extremely problematic for economic security."¹⁴⁷

January 2026 saw Japan progress deep sea drilling of rare earths in response to supply restrictions.¹⁴⁸

Japan was dependent on China for 90% of its rare earth products back in 2010 when China first temporarily banned rare earth exports to Japan, driving international rare earth prices up >700%. Since then, Japan has built stockpiles and been able to somewhat diversify its supply chains.¹⁴⁹

Since 2010 Japan has provided significant financial and offtake support to Australia's Lynas Rare Earths (the world's largest non-Chinese rare earths miner) through the Japan Australia Rare Earths (JARE), a JV established by the state-backed Japan Organization for Metals and Energy Security (JOGMEC) and the trading house Sojitz Corporation. In 2011 JARE provided US\$250m debt and equity support for Lynas to build its Mt Weld mine in WA and to construct its Malaysian processing plant.

March 2023 saw JARE provide a further A\$200m (US\$133m) finance to support capacity expansion.¹⁵⁰ In return, Sojitz Corp. has supported Lynas with long term offtakes, becoming the sole distributor of Lynas' rare earth products in the Japanese market.¹⁵¹ Lynas provides about 90% of Japan's supply of neodymium and praseodymium.¹⁵²

¹⁴⁷ Bloomberg, [Japan Seeks Support as Fears Rise Over China's Rare Earth Grip](#), 9 January 2026

¹⁴⁸ AFR, [Japan dives for rare earths as China tightens the screws](#), 14 January 2026

¹⁴⁹ SCMP, [Japan firms seen 'stockpiling' rare earths as Tokyo looks to G7 in face of China controls](#), 12 January 2026

¹⁵⁰ Mining-Technology.com, [Australian rare earths miner Lynas receives \\$133m from JARE](#), 8 March 2023

¹⁵¹ Investor News, [From Survival to Strength – How Amanda Lacaze Transformed Lynas Rare Earths](#), 25 September 2025

¹⁵² Foreign Policy, [Japan Might Have an Answer to Chinese Rare-Earth Threats](#), 15 August 2023

Section 4.3. A Global Geopolitical Reassessment

China's response is clear. At Davos, Vice President He Lifeng, said: "We invite enterprises from all over the world to embrace the opportunities from the green and low-carbon transition, and work closely with China in such areas as green infrastructure, green energy, green minerals and green finance."^{153 154}

A silver lining of the Trump administration's trade war against the world is that this is forcing a real time reassessment of long established alliances and assumptions.

January 2026 saw a historic India-EU trade deal,¹⁵⁵ and new China-Canada discussions, clear signs the world is moving on whilst the US chooses to isolate.

Whilst the EU generally distrusts China, the US is now held in the same regard,¹⁵⁶ and many parts of the world see the US as a threat to their country's security.¹⁵⁷

Likewise, India was under the previous US administration increasingly moving into the QUAD alliance with the US, Japan and Australia earlier this decade, but with India initially targeted for some of the highest US import tariffs and bullying by the US president, the relationship with PM Modi's government has soured, even as India's trade with China booms.¹⁵⁸ And the January 2026 move by Trump to withdraw from PM Modi- promoted International Solar Alliance (ISA) further erodes Indian trust.¹⁵⁹ CEF looks at the silver lining of Trump in terms of the potential for green energy statecraft to allow countries to reach alignment on areas of common focus e.g. solving the global climate crisis.

December 2025 saw M. K. Stalin, chief minister of Tamil Nadu, note that high US tariffs are causing "irreparable damage" to businesses in India. The US is India's biggest export market.¹⁶⁰

China staying calm is improving the country's global reputation at the US' expense.¹⁶¹

2026 has started with a growing list of nations engaging with China, from the UK, Canada and Germany to South Korea.¹⁶²

January 2026 saw Canadian Prime Minister Mark Carney announce an agreement with Chinese President Xi Jinping allowing 49,000 Chinese EVs annually to be imported into Canada at significantly reduced tariff rates—in exchange for lower tariffs on other goods. Carney stated: "At its best, the Canada-China relationship has created massive opportunities for both our peoples. By leveraging our strengths and focusing on trade, energy, agri-food, and areas where we can make huge gains, we are forging a new strategic partnership that builds on the best of our past, reflects the world as it is today, and benefits the people of both our nations." Canada is a resource rich country, resources that could well underpin a new global EV supply chain, and supply China oil to replace Venezuela.¹⁶³

January 2026 saw Cambodia's deputy prime minister Sun Chanthol warn that smaller countries "cannot afford to choose sides" in the US-China rivalry: "When elephants fight, you better get out of the way," he said. "Cambodia can survive by not choosing sides."¹⁶⁴

¹⁵³ Bloomberg, [China Defends Growth Model at Davos. Aims to Be 'World's Market'](#), 21 January 2026

¹⁵⁴ Davos 2026: [Address by He Lifeng, Vice-Premier of the People's Republic of China](#), 20 January 2026

¹⁵⁵ FT, [EU and India seal trade pact to slash €4bn of tariffs on bloc's exports](#), 27 January 2026

¹⁵⁶ SCMP, [Most Europeans want to keep same distance between US and China, poll finds](#), 4 December 2025

¹⁵⁷ FT, [Donald Trump prompts global surge in people viewing US as a threat](#), 12 February 2026

¹⁵⁸ Bloomberg, [Trump Says Modi Unhappy Over Tariffs as India Cuts Russian Oil](#), 7 January 2026

¹⁵⁹ ET EnergyWorld, [US' solar alliance pull-out throws spanner in ties with India](#), 9 January 2026

¹⁶⁰ Bloomberg, [India's Key Export State Says US Tariffs Decimating Industries](#), 18 December 2025

¹⁶¹ Bloomberg, [How Xi Can Win in Rivalry With US by Doing Absolutely Nothing](#), 16 January 2026

¹⁶² Bloomberg, [South Korea Tests Diplomacy's Limits With Its China Entente](#), 9 January 2026

¹⁶³ Electrive, [Canada strikes EV deal with China](#), 16 January 2026

¹⁶⁴ FT, [Cambodia looks to reduce reliance on China amid US trade war](#), 14 January 2026

Despite Trade Wars, China Reported Record Trade Surplus in 2025

Over 2025 China's trade surplus surpassed the US\$1 trillion benchmark set in the whole of 2024 as China continues to diversify its trade and allow a lower exchange rate, leveraging its ongoing domestic price deflation. Despite a 19% yoy decline in US destined exports in 2025, exports to Africa, the EU and ASEAN are all growing strongly. China's 2025 two-way trade with ASEAN reached US\$1.05 trillion, up 7.4% yoy to be worth double that of the China-US flows.

January 2026 saw updates to the US\$10.4bn infrastructure investment program to build a new 134km canal from Nanning to the Gulf of Tonkin. Once opened later in 2026, vessels from the Chinese interior heading to coastal ports will be able to bypass Guangdong province – southern China's traditional gateway to global markets – reducing shipping distances by about 560km, and accelerating two-way trade with ASEAN.¹⁶⁵

The downside of this is there is a growing concern of a greater push-back more generally against China's trade dominance and imbalance, and the lack of two-way trade developments.¹⁶⁶ One of the emerging trends we have identified in this report is a growing trend for China to invest in within-country value-add of commodities before export to China, to ensure more of a win-win result.

Despite this massive trade surplus, the growth in China's official foreign exchange reserves has lagged, suggesting much of this record high trade surplus in 2025 has flowed back overseas through asset and securities investment, mostly by private market participants – Figure 4.32. This is a key theme of CEF's recent report: "Rising Tide: China's Outbound Cleantech Capital Surge Drives Global Collaboration Toward Net Zero" where we detailed China's now >US\$210bn of outbound foreign direct investment in cleantech globally since the start of 2023.¹⁶⁷

Capital flight from US Treasuries

In 2024 President Xi Jinping outlined his vision for China to become a financial "powerhouse", putting a "strong currency" at the top of six core priorities. With the US's international actions becoming increasingly erratic into 2026, this long term Chinese aspiration returns to the fore of thinking.¹⁶⁸

November 2025 saw China's holding of US Treasuries fall to a near two decade low of US\$683bn - Figure 4.31. This reflects both China seeking to avoid losses on the back of rising US interest rates and alignment with their plan to build a less US dollar centric global trade system,¹⁶⁹ and build the use of the yuan as an alternative trade currency, including pricing iron ore purchases from Australia in yuan.

¹⁶⁵ SCMP, [China close to opening US\\$10 billion canal linking heartlands to Southeast Asia](#), 26 January 2026

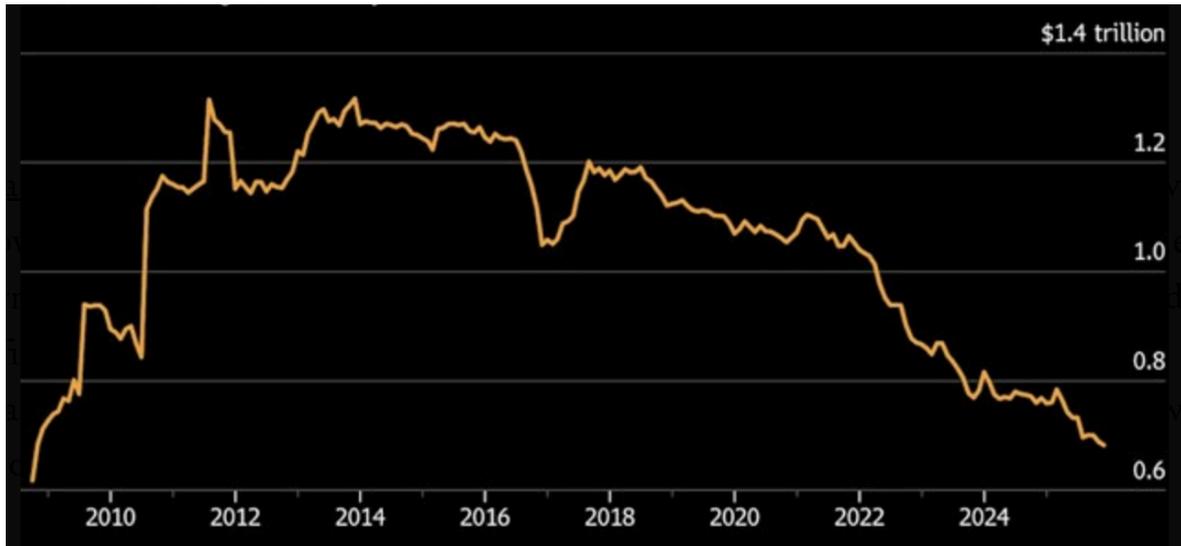
¹⁶⁶ SCMP, [China's record trade surplus could prompt protectionist response in 2026](#), 22 December 2025

¹⁶⁷ SCMP, [China has logged a US\\$1 trillion trade surplus. Where is all that money going?](#) 29 December 2025

¹⁶⁸ SCMP, [Can China's roaring trade engine power the yuan's challenge to the US dollar?](#) 3 March 2026

¹⁶⁹ CEIG, [China Holdings of US Treasury Securities](#), accessed 1 February 2026

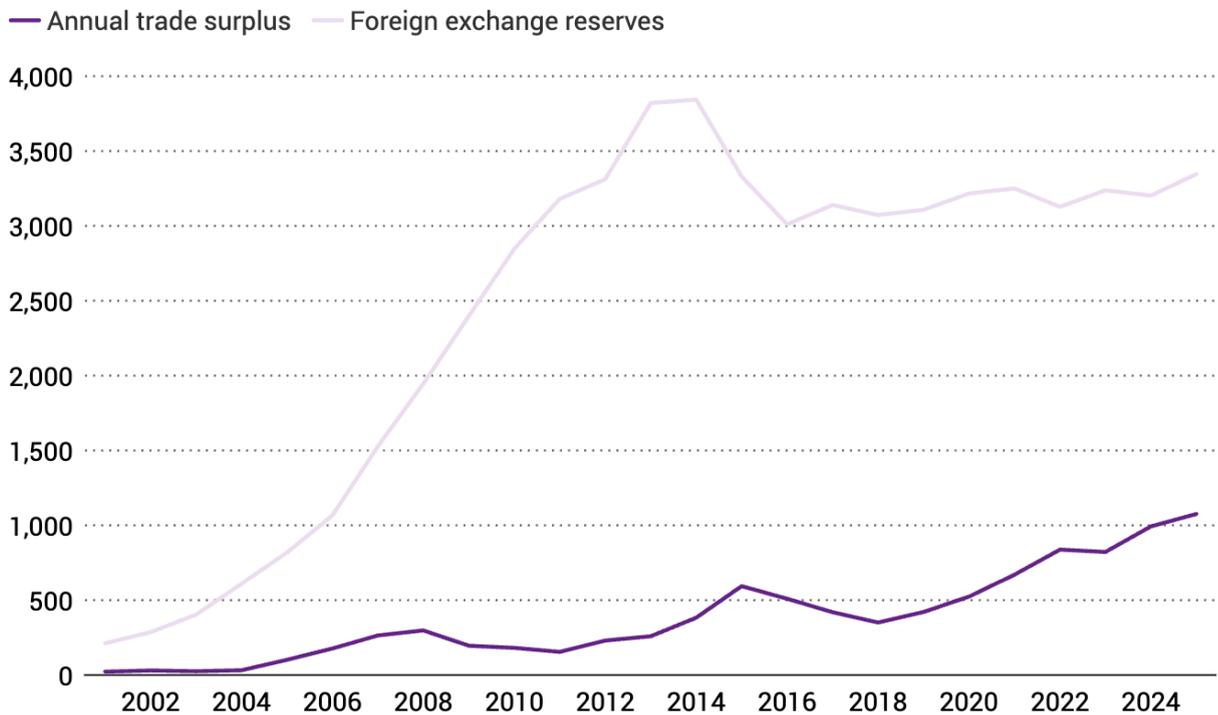
Figure 4.31: China's Holdings of US Treasuries (2008-2025)



Source: Bloomberg, US Department of the Treasury, Kevin Walmsley

January 2026 saw President Xi call for the renminbi (Rmb) to become a global reserve currency as part of the wider objective for Beijing to play a greater role in the international monetary system as an alternative to the US dollar in the emerging multi-polar world order.¹⁷⁰

Figure 4.32: China's Balance of Payments (2000-2025)



Data for 2025 is through November

Source: China Customs, SCMP

¹⁷⁰ FT, [Xi Jinping calls for China's renminbi to attain global reserve currency status](#), 1 February 2026

The EU Critical Raw Materials Act (CRMA)

Following on from the Green Deal Industrial Plan for Europe in 2023, the EU adopted the Net-Zero Industry Act (NZIA) and the Critical Raw Materials Act (CRMA) in May 2024, followed by the Clean Industrial Deal (CID) in February 2025. Combined, the EU aims to deliver an industrial policy framework aimed at achieving climate neutrality whilst boosting competitiveness and resilience, protecting jobs and steering the economy toward sustainable growth.

The CRMA targets of 40% EU self-reliance in processing (lithium, nickel, cobalt, manganese and graphite) and 25% self-reliance in critical minerals recycling by 2030 are not currently on track, undermined by the EU's heavy reliance on North Asia across the battery value chain.

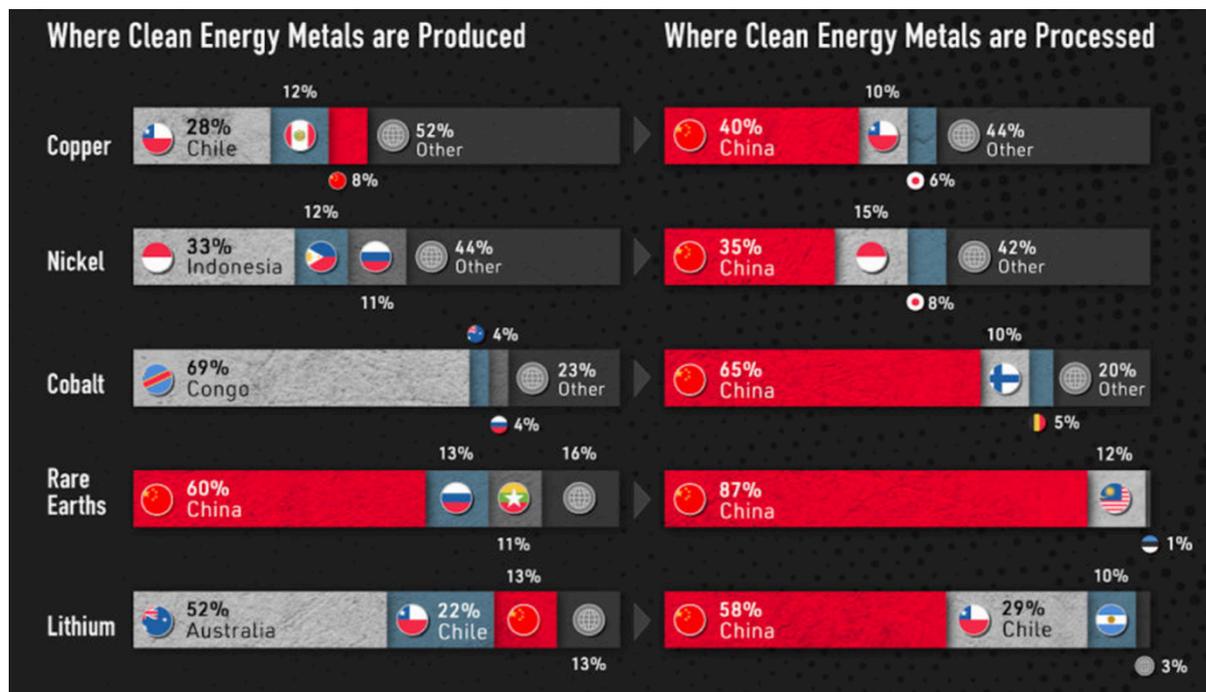
The growth in EV imports from China resulted in import duties being applied in 2025, and is seeing a range of Chinese EV manufacturers setting up regional manufacturing in response, including in Turkey and Morocco, given their EU FTA – refer Section 5).

Section 5. China's Globalisation and International Partnership Strategy to Address Geopolitics

The IEA expects demand for key energy minerals – critical minerals and strategic metals – to grow rapidly, with the energy and transport sectors being the largest drivers of growth. In the IEA Stated Policies Scenario, lithium grows fivefold from 2025 to 2040, while graphite and nickel demand is expected to double. Demand for cobalt and rare earth elements also grows strongly, increasing 50-60% by 2040. Copper is the material with the largest established market, and its demand is projected to grow 30% by 2040. Battery deployment in EVs and storage applications drives strong demand growth for these minerals. Meanwhile, expanding construction and the electrification of grids and industrial equipment fuel increased copper demand. Growing demand for permanent magnets, particularly from EVs and wind power, boosts the need for magnet rare earths.¹⁷¹

While China is relatively poor in critical minerals and strategic metals mining, China is increasingly the dominant global processor of the metals underpinning the global energy system transformation. The IEA in Figure 5.1 details how China in 2024 held an 87% global market share in refining rare earths, 58% of lithium processing, 58% of cobalt processing, 35% of nickel processing, and 40% of copper processing. While this suggests nickel is something of an exception, with China only holding a 35% share of processing, this simplistic presentation fails to show that Chinese capital has underpinned Indonesia's nickel mining and processing industry rise and rise, such that Indonesia exits 2025 as the world's #1 nickel miner and processor, with an exceptionally close China-Indonesia ownership partnership. Beyond this chart is aluminium, where China in 2024 held a 59% global share, and steel, a 54% global share.

Figure 5.1: China's Growing Dominance of Clean Energy Metal Processing, 2024



Source: IEA

This report details how China has systematically extended its control over mining, processing and the enabling rail/port infrastructure required in critical minerals and strategic metals essential for the

¹⁷¹ IEA, [Global Critical Minerals Outlook, 2025](#), December 2025

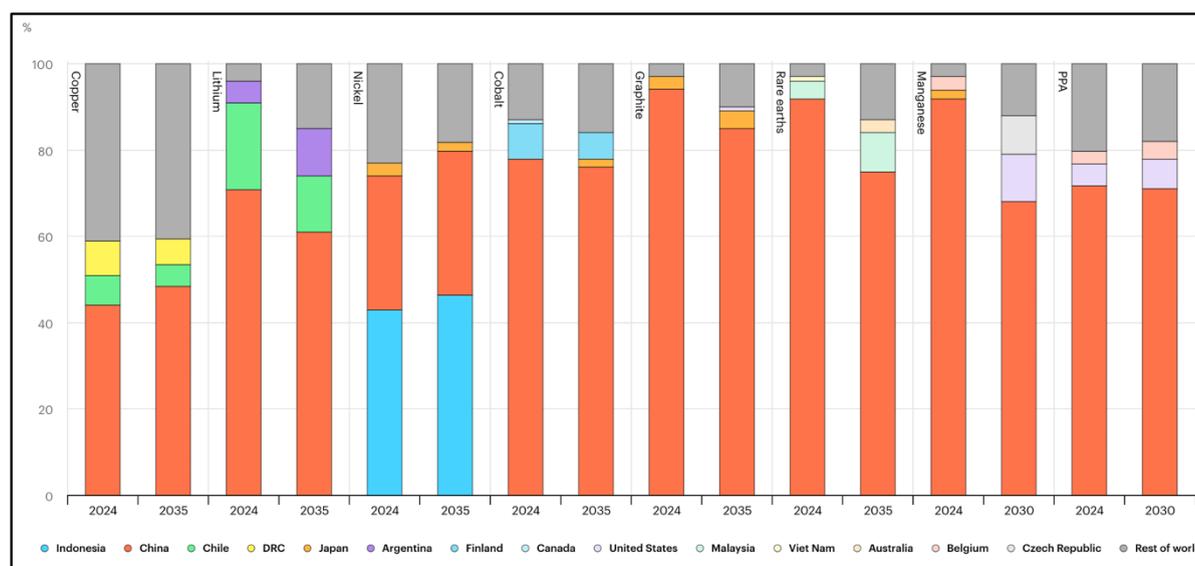
global energy transition and net-zero emissions. A network of state-backed financial institutions support China's mining focused corporations.¹⁷²

January 2025 saw AidData's report tracking US\$57bn in Chinese official sector financial commitments for transition mineral extraction and processing in developing countries from 2000 to 2021.¹⁷³

This CEF report examines transactions over 2024-2026 to illustrate this trend has continued, and if anything, has accelerated. China is the majority of the world's demand for critical minerals and strategic metals, and leverages this to link long term offtake agreements with equity investments, as well as often providing the EPC capabilities and enabling rail, road and port infrastructure.

The IEA's Global Critical Minerals Outlook 2025 highlights this same trend, with China's global share set to increase from 2024 to 2030 – Figure 5.2.

Figure 5.2: China's Growing Dominance of Metals Processing, 2024 vs 2035



Source: [IEA Global Critical Minerals Outlook 2025](#)

The IEA concludes that diversification of global critical minerals and strategic metal supply chains will not materialise through market forces alone; well designed policy support and new collaborations and strategic partnerships are essential. Green Energy Statecraft is clearly needed.

In 2023 Beijing imposed export controls on two rare earth elements — gallium and germanium — used in computer chips and solar panels, in retaliation for the US and Europe restricting chip exports to China. China accounts for 90% of the world's production of gallium and germanium.¹⁷⁴

Beata Javorcik, chief economist at the EBRD said: "Under the scenario of escalating trade tensions between Europe and China, Europe may find itself cut off from access. Export restrictions can be introduced at a stroke of a pen, while developing rare earth or critical mineral deposits takes time."

But there is a second issue of even more significance – Chinese OFDI accelerates capital to build new capacity in natural resources, often flooding the global market and crushing prices despite structural growth in demand trajectories. As the largest steel, solar, battery and EV manufacturer globally, China is collectively the largest buyer in the world. This saw fears of a structural growth in demand supply shortage in nickel, cobalt and lithium turn into a global glut in 2023-24 as capacity expanded faster than demand.

¹⁷² Mining.com, [China funnelled \\$57bn to control critical mineral supply chain](#), 29 January 2025

¹⁷³ AidData, [AidData's Chinese Financing for Transition Minerals Dataset, Version 1.0](#), 28 January 2025

¹⁷⁴ FT The Banker, [Banks' role in securing minerals for a low-carbon future](#), April 2024

Domestic Value-Add Mandates in Resource-Rich Countries

We provide a number of country cases studies on how China is building geopolitical support to best leverage its cleantech capital investment and need for supply chain security in resources. And how China is responding to the growing restrictions on commodity exports by Indonesia, Guinea, Zimbabwe, Namibia and Ghana by investing in within-country value-add processing to ensure a balanced outcome that allows a stronger alignment of interests. Indonesia and Morocco are seeing Chinese collaborations to build entire vertically integrated industrial precinct models extending from mining and refining to battery cathodes and anodes manufacturing, through to battery and EV manufacturing plants. Clear examples of investments that create a long term win-win outcome.

A number of resource-rich economies, such as Indonesia, Chile, Mexico, and Zimbabwe, have introduced export restrictions, permit revocations, forced renegotiations, increased state control and the threat of nationalisation to foster investment in domestic processing facilities to drive investment, employment, skills development and higher-value export revenues.

The most prominent example is Indonesia's ban on raw nickel ore exports, introduced partially in 2014 and enacted in full in 2020, under former President Joko Widodo. The ban restricted exports of unprocessed nickel ores, driving significant investment into Indonesia's nickel industry to value-add onshore. Value-added facilities have scaled and integrated further down the value chain significantly into battery materials processes, battery and EV manufacturing to create a vertically-integrated EV value chain (detailed further in Section 7.2). Western African nation Guinea has also articulated this as a potential policy for foreign investors in iron ore and bauxite mining.¹⁷⁵

Zimbabwe's push for local processing saw a concentrate export ban proposed back in 2022 and implemented from February 2026 - refer below.

Through January 2026, China's top diplomat, Foreign Minister Wang Yi, toured Africa with a focus on strategic trade routes and high growth emerging economies as key export and import partners. This was an important follow up to President Xi Jinping's hosting of the 2024 China-Africa Cooperation summit in Beijing. China's strengthened foreign policy focus on globalisation and international cooperation through the expansion of strategic investments in high value-add industries and enabling infrastructure projects is a stark geopolitical contrast to the US's foreign and trade policies that have seen foreign aid and developmental financing slashed and trade barriers levied on African exports to the US.

As Judith Mwai, policy analyst at Development Reimagined states, "For African leaders, this tour is an opportunity to demand that China's 'small yet beautiful' projects specifically target our industrial gaps, turning African raw materials into finished products on African soil, rather than just facilitating their exit." Tanzania is central to Beijing's plan to secure access to Africa's vast copper deposits, with Chinese firms refurbishing the Tazara Railway that runs through the country into Zambia so as to provide investment in the enabling infrastructure.¹⁷⁶

Latin America

January 2026 saw an unprecedented military intervention by the US in Venezuela. China is a major investor in Venezuela, and this raises all sorts of geopolitical questions over investments and financial support provided by China, both in Venezuela and the broader Latin American region. The US action marks the start of what Trump has called the "Donroe Doctrine." That's a revival of the 19th-century policy by former President James Monroe establishing US dominance in the Americas. China is Latin America's second-largest trading partner behind the US – Figure 5.3.¹⁷⁷ This also follows US

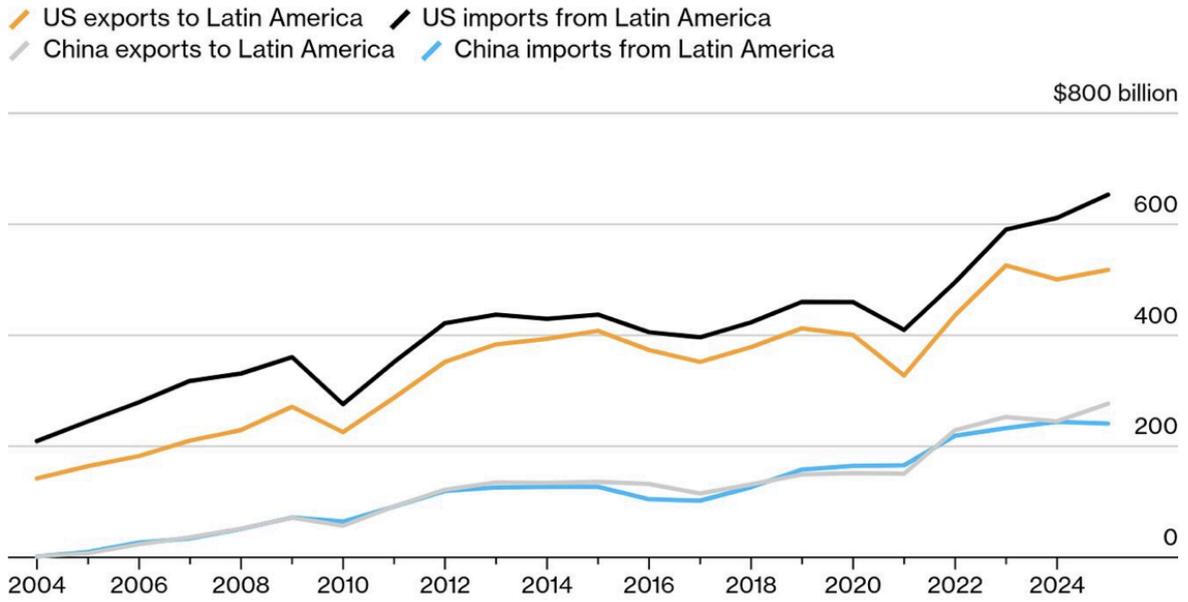
¹⁷⁵ Financial Afrik, [Guinea's mining sector: a risky bet for foreign investors?](#) 14 September 2025

¹⁷⁶ Reuters, [China's top diplomat tours Africa with focus on strategic trade routes](#), 7 January 2026

¹⁷⁷ Bloomberg, [What Does the Maduro Raid Mean for China? We Asked an Expert](#), 9 January 2026

geopolitical pressure that led Mexico to put 5-50% import tariffs on China and other Asian nations in December 2025.

Figure 5.3: China is Latin America’s Second-Largest Trading Partner Behind the US



Source: China’s General Administration of Customs., US census Bureau – via Bloomberg

Brazil's global domination of Niobium

An example of Chinese corporate leaders using joint ventures and strategic alliances to build out its global influence and enhance its global supply chain security is in Brazil in niobium, a niche critical mineral playing a key role in EV batteries. The dominant global producer is Companhia Brasileira de Metalurgia e Mineração (CBMM), reported to be responsible for three-quarters of global niobium supply. Founded in the 1950s and controlled by the Moreira Salles business dynasty, CBMM's other shareholders are a Japanese-Korean grouping and a consortium of Chinese steelmakers.¹⁷⁸ CBMM generates 30% of its revenue from the steel sector.

Brazil's other dedicated niobium mine, located in the city of Catalão, was purchased by China's China Molybdenum Co., Ltd. (CMOC) from Anglo-American in 2016.¹⁷⁹

China is the main destination for Brazilian exports of the metal. Niobium is ranked the second-most "critical mineral" by the US Geological Survey, which estimates that 90% of output is from Brazil.

With its usage long established in aerospace and astronautics — from the Nasa Apollo program to SpaceX rockets — the US described the metal as "indispensable" for critical components in hypersonic missiles, with the US failure to invest leading to a strategic supply chain security issue.

Additionally in Brazil, China's BYD and Great Wall Motor are both building domestic EV manufacturing facilities. This is both to tap into the 215 million people in the domestic market there (the sixth largest auto market globally), and also to strengthen bilateral relationships at a time when China is also investing upstream in lithium in Brazil. January 2026 saw China become the #1 exporter of vehicles to Brazil, and Chinese auto exports rose 1000% yoy to account for a record 65% share of all imports.¹⁸⁰

¹⁷⁸ FT, [Brazilian niobium carves out an energy niche](#), 15 May 2024

¹⁷⁹ Caixin Global, [In Depth: How a Chinese Mining Giant Learned to Win in Brazil](#), 18 December 2025

¹⁸⁰ SCMP, [China becomes Brazil's biggest vehicle exporter in January, surpassing Argentina](#), 10 February 2026

Peru

Supported by a free trade agreement in 2009, over the last two decades China's involvement in Peru has expanded massively in trade and investment, with much of the OFDI focused on mining. China is the #1 trade partner to Peru, with exports from Peru worth US\$22bn in 2025, and with copper representing US\$15.6bn or 70% of this.

June 2025 saw China's Cosco Shipping's 60% ownership of the US\$3.5bn deep water mega port at Chancay, Peru, officially licensed and operational.¹⁸¹ This is the first port on South America's Pacific coast, opening up resource and agricultural exports but also for Peru as a destination for Chinese exports such as EVs. The other 40% is owned by the Peruvian mining firm Volcan. The port cuts shipping time to and from China by a third to 23 days.

March 2024 saw Peru award Chinese firm Jinzhao a contract to build a port in the south of the country. The construction of the port is expected to be completed in 2026. As part of the US\$405m deal, Jinzhao Peru will receive a concession to operate the port for 30 years. The port will transport bulk goods as well as an iron concentrate and copper.

As an extension of this port deal, 2026 is likely to see construction commence on Jinzhao Mining's US\$1.8bn 22Mtpa Pampa de Pongo iron proposal in the Arequipa region. The project is a large, world-class iron ore deposit that will also produce copper and gold concentrate.¹⁸²

China's largest operation in Peru is the Las Bambas 400,00tpa copper mine, source of 2% of the world's copper. The Las Bambas project is owned by a consortium of three firms: China Minmetals Corporation (62.5%); Hong Kong-based Guoxin International Investment Co. Ltd. (22.5%); and CITIC Ltd. (15%). Since purchasing Las Bambas from Glencore in 2014, the consortium has invested some US\$10bn in the project. January 2023 saw reports of growing social unrest due to a lack of consideration of local community interests after the mine was restarted in 2022.¹⁸³

China's Chinalco operates the Toromocho copper mine in southern Peru. Following expansion plans costing over US\$815m in 2024, capacity is expected to reach 300,000tpa of copper concentrate.

China's Zijin Mining Group has been trying to develop the Río Blanco Copper-Molybdenum Mine proposal (one of the world's largest undeveloped copper deposits) since 2007, with little success to-date due to deep seated community resistance.

¹⁸¹ COSCO press release, [Chancay Port in Peru Granted Official Operating License](#), 16 June 2025

¹⁸² BNamericas, [Peru expects progress on four Arequipa mining projects totaling US\\$6.95 billion in investments](#), 23 September 2025

¹⁸³ Fastmarkets, [Las Bambas mine drives growth in MMG's copper output after easing of protests in Peru](#), 22 January 2026

Indonesia

China related entities have announced investment proposals of well over US\$35bn in the last five years into the Indonesian nickel mining, nickel refining, through to battery materials, battery manufacturing and EV sectors, plus supporting power and transport infrastructure. Much of this investment is well underway, and capacity is progressively ramping up. This development is mostly occurring in industrial precincts to leverage collaboration and vertical integration, similar to the industrial development model seen in China over the last two decades.

This resource value-add was instigated by the Indonesian government in 2020 proposing a ban on nickel ore exports, which was then expanded in June 2023 by a similar ban on raw bauxite ore exports, in order to encourage or require downstream value-adding. Indonesia has also leveraged the lure of its 288 million people as a massive growing domestic market, and its strong trade ties to the US (at least until 2025).

The vast majority of nickel mines and nickel smelters now built in Indonesia have major Chinese investment partners, who in turn have leveraged access to Chinese banks and Sinosure for export and credit insurance. We discuss the major project developments in Section X, but some of the largest newer proposals include the following:

October 2024 saw China's CNGR Advanced Material announce grand plans to invest up to US\$10bn in a vertically integrated nickel production facility in Indonesia in three phases over the next 10-15 years. The proposal is reported to have been granted national strategic project status from the government and will require 3,000-5,000ha.

April 2025 saw China's Zhejiang Huayou Cobalt propose to take on the development of Indonesia's high-profile Project Titan, a proposed US\$8.45bn EV battery hub.

June 2025 saw CATL commence construction of a multi-stage US\$6bn integrated battery materials, manufacturing and recycling facility in partnership with Indonesia's Antam and Indonesia Battery Corporation (IBC). The project is expected to utilise 2,000ha of land and create 8,000 direct jobs and 35,000 indirect opportunities at full capacity.

December 2025 saw reports that construction is nearing completion of the US\$4.3bn KNI nickel mine and High-Pressure Acid Leaching (HPAL) based processing plant. KNI is controlled by Zhejiang Huayou Cobalt Co. (73%), Vale Indonesia (18%) and Ford Motor (8.5%).

January 2026 saw South Korea's Sphere Corp take a 10% stake in the US\$2.3bn, 70ktpa nickel Excelsior Nickel-Cobalt HPAL project development located in the IMIP in Central Sulawesi, due for commissioning early 2026. Excelsior Nickel-Cobalt is now owned 45% by ASX-listed Nickel Industries (which in turn is 22% owned by Tsingshan Holding Group), 20% by United Tractors (a subsidiary of PT Astra International), 10% by Sphere Corp, and 20% by Tsingshan Holding Group.

January 2026 saw the United Nations Industrial Development Organization (UNIDO) designate the Indonesia Weda Bay Industrial Park (IWIP) as a pilot project for sustainable management of a nickel industrial zone. This includes a proposed US\$2bn investment in 2GW of solar and 0.5GW of wind power to reduce reliance on coal-power.¹⁸⁴ IWIP is a massive, integrated industrial park that includes mining, smelting (RKEF and HPAL), and its own dedicated coal power and port infrastructure. The Weda Bay nickel mine is a JV involving Tsingshan (51%), French firm Eramet (39%), and Indonesia's Antam (10%). Tsingshan has invested over US\$4.5bn in HPAL nickel plants at Weda Bay to produce battery-grade nickel.

¹⁸⁴ Indonesia Miner, [UNIDO Appoints IWIP as a Pilot Project for a Sustainable Nickel Industrial Zone](#), 23 January 2026

January saw a new consortium of China's Huayou Cobalt and EVE Energy partner with a local Indonesian firm and two SOEs (Antam and IBC) to build a new integrated 20GWh battery supply chain over multiple phases, with a proposed US\$6-8bn investment.

January 2026 saw reports BYD's US\$1.3bn Indonesian EV factory is due to commence production in March 2026.¹⁸⁵ China's Geely and Xpeng are transitioning from importing EVs to completely knocked down (CKD) assembly to comply with new Indonesian government regulations.

February 2026 saw Indonesia notify PT Weda Bay Nickel, the world's largest nickel mine, that its quota for 2026 had been cut by more than two-thirds to just 12Mt. This followed a cut to Indonesia's thermal coal mining sector of a quarter for 2026, in order to tighten global supply and favour higher prices over higher volumes in the two commodities Indonesia is the world export leader.

February 2026 also saw a new bilateral Indonesia-US Agreement on Reciprocal Trade (ART) saw the US agree to lower import tariffs imposed on Indonesian exports in return for Indonesia agreeing to dilute China's preferential access and divert nickel flows toward U.S.-linked supply chains for batteries.¹⁸⁶ Whether this agreement has any lasting impact or meaning is yet to be seen.

CEF has tracked a wide range of Chinese cleantech investments into Indonesia across solar and BESS (China National Nuclear Corp.), hydro electricity (Power China) and waste-to-energy (Zheneng Jinjiang Environment Holding Co) infrastructure projects, plus solar flat-glass (Xingyi Glass) and solar module (Trinasolar, LONGi, Yuncheng Solar Technology Group., China Lesso Group, New East Solar, Elite Solar) manufacturing.

And what the China-Indonesia expansions did to nickel over the last five years looks to be replicated in aluminium now. Chinese-backed consortiums have four aluminium smelters under construction in Indonesia, and plenty more under consideration – refer Section 12.¹⁸⁷

The sooner the world embraces the EU's leadership on carbon pricing in international trade via their CBAM the sooner it can prevent China offshoring new high emissions refining and smelting activities that lock in coal power dependency. If and when China sees a price differential to incentivise green aluminium, they will convert to renewables powered green metal production, as was hinted at with the UNIDO IWIP greener nickel proposal discussed above.

Indonesia's development of integrated domestic resources-battery-EV precincts coincides with the progressive uptake of battery hybrids and EVs, which grew to a record high 13.2% and 7.0% respective national market share in 2025 in four-wheel passenger vehicles as parity pricing on a total cost of ownership model basis rapidly approaches.¹⁸⁸

¹⁸⁵ The Jakarta Post, [BYD, VinFast to start local EV production in March, govt says](#), 28 January 2026

¹⁸⁶ SCMP, [US-Indonesia deal threatens China's 'entrenched position' in nickel market](#), 24 February 2026

¹⁸⁷ Aluminium Market Update, [The third coming of Indonesia in aluminium](#), 3 October 2025

¹⁸⁸ ICCT, [Roadmap to zero: Vehicle technology pathways for Indonesia](#), February 2026

Guinea

China has built up strong geopolitical relations with the Guinea government over the last decade, which is increasingly a key strategic supplier for China of both bauxite (refer Section 12) and iron ore (refer Section 10).

2017 saw a broad agreement to secure bauxite resources with China committing to provide a US\$20bn loan to Guinea over 20 years, with the loan to be repaid through revenues from various mining and enabling infrastructure projects, including those by China Power Investment Corporation (SPIC), Chalco and CHICO, in exchange for concessions on bauxite mined in the West African country.

September 2025 saw reports of pressure building from the Government of Guinea for the Simandou consortium to build downstream iron and even steel processing capacity to ensure value-adding in country. The current agreement requires partners to conduct feasibility studies for the construction of a pellet plant or a steel mill within two years of commencing exports.

The Guinea government has made similar demands of bauxite mine proposals to include alumina refineries and aluminium smelting, culminating in the August 2025 decision to revoke the bauxite concession of Emirates Global Aluminium. This is a bid to ensure value-adding and more national benefit from resource exploitation by foreign mining giants.¹⁸⁹

This has seen several value-add investment commitments, including two from China:

- Winning Consortium Alumina Guinea (WCAG) officially launched construction of its US\$1.2bn, 1.2Mtpa alumina refinery project in December 2025. WCAG includes China's Shandong Weiqiao Aluminum and Power Co., and China Yantai Port Group.
- SPIC has a 1.2Mtpa alumina refinery under construction, and due for completion 2028.

January 2026 saw the US\$23bn Simandou iron ore mining project deliver its first shipment to China. Simandou is expected to rapidly ramp up to 120Mtpa of high quality 65% iron content ore by 2029, positioning Guinea as the world's third-largest iron ore exporter with an expected 5% global share by the end of this decade. The project has involved building the enabling infrastructure as well, including the TransGuinean heavy haulage railway of 650km plus the Morebaya port. This is the largest integrated greenfield mine and infrastructure investment in Africa and provides a significant step towards the decarbonisation of the Chinese steel industry.

This project is a consortium of consortiums with the Government of Guinea holding a free carry direct 15% equity stake, with China Baowu (an indirect 25% share), China's Chinalco (15%), a Singapore consortium (21.7%) and Rio Tinto (~22.5%). Chinalco also owns a 11.2% stake in Rio Tinto.

March 2026 saw The Simandou 2040 Program enshrined in law (the 2026-2040 Plan Law) in Guinea to ensure an economic transformation beyond just resource extraction for export.¹⁹⁰

¹⁸⁹ AFR, [Rio faces pressure from Guinea to build refinery for Simandou ore](#), 8 September 2025

¹⁹⁰ Financial Afrik, [Guinea: Simandou 2040 Program enshrined in law to boost economic transformation](#), 6 March 2026

Zimbabwe

Zimbabwe has rapidly emerged since 2023 as a major global exporter of lithium in competition with Australia, South America and China.

Lithium represents Zimbabwe's fastest growing industry, with companies from China as the largest share of investors. For the past two decades, Zimbabwe has turned to China, adopting what the government terms a "Look East Policy." In 2020, President Mnangagwa described China as "our all-weather friends" at a time of western sanctions against the country for politically motivated violence.

Zimbabwe's push for local processing saw a concentrate export ban proposed back in 2022 scheduled to take effect from January 2027, but brought forward to February 2026.¹⁹¹ This is a key part of Zimbabwe's development plan, Vision 2030, in which it aims to have a domestic value-adding mining industry that generates US\$12bn a year in revenue, curtails illegal export smuggling, and ensures local communities see some economic returns for the environmental impacts its resources industry has created with water pollution, displacement and toxic dust.^{192 193}

Major Chinese companies, including Zhejiang Huayou Cobalt, Sinomine Resource Group, Sichuan PD Technology Group, Canmax Technologies, Rwizi Rukuru and Chengxin Lithium Group, have all commenced the development of downstream facilities, such as lithium sulphate plants, to align with Zimbabwe's new government mandate.

An example of this is Sinomine's US\$300m lithium spodumene processing facility. Reports have indicated Sinomine further plans to construct a US\$500m lithium sulphate plant (a lithium intermediate that can be refined further into battery-grade lithium hydroxide or lithium carbonate—materials vital for manufacturing EV and BESS batteries) at its Bikita mine.¹⁹⁴

China's Zhejiang Huayou Cobalt is set to start producing lithium sulphate early in 2026 at its new US\$300m 50-60,000tpa plant in Zimbabwe. Reports highlight further developments may include integrated acid and chemical plants at proposed lithium hydroxide projects.

September 2025 saw reports the Zimbabwe government was working with China Railway Group (CRG) regarding a US\$600m deal to overhaul Zimbabwe's rail infrastructure.

China's Tsingshan Holdings Group has plans to invest US\$1.5bn in building an integrated iron ore mine and 1.2Mtpa steel plant (over two phases, with phase one commissioned in 2024). This has a token 50MW solar plant, but fails the wider opportunity to leverage China's cleantech leadership.¹⁹⁵

China's Xinganglian Holding Group (a subsidiary of Xintai Resources) has plans to invest up to US\$3.6bn over several stages at the Palm River Energy Metallurgical Special Economic Zone in Beitbridge. The first phase to build a 1Mtpa coal mine and a coke production facility for steelmaking, a ferrochrome smelting facility and a 1.2GW coal-fired power plant are all under construction.¹⁹⁶

China's Sinomine Resource Group plans to invest US\$400m in further value-adding, having constructed the initial stage of the world's second cesium smelting plant at its lithium Bikita Mine in Zimbabwe, commissioned in May 2025¹⁹⁷ (refer Section 7).

¹⁹¹ Bloomberg, [China's Yahua starts building lithium sulfate plant in Zimbabwe](#), 27 February 2026

¹⁹² The Conversation, [Zimbabwe's lithium is in demand for making batteries: how to make sure benefits flow to the local economy](#), 13 July 2025

¹⁹³ African Leadership Magazine UK, [Zimbabwe's Long-Term Vision: Promoting Local Value Addition in Lithium Industry](#), 13 June 2025

¹⁹⁴ Reuters, [Huayou to start Zimbabwe lithium sulphate production early 2026](#), 17 October 2025

¹⁹⁵ Dialogue Earth, [Can Zimbabwe's steel ambitions be green?](#) 27 January 2026

¹⁹⁶ Dialogue Earth, [Can Zimbabwe's steel ambitions be green?](#) 27 January 2026

¹⁹⁷ The Africa Report, [China's Sinomine in Zimbabwe corners market for little-known but crucial tech mineral](#), 4 August 2025

Morocco

Morocco is important to China as a strategic export hub with a FTA in place to access both the European¹⁹⁸ and US markets, and also for North African markets. The country is also a source of crucial mineral resources, especially phosphates (Morocco holds ~70% of the world's phosphate reserves), which is critical for both fertilizer and as a key component for LFP (lithium iron phosphate) battery manufacturing. Morocco is also Africa's largest auto manufacturing hub, with both Stellantis and Renault undertaking manufacturing there. Morocco was the first Northern Africa partner within the BRI. Chinese investment and EPC firms are also very active in high speed rail (430km Kenitra-Marrakech high-speed corridor) and providing the solar and battery materials used in power infrastructure (ACWA's solar and storage NOOR project).¹⁹⁹

The largest landmark Chinese investment into Morocco was made by Gotion High-Tech, with a multi-phase US\$6.5bn proposal to build a 100GWh battery manufacturing facility in Kenitra, Morocco and is said to be planning to employ up to 10,000 workers. The first phase of 20GWh pa is due to be commissioned in late 2026 to supply Renault and Stellantis.²⁰⁰

China's BTR New Material is investing US\$850m across two battery material plants under construction to produce 50,000tpa of cathodes and 60,000tpa of anodes by 2027. Zhejiang Hailiang is also constructing a lithium copper foil plant whilst Tianci Materials Technology is constructing a 150,000tpa electrolyte factory, both to supply the new battery manufacturing facility.

China's CNGR Advanced Material in partnership with the Moroccan Royal investment fund Al Mada commissioned in 2025 the first of two phases of a US\$2bn integrated battery materials factory.

September 2025 saw the Sichuan Yahua Industrial Group and LG Energy Solution announce a JV to undertake a US\$612m investment in a 30,000tpa lithium hydroxide refinery in Morocco to leverage local lithium mining resources for use in battery manufacturing.²⁰¹

¹⁹⁸ APRI, [Morocco-China-EU Relations on Green Transition Minerals](#), 8 July 2025

¹⁹⁹ Orchard Island, [How Chinese Investment Is Reshaping Morocco's Real Estate and Trade Landscape](#), 13 May 2025

²⁰⁰ Ecofinagency, [As Morocco Attracts a \\$5.6B Battery Plant, Its Coal-Fired Grid Faces a Power Test](#), 16 September 2025

²⁰¹ Electrification Solutions, [China's Battery Giants Forge Full Industry Chain in Morocco via 'Chain Investment'. Creating New Gateway to Global Markets](#), 26 September 2025

Saudi Arabia

CEF has tracked over US\$18bn in cleantech OFDI by China into Saudi Arabia since 2023. This collaboration has seen successive announcements regarding the construction of a number of the world's largest solar farms, wind farms²⁰² and BESS²⁰³ developments globally – although most of these are for equipment supply and EPC, rather than involving OFDI from China, given Saudi Arabia has plenty of capital of its own to deploy in infrastructure.

July 2024 saw the announcement of three joint investments involving cleantech manufacturing in wind and solar in partnership with Saudi Arabia's Public Investment Fund (PIF), Saudi Arabia's sovereign wealth fund (AuM US\$1.15 trillion) to localise the manufacturing and assembly of equipment and components needed for solar and wind power. These agreements have been entered into by the Renewable Energy Localization Company (RELC), a PIF subsidiary. The first, with Envision Energy (50%) and Vision Industries (10%) involves the manufacture of 4GW pa wind turbines and components. The second was with Jinko Solar (40%) and Vision Industries (20%) to localise production of 10GW pa of cells and modules. The third was with TCL Zhonghuan Renewable Energy (40%) and with Vision Industries (20%) for the production of ingots and solar wafers for the equivalent of 20GW pa of modules.²⁰⁴

September 2025 saw confirmation that the new US\$4bn investment in 2.5Mtpa of direct reduced iron (DRI) / 1.5Mtpa of metal plate in an integrated manufacturing facility in Ras Al-Khair SEZ was on track for commissioning in 2026. The project is a JV between China's Baoshan Iron & Steel Co. (50% of the equity), Saudi Aramco (25%), and Saudi Arabia's PIF (25%).²⁰⁵

January 2026 saw a consortium of PIF and Red Sea Aluminium Holdings (a subsidiary of China's Shandong Innovation Group) to invest SR38bn (US\$10bn) in the development of an advanced, integrated aluminum complex in Yanbu, Saudi Arabia.²⁰⁶

²⁰² Goldwind press release, [Goldwind Signs 3GW Wind Power Project in Saudi Arabia](#), 28 October 2025

²⁰³ Energy Storage, [Saudi Arabia connects 7.8 GWh battery storage project to the grid](#), 18 December 2025

²⁰⁴ PIF, [PIF strengthens renewable energy localization in Saudi Arabia with three new JV](#), 16 July 2024

²⁰⁵ Zawya, [China's Baosteel says work progressing on \\$4bln steel plant in Saudi Arabia](#), 2 September 2025

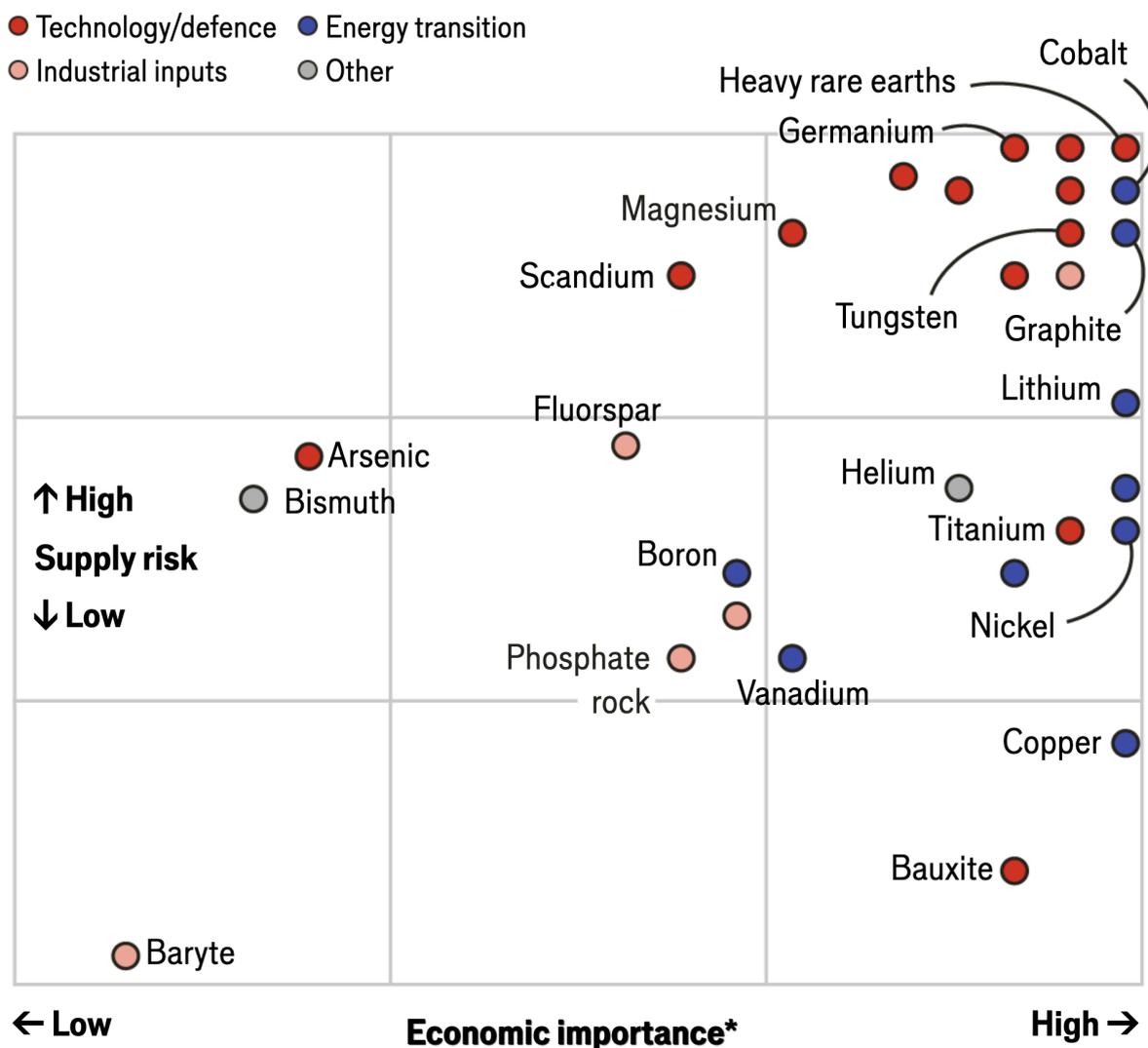
²⁰⁶ PIF, [PIF and Red Sea Aluminium Holdings sign initial terms to develop an advanced integrated aluminum complex in Saudi Arabia](#), 14 January 2026

Section 6. Critical Minerals – Rare Earths

Over recent decades China has patiently invested to build its global dominance in rare earths, a small subset of the critical minerals sector. But China has understood the strategically important industrial nature of this group of elements, and now controls over 90% of global processing capacity. Like the US tech giants have dominated global IT platforms and OPEC dominates the world's oil supply, China has built strategic power in rare earths. The US has belatedly understood this global supply chain dependency, preventing its' administration bullying China on wider issues.

Rare earth elements and other critical minerals are essential for electric vehicles, solar panels, semiconductors, batteries, wind turbines, aerospace components, and military hardware. While demand has surged globally, supply has become increasingly concentrated. China dominates both the mined production and the processing of rare earths, as it does in most strategic minerals, with an increasing market share of global refining capabilities of critical minerals and strategic metals of high economic importance for the energy transition and defence capabilities - Figure 6.1.

Figure 6.1: Critical Minerals Supply Risk and Economic Importance Matrix



*Measured in scale, value creation and industrial dependency

Source: The Economist, [America's new era of state-sponsored mining](#), 26 February 2026

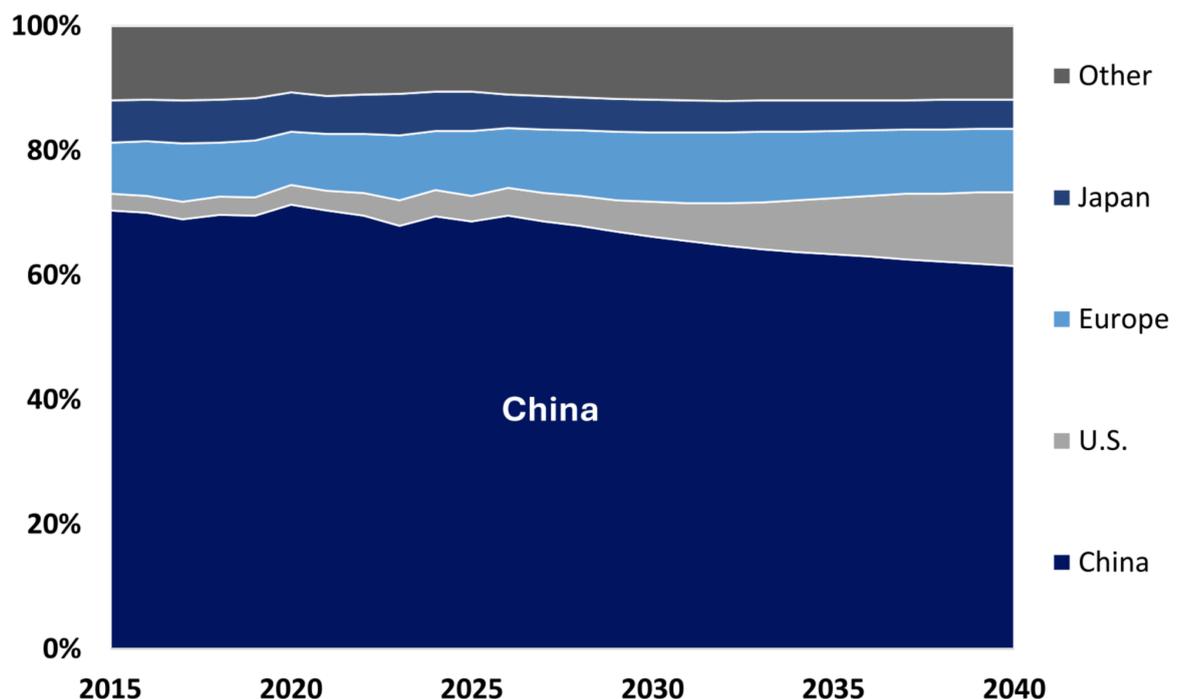
China controls the majority of refining, separation, and processing capacity, which is a technically complex and environmentally challenging stage of the supply chain. Processing requires specialised chemistry, infrastructure, and technical expertise that China has invested in over decades. Most rare earths mined outside China are shipped to China for processing.

China mines about 70% of the world's rare earths and controls over 90% of the world's rare earth processing, all hosted within China. The enormous Chinese state-owned companies that dominate the market, China Northern Rare Earth Group and China Rare Earth Group, operate efficient, closely integrated supply chains, almost entirely within China. China's concentration of control of rare earth refining has been developed over the last few decades, but has increased even further from ~85% in 2020 to over 90% by 2025.

Governments in the US, Europe, and allied countries are now moving to stockpile strategic minerals, develop domestic mining capacity, sign long term offtake agreements and build refining and processing infrastructure. But these efforts will take decades, and substantial capital to scale into vertically integrated production. Renewable energy requires a lot of critical minerals and strategic metals, even as it reduces the need for massive ongoing volumes of fossil fuels extraction – a massive ongoing pivot in the mining sector globally.

China dominates global mining and refining of earth earths, but also dominates global rare earth demand. Figure 6.2 details China's forecast dominance in global demand progressively declining from ~70% in 2025 to maybe 60% by 2040, on the premise other countries carry through with their policy intent to diversify their supply chains.

Figure 6.2: Share of Global NdFeB Magnet Demand



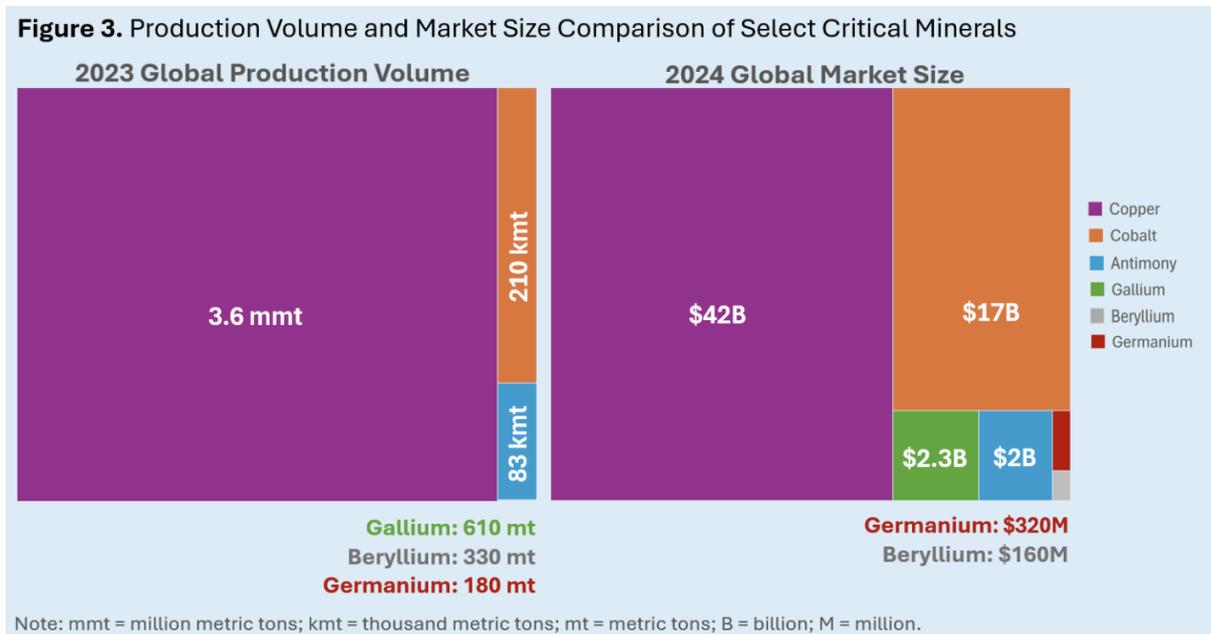
Source: Adamas Intelligence, [Ryan Castelloux via LinkedIn](#), 3 February 2026

It is also noteworthy that the rare earth mining segment is strategically important, but only a niche sector relative to copper or even cobalt - Figure 6.3.

February 2026 saw the Indian government provide new support for in-country supply chains in their 2026 national budget, just one of many steps being taken to reduce supply chain concentration risk. But CEF notes China has invested enormously in RD&D and equipment manufacturing as well,

making the task daunting in the absence of a multi-country collaboration, something the US is busy undermining as 2026 commences.²⁰⁷

Figure 6.3: Individual Rare Earth Elements are Niche Products

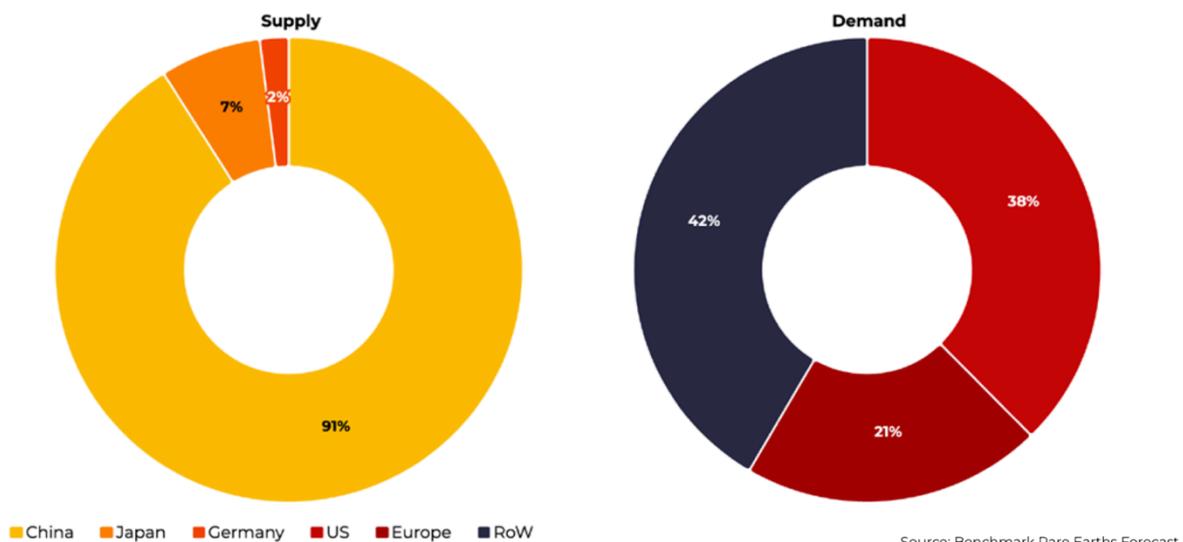


Source: SAFE, [Resources for Resources: Financing Critical Minerals Supply Chains](#), January 2025

Within the defence sector, BMI estimates that China’s global supply of rare earth permanent magnets has reached a 91% share by 2025 – Figure 6.4.²⁰⁸

Figure 6.4: Rare Earths Permanent Magnets for the Defence Sector: Supply & Demand

Split of REPM in the defence sector by country, 2025



Source: Australian Financial Review, 12 December 2025

²⁰⁷ ET Economic Times, [Budget 2026: FM proposes ₹20,000 cr CCUS push; customs duty relief for batteries, solar, nuclear](#), 1 February 2026

²⁰⁸ BMI, Mine to Grid, [2025 Year in Review](#), December 2025

China's global dominance of the rare earths supply chain didn't happen by accident. It is the result of many decades of planning and domestic and overseas investment, as part of a well orchestrated strategic plan of the Chinese government, championed since Deng Xiaoping and Premier Wen Jiabao from the late 1970s to the 2010s.

In 1983, engineers at General Motors developed powerful rare-earth magnets, which GM built into a magnet manufacturing subsidiary called Magnequench. But a decade later, GM decided to outsource its auto parts manufacture, and in 1995 sold Magnequench to a consortium of investors that included both US and Chinese companies, and this consortium progressively transferred the equipment and know-how to lower cost Chinese facilities subject to far less environmental controls, particularly with respect to the toxic radioactive waste.²⁰⁹ The US facilitated its progressive loss of global cleantech industrial and technology leadership, even as China embraced this massive opportunity. China invested in rare earths education and R&D for decades, learning from the best professors in the world (many of whom were then in the US). A strategic investment in long term capacity building way beyond the 3-4 year terms of western political leaders.

Rare earths mining resources are not rare, but there are few developed mines, and the processing and refining of rare earths is concentrated in just a few plants globally, with the expertise centrally held in China. Rare earths have radioactivity which increases the safety issues, while the refining is a toxic process.

High-performance motors need some degree of heavy rare earths, and at present, almost the only source is China. Rare earths are essential to permanent magnets used in electric vehicles, wind turbines, drones and high-tech applications for all electronic devices. Lockheed Martin, for instance, uses the heavy rare earths in its F-35 fighter jets.

December 2025 saw media reports that China was using its technology leadership to blend rare earths with steel into a high-performance alloy to enhance its infrastructure developments from high speed railways, hydro-electricity and enhanced wind turbines.²¹⁰

March 2026 saw China's global supply chain dominance in rare earths featured as a reason the US administration is unwilling to prosecute its trade threats against China. US industry is ill-equipped to cope with the consequences of China's decades of geopolitical investment.²¹¹ While the US blusters, it is interesting to see Japan move to materially reduce its supply issues by signing a long term off-take agreement at a mutually beneficial price with Australia's Lynas Rare Earths, Green Energy Statecraft in action.²¹²

²⁰⁹ The New York Times via the AFR, [Inside China's six-decade campaign to dominate rare earths](#), 1 January 2026

²¹⁰ SCMP, [Why China's growing demand for rare-earth steel is bad news for US F-35](#), 15 December 2025

²¹¹ SCMP, [Why China's critical mineral dominance is still disrupting US supply chains](#), 9 March 2026

²¹² Lynas Rare Earths ASX release, [ENHANCED JARE AGREEMENT FOR JAPANESE INDUSTRY](#), 10 March 2026

Section 6.1. Rare Earths – New Supply Sources

Rare earths are not overly rare, but the technology and refining capacity underpinning the processing of rare earths into magnets and other key industrial, energy and military applications is almost entirely held in China. Whilst the US used to hold global technology leadership, it let this strategic capacity lapse over recent decades, to China's benefit. New rare earth mines can be developed, but as the Japanese deal with Lynas in March 2026 and the US deal with MP Materials found, the unit price will be significantly higher than the price China charges. Governments will need to fund supply chain diversification, private markets will not.

Rare Earths - Myanmar

Myanmar is the world's third-largest producer of rare earth elements overall. Myanmar is a critical supplier of heavy rare earth elements (HREEs), with a reported 60% global share of the supply of dysprosium and terbium. Most of the HREE mines are located in the remote Kachin State in northern Myanmar, a region marked by long-standing conflict. In 2023, Myanmar is reported to have accounted for 98% of China's HREE imports, totaling 9000t of concentrates.²¹³ Chinese state-owned enterprises provide technical expertise, equipment financing, and market access arrangements that enable Myanmar operations to achieve commercial viability. It is also reported that private sector partnerships offer operational flexibility and risk management capabilities that prove essential in complex political and security environments.²¹⁴

November 2025 saw the Shan Human Rights Foundation (SHRF) release a report stating that China's Shanghai Chijin Xiawu Metal Resources Co. Ltd's (a JV between Xiamen Tungsten Co. Ltd. and Chifeng Jilong Gold Mining Co. Ltd., through its 90%-owned subsidiary China Investment Mining Company) gold and rare-earth mining operations caused severe environmental destruction and human rights risks in eastern Shan State.²¹⁵

Rare Earths – US - MP Materials

2017 saw China's Shenghe Resources take a then 8% equity stake in the US-based Mountain Pass mine operator, MP Materials Corp., and in return securing a long term offtake agreement that all output at Mountain Pass would be processed in China. Shenghe's stake has subsequently been diluted down to ~3% due to new equity issues to the U.S. Department of Defense, and the offtake agreement cancelled.

February 2022 saw the US government pledging \$US35m to Californian rare earths miner MP Materials to build a second US heavy rare earths refinery alongside Lynas²¹⁶ - Refer Section 4.1 above for recent MP Materials financial developments.

Rare Earths – Africa

June 2024 saw BMI report that Eight African mines in Tanzania, Angola, Uganda, Malawi and South Africa are expected to start production by 2029 and contribute 9% of global supply.

Tanzania will become one of China's fastest-growing sources of imported rare earth ores this decade, despite producing none today. BMI forecasts that by 2029, Tanzania is expected to send all its rare

²¹³ East Asia Forum, [Myanmar's rare earth gold rush is fool's gold](#), 4 October 2025

²¹⁴ Discovery Alert, [Myanmar Rare Earth Deposits: Strategic Supply Chain Analysis 2025](#), 22 November 2025

²¹⁵ Business and Human Rights Centre, [Southeast Asia: Chifeng Gold-Xiamen Tungsten JV accused of causing cross-border pollution and increasing flooding risk from the expansion of rare earth and gold mining in Myanmar's Shan State](#), 10 November 2025

²¹⁶ AFR, [Cashed-up Lynas may look beyond US if Biden support wanes](#), 25 February 2022

earths output to Chinese processors, amounting to 10% of China's imported mined rare earths supply in 2029.²¹⁷

October 2023 saw China's Shenghe Resources acquire for US\$1.5m a 50% interest in the Wigu Hill rare earth proposal in Tanzania from ASX-listed Vital Metals (owner of a Canadian rare earth deposit), with an option to increase its position to 75% by 100% funding the definitive feasibility studies for the project. The Tanzanian government will hold a standard 16% free-carried ownership interest upon granting a Special Mining Licence. Shenghe in December 2023 invested A\$6m to acquire a 9.99% equity stake in Vital Metals, with the right to go to 18% with a subsequent investment of A\$9m.²¹⁸

May 2025 saw China's Shenghe Resources enter into a binding agreement to fully acquire ASX-listed Peak Rare Earths Ltd in a deal that was then completed in September 2025 valued at A\$195m (US\$130m). Peak Rare Earth's main asset is the Ngualla Rare Earth Project in Tanzania with a projected output of 37,200tpa of concentrate.²¹⁹

Rare Earths – Malaysia

Malaysia has significant rare earth resources and a ban on companies from exporting raw rare earths to prevent their loss without value-adding.

October 2025 saw reports that China and Malaysia are in talks for a project to process rare earths, with sovereign wealth fund Khazanah Nasional likely to partner with a Chinese state-owned firm to build a refinery in Malaysia.²²⁰ Established in 1993, Khazanah Nasional functions as the primary execution vehicle for Malaysia's rare earth industrialisation strategy, representing a sophisticated blend of sovereign wealth fund capabilities and strategic industrial policy implementation. The fund manages ~US\$36bn in assets while pursuing both financial returns and national strategic objectives.²²¹

Australia's ASX-listed Lynas Rare Earths has a 10,000tpa rare earths processing plant in Malaysia's central state of Pahang, but has long suffered permit and social licence to operate issues given the radioactive nature of rare earths, hence fears of contamination.

²¹⁷ Benchmark Minerals Intelligence, [Rise of African rare earths bolsters supply pipeline for China and the West](#), 24 June 2024

²¹⁸ Vital Metals press release, [Vital Secures Cornerstone Investment](#), 27 October 2023

²¹⁹ Project Blue, [Shenghe tops up stake to acquire Peak Rare Earths and secure more ex-China feedstock](#), 15 May 2025

²²⁰ Reuters, [Malaysia seeks foreign partnerships to develop rare earth sector. state media reports](#), 22 October 2025

²²¹ Discovery Alert, [Khazanah China Rare Earth Refinery Deal Transforms Malaysia Strategy](#), 9 December 2025

Rare Earths - Australia

Geopolitical tensions between China and the West loom large over Australia's critical minerals industry, and there are no easy answers. China is well positioned as Australia's largest export destination, and much of the mining export capacity in Australia built over the last two decades has been underpinned by Chinese demand, plus capital and co-investment. But price volatility, in particular the collapsing global prices of lithium, rare earths and nickel over 2023-24 undermined investor confidence and bankability of new project developments across the Australian critical minerals sector. As Chinese buyers control the market and largely dictate the global pricing of rare earths, the collapsing commodity price has increased US-China trade tensions, which have developed into the strategic discussions evident in Australia in 2024.²²²

May 2023 saw the Australia-United States Climate, Critical Minerals and Clean Energy Transformation Compact announced in Japan by President Biden and PM Anthony Albanese. The agreement states: "Australia and the United States recognise the importance of addressing the climate crisis as a critical component of the bilateral relationship. The Compact is a framework which is designed to advance ambitious climate and clean energy action this decade, at home and abroad. The framework intends to coordinate policies and investments to support the expansion and diversification of responsible clean energy and critical minerals supply chains, and accelerate the development of markets for established and emerging technologies."²²³

Rare Earths - Australia - Lynas

ASX-listed Lynas Rare Earths Ltd is the world's largest non-Chinese rare earths miner, with the world's largest operating rare earth mine at Mt Weld, and performs early-stage processing of 12,000tpa of materials at its cracking and leaching plant near Kalgoorlie, Western Australia (WA), before sending them to its 10,500tpa rare earth processing facility in Malaysia for further refining. Lynas has invested A\$25m to expand the Malaysian processing facility that is targeting first production of 1,500tpa of two heavy rare earths – dysprosium and terbium – by end 2026.²²⁴

Lynas has been a major beneficiary of strategic Japanese financial support since a geopolitical incident in 2010 – refer Section 4.2. Now Lynas provides ~90% of Japan's supply of neodymium and praseodymium.²²⁵

January 2021 saw the US Department of Defence promise to provide half the funding for a new US\$60m greenfield 5,000tpa downstream processing plant in Texas (including 1250tpa of neodymium-praseodymium oxide (NdPr), owned by Lynas and fed by Lynas' Mt Weld mine in WA, and the company must be able to supply both heavy and light rare earths as part of that deal. But by August 2025 Lynas has flagged considerable uncertainty of an expanded version of this proposal proceeding, given the estimated capex cost has risen from US\$400m to now US\$575m, with unresolved problems in obtaining a permit for wastewater discharge having stalled the project's regulatory approval process. This is notwithstanding the US DoD having increased their funding support proposal to US\$258m in 2023.²²⁶

Lynas has also invested over 2025 in decarbonisation by building an integrated 65MW Mt Weld hybrid power system, that includes a 7MW solar farm, 12MW/12MWh BESS and 24MW windfarm to power its Mt Weld facility.

²²² AFR, [Big China question hangs over Australia's critical minerals sector](#), 22 May 2024

²²³ The White House, [Australia-United States Climate, Critical Minerals and Clean Energy Transformation Compact](#), 20 May 2023

²²⁴ Lynas Rare Earths, [Investor Presentation](#), 26 February 2026

²²⁵ Foreign Policy, [Japan Might Have an Answer to Chinese Rare-Earth Threats](#), 15 August 2023

²²⁶ MSN, [Lynas Rare Earths Flags Texas Plant Uncertainty](#), 28 August 2025

January 2026 saw outgoing Lynas CEO Amanda Lacaze reported as ‘a vocal critic of the manipulation of the rare earths market by China, which she said uses its dominance to keep a lid on prices and weed out higher-cost competitors.’²²⁷ Lynas also sees a major risk that Chinese rare earth equipment providers could undermine foreign competitors’ refinery developments.²²⁸

March 2026 saw Lynas lock in a long term supply agreement with Japan Australia Rare Earths B.V. ((JARE) a SPV established by Japan Organization for Metals and Energy Security (JOGMEC) & Sojitz Corporation) to update their long-standing, successful commercial arrangement for the availability of Australian rare earths to Japanese industry. Lynas will provide up to 7,200tpa of NdPr to Japan through to 2038 at a US\$110/kg NdPr floor price. A deal very consistent with the deal done by the US Department of Defence in July 2025 with MP Materials.²²⁹

Rare Earths - Australia - Iluka Resources

ASX-listed Iluka Resources, a zircon and titanium miner, is investing A\$1.8bn to build Australia’s first fully integrated rare earth refinery at Eneabba, WA to process rare-earths heavy residual ore stockpiles remaining from its long history in mineral sands mining, as well as from third party miners. Iluka’s move into rare earth refining is supported by a A\$1.65n non-recourse loan from the Australian government’s A\$5bn Critical Minerals Facility (CMF), which is administered by Export Finance Australia (EFA). The Eneabba refinery is due for commissioning in 2027 and will produce 23ktpa rare earth oxides praseodymium, dysprosium, neodymium and terbium.²³⁰

Rare Earths - Australia - Arafura

ASX-listed Arafura Rare Earths has secured significant funding commitments totaling over A\$1.04bn from the Australian Federal Government plus promised support from Germany and the US for its US\$1.2bn capex Nolans Project to establish Australia’s first integrated rare earths mine through to concentrate, mixed rare earth carbonates and NdPr Oxide refinery, due to reach FID in 2026.

March 2024 saw the government committed an initial A\$840m loan and grants package, mostly from the Critical Minerals Facility (CMF), administered by Export Finance Australia (EFA), with the balance of \$200m of project finance from the Northern Australia Infrastructure Facility (NAIF) for critical enabling infrastructure such as water, power, roads, and communications for the mine.²³¹

January 2025 saw the government announce a A\$200m cornerstone equity investment commitment through the National Reconstruction Fund Corporation (NRFC).²³²

July 2025 saw Arafura due diligence progressing for a potential €100m equity investment from the KfW German Raw Materials Fund in alignment with its global supply chain diversification initiatives.²³³

October 2025 saw EFA announce a US\$100m equity investment in Arafura²³⁴ plus a US\$300m non-binding letter of interest (LOI) from the US EXIM Bank.²³⁵

²²⁷ AFR, [Lynas Rare Earths CEO Amanda Lacaze to depart](#), 13 January 2026

²²⁸ AFR, Lynas warns China will starve rare earths projects of equipment, 30 October 2025

²²⁹ Lynas Rare Earths ASX release, [ENHANCED JARE AGREEMENT FOR JAPANESE INDUSTRY](#), 10 March 2026

²³⁰ Prime Minister’s Office press release, [Additional support for rare earths refining for a Future Made in Australia](#), 6 December 2024

²³¹ ABC, [Federal government to invest \\$840m in Arafura rare earths project](#), 14 March 2024

²³² Bloomberg, [Arafura Rare Earths gets US\\$124m boost from Australia](#), 14 January 2025

²³³ Arafura press release, [German Raw Materials Fund Update](#), 8 July 2025

²³⁴ Arafura press release, [EFA update](#), 21 October 2025

²³⁵ Arafura press release, [Export-Import Bank of the US Update](#), 21 October 2025

Rare Earths - Australia - Hastings Metals Technology

Hastings has been trying to develop its Yangibana rare earth and niobium mine and concentrator proposal in WA, which is now half-built, with a target to produce 37,000tpa of mixed rare earth concentrate from 2026.

Hastings in mid-2022 acquired a 21% stake in Canadian-listed magnet maker Neo Performance Materials in line with its strategy of building a vertically integrated mine-to-magnet supply chain, funded by a \$150m in Exchangeable Notes issued to Wyloo Metals.²³⁶

January 2023 saw the Australian government via NAIF provide an extra A\$80m loan support to Hastings, adding to the A\$140m provided in February 2022 due to capex estimate blowouts.

EFA provided a non-binding and conditional letter of support for an additional loan of up to A\$100m.

July 2024 saw Chinese rare earths HK-Listed JL Mag Rare Earth Co. (the world's #1 leading producer of rare earths permanent magnets) acquire a 9.8% stake in Hastings Metals Technology, investing A\$7m. JL Mag is the designated offtaker for any downstream products in Phase 3.²³⁷

November 2024 saw Hastings enter into a non-binding MoU with the Ministry of Investment of Saudi Arabia (MISA) for their Global Supply Chain Resilience Initiative ("GSCRI") program totalling US\$9bn, subject to Hastings locating phase 2 in Saudi Arabia.²³⁸ Nothing has come of this so far.

May 2025 saw Hastings sell a 60% stake in its Yangibana project to Wyloo Metals, retaining a non-operating 40% equity stake. Hastings also transferred a 19.9% stake in Neo Performance Materials Inc. to Wyloo in settlement of its \$150m Exchangeable Notes held by Wyloo Metals.²³⁹

October 2025 saw the Yangibana JV sign a non-binding MoU for the potential offtake of 100% of the 37,000tpa of rare earth concentrate with the Canadian firm Ucore Rare Metals Inc and an agreement to evaluate the establishment of a hydromet plant in Louisiana to process Yangibana's concentrate into a high-value Mixed Rare Earth Concentrate (MREC) product within the United States.²⁴⁰

Rare Earths - Australia - Australian Strategic Materials

ASX-listed Australian Strategic Materials (ASM) has a strategic stake in a US\$60m Korean Metals Plant with processing capacity of 1,300tpa NdFeB rare earths refinery, with a phase 2 to triple capacity underway, plus a proposal for a rare earth mine and refinery for 1,157tpa NdPr oxide plus Tb and Dy in Dubbo, NSW, Australia.²⁴¹

January 2026 saw ASM receive a US\$300m takeover offer from NYSE-listed Energy Fuels.²⁴²

Rare Earths - Australia - Northern Minerals Ltd

June 2024 saw the Australian government order private funds associated with Chinese conglomerates to divest shares in a ASX-listed heavy rare earths mining minnow, Northern Minerals Ltd, given the entities were believed to be acting in concert and acquiring a controlling stake in an attempt to get board control.²⁴³ This follows a ruling by the Foreign Review Investment Board in February 2023 that the Chinese entities were not allowed to increase their ownership holding from

²³⁶ AFR, [China magnet maker nabs stake in Forrest-backed rare earths play](#), 9 July 2024

²³⁷ Hastings press release, [Leading permanent magnet producer JL Mag to become 9.8% strategic investor in Hastings](#), 9 July 2024

²³⁸ Hastings press release, [Hastings signs MOU with Ministry of Investment, Kingdom of Saudi Arabia as part of their GSCRI program](#), 28 November 2024

²³⁹ Hastings press release, [Yangibana JV: Execution of Binding transaction with Wyloo](#), 16 May 2025

²⁴⁰ Hastings press release, [Yangibana JV Partners with Ucore to advance US Processing](#), 31 October 2025

²⁴¹ ASM [investor briefing](#), 26 November 2025

²⁴² AFR, [NYSE-listed Energy Fuels to acquire Australian Strategic Materials](#), 21 January 2026

²⁴³ Australian Treasurer press release, [Court action regarding 2024 Northern Minerals Disposal Orders](#), 26 June 2024

10% to 19.9%. The company's A\$600m capex Browns Range proposal in WA aims to build an integrated rare earths refinery to supply 4,350tpa Total Rare Earth Oxides (TREO).

October 2025 saw Northern Minerals receive a joint US EXIM and EFA funding support proposal worth US\$230m, targeting first production by 2028, but we note the proposal is still subject to reaching FID. The proposal has a long-term, binding supply agreement in place with Iluka Resources for the majority of Browns Range Dy/Tb-rich xenotime concentrate to be processed at Eneabba, where Iluka is constructing Australia's first fully integrated rare earths refinery.²⁴⁴

Section 6.2. Critical Minerals – Antimony

China has around a third of global reserves of antimony while Russia has almost a fifth. Tajikistan, the second-largest antimony producer, is also benefiting from US attention. Even if antimony can be mined, processing expertise remains concentrated in China.

The US government agreed in 2025 to buy antimony from Texas-based US Antimony Corp.

Pakistan at present produces a small amount of mined antimony and holds just 1% of the world's reserves, according to the US Geological Survey. September 2025 saw US Strategic Metals sign an MoU with Pakistan's military and political leaders to collaborate on "critical minerals essential for the defence, aerospace and technology industries". US Strategic Metals plans to build a US processing plant and mine.

November 2025 saw Pakistan-based Himalayan sign a "strategic partnership" with Nova Minerals, a company dual listed in Australia and the US, to "strengthen US-Pakistan economic ties" through exploring for antimony. Nova received a US\$43m grant from the US DoD in 2025 to explore for gold and antimony in Alaska. Whilst Nova does not at present produce any antimony it has suggested it would then build a refinery in Alaska with the aim to produce "military-grade antimony by 2026/27".²⁴⁵

²⁴⁴ Northern Minerals press release, [USA President & Australian Prime Minister sign landmark Critical Minerals and Rare Earths Framework Agreement](#), 21 October 2025

²⁴⁵ FT, [The wildcat traders and US contractors piling into Pakistan's antimony](#), 29 December 2025

Section 7. Critical Minerals – Lithium

Lithium spodumene prices have been in a massive boom-bust cycle over the last decade, with the structure growth in batteries and EV demand globally driving a hype relating to concerns of a global supply shortage only to see prices collapse even as global demand has growth rapidly, but not as rapidly as new lithium supply. China has resolved its over-reliance on Australia by developing strategic domestic lithium mine capacity, but has also strategically invested in at least 15 countries to ensure new supply is likely sufficient to cover the structural growth in demand.

January 2026 has seen lithium prices in China rise sharply, driven by the convergence of steadily tightening inventories, improving demand expectations, and the vagaries of a very thinly traded 'global' market dominated by one country – China. BMI reports battery-grade lithium carbonate and hydroxide inventories in China have been consistently drawn down since September 2025 and are now lower than at any time in 2025. With inventories depleted, the market has become increasingly sensitive to marginal changes in demand expectations and supply fundamentals, and lithium pricing has more than doubled into February 2026 vs the rock-bottom 2025 price averages that saw almost all mines loss-making – Figure 7.1.

This follows a lithium spodumene price boom into 2022 rising eightfold to over US\$8,000/t and then subsequent price collapse of more than 90% over 2023-2024. A boom-bust-boom cycle that undermines investment, at least by non-Chinese for-profit enterprises. Against this, lithium demand is seeing long term structural growth, with US-listed Albemarle in February 2026 forecasting lithium-ion battery production to grow at a 15-30% CAGR over 2025-2030, and global EV demand to see a 10-15% CAGR to 2030, underpinning lithium demand of 10-20% CAGR to 2030.²⁴⁶

Figure 7.1: Lithium Spodumene Pricing Has Been a Rollercoaster (US'000\$/t)



Source: S&P Global Platts, via [AFR](#) 18 January 2026

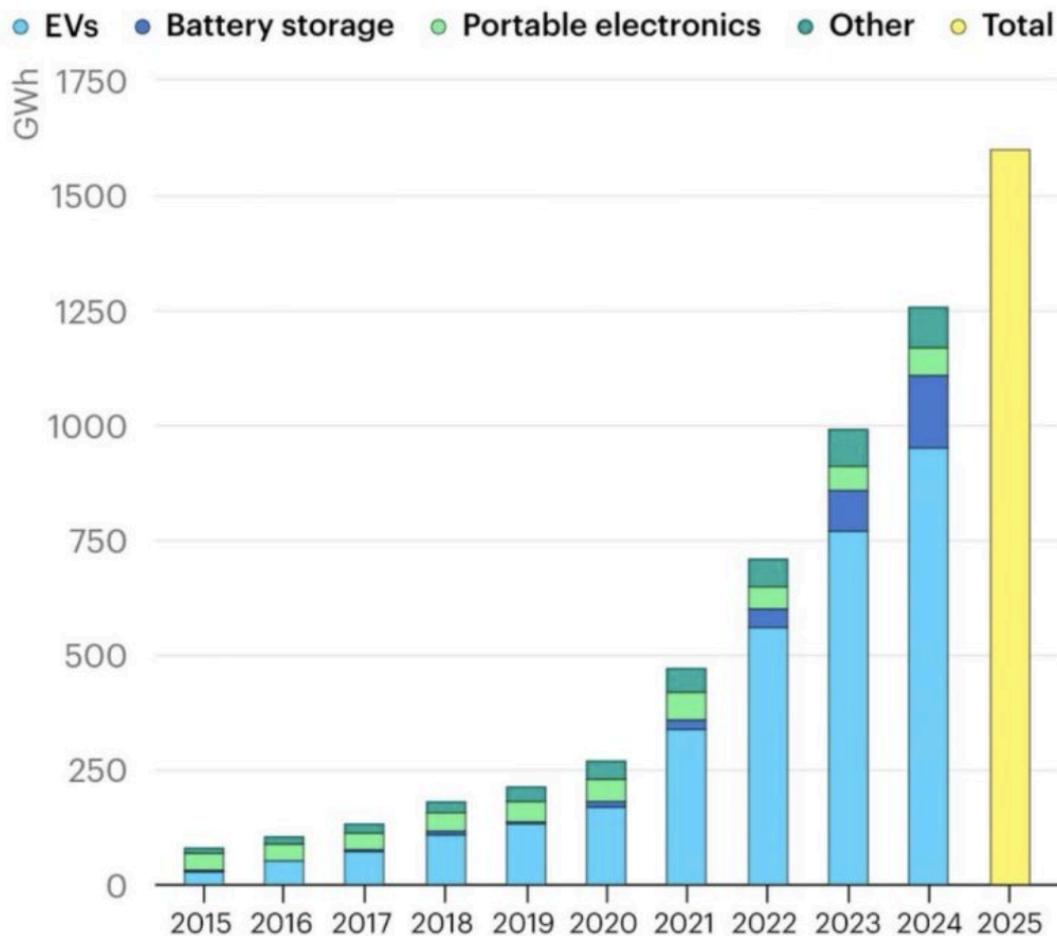
In order to supply the long term structural growth in demand resulting from the boom in EVs and hence lithium ion battery manufacturing, China has led a massive investment in new lithium mine capacity expansions across the world over the last few years.

²⁴⁶ Albemarle Corp., [CY2025 Results briefing - investor presentation](#), 11 February 2026

Traditionally, Australia has been China’s main supplier of lithium spodumene – accounting for 79% of China’s imports in 2023. But this is changing, rapidly. China’s supply security is being undermined as Australia and other global lithium producers draw up critical mineral plans, undermining China’s confidence of continued collaboration and access as the US in particular weaponises global trade.

As by far the largest buyer of lithium globally, China benefits significantly from oversupply, which saw the lithium commodity price collapse 80-90% over 2023/24, despite the projections for a structural deficit in lithium as demand growth accelerates - Figure 7.2.

Figure 7.2: Global Lithium-ion Battery Use, 2015-2025



Source: International Energy Agency, February 2026

We note this has structural benefits to the global energy transition, as the collapse in critical minerals prices over 2024 combined with massive battery manufacturing capacity expansions (again led by China, but also by South Korea, both in its domestic market and in the US), which has seen battery cell and pack prices drop by over 50% yoy in 2024/25 – Refer Section 2.2.

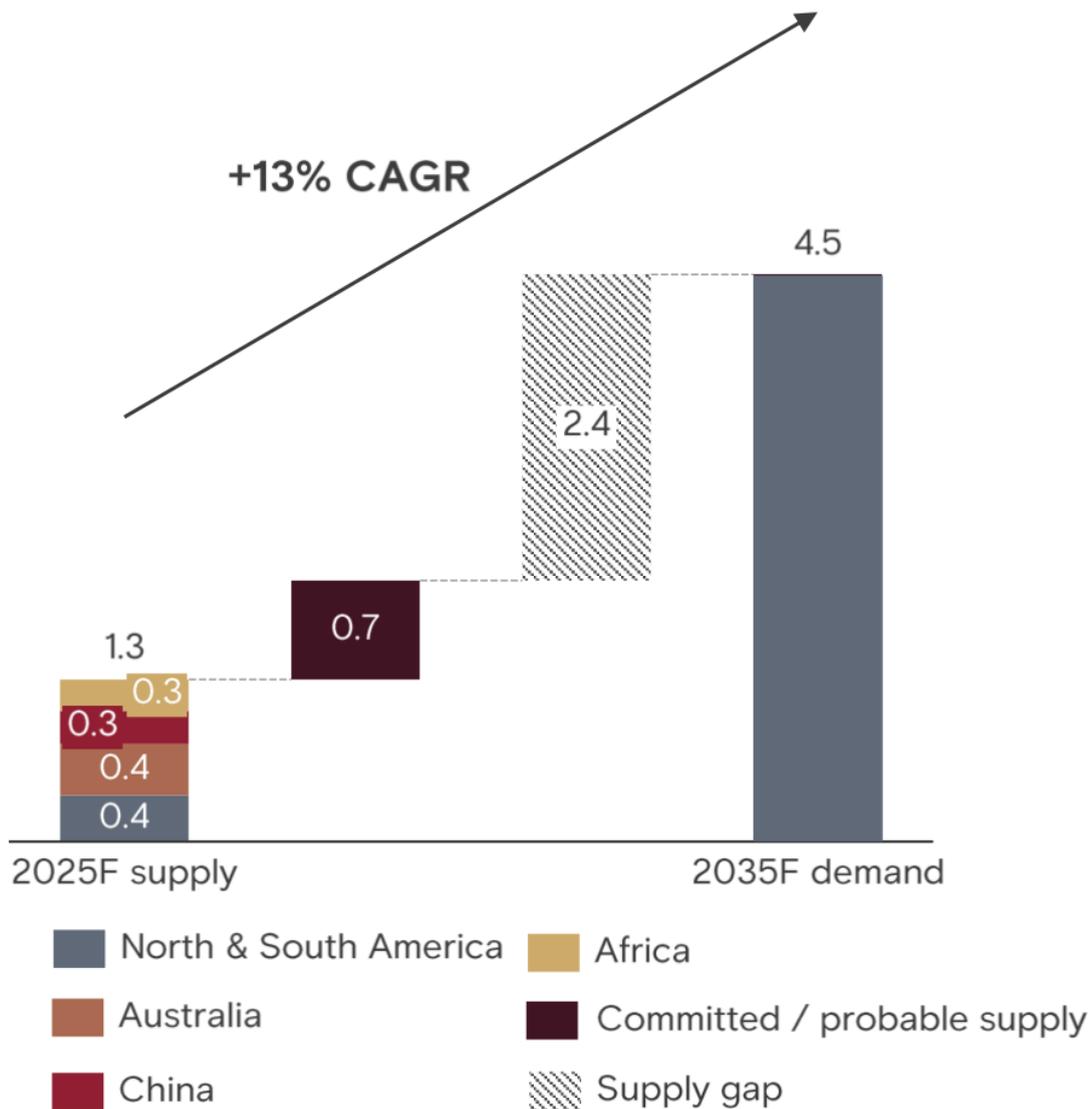
However, the volatility of commodity prices does cause significant investor alarm, and undermines non-Chinese investment in new capacity expansions, such as by ASX-listed Lake Resources in Argentina.²⁴⁷ One could argue China is strategically gaming myopically short term western investors, driving stock market valuations down and forcing start-ups to seek patient strategic investment partners, many of whom are often Chinese firms with government financial support.

²⁴⁷ AFR, [Lithium play Lake Resources slashes jobs and puts assets up for sale](#), 1 July 2024

However, it is clear that the ongoing rout in lithium commodity prices is similarly impacting Chinese listed lithium firms. Ganfeng Lithium Group Co.’s HK shares were down >90% from a HK\$132 peak in 2021 to a low of HK\$15ps in June 2024, before recovering as lithium prices have surged over 2025 to now trade at HK\$60ps (in February 2026).

In December 2025, BMI forecasted battery demand rising +15% CAGR from 2025, translating to a quadrupling of annual demand to 6.8TWh by 2035. As a result, Rio Tinto forecasts the surge in battery demand to drive a +13% CAGR volume growth for lithium demand - Figure 7.3.

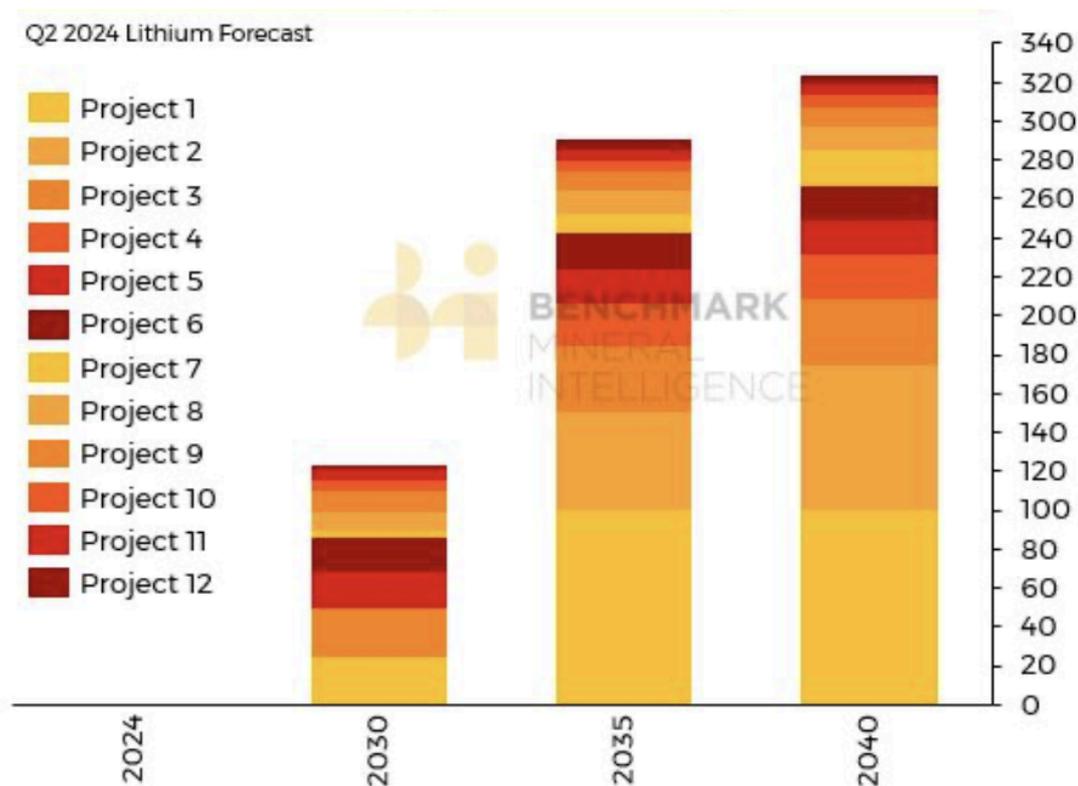
Figure 7.3: Mined Lithium Carbonate Equivalent Supply Deficit Forecast (Mtpa LCE)



Source: [Rio Tinto Economics Conviction Scenario](#), BMI 3Q2025, December 2025

It is CEF’s view that all the claims of critical mineral resource constraints to the global energy and EV transformation are somewhat overstated. Beyond battery recycling, we also note that the best way to solve high prices is high prices. And we think these claims understate the battery industry’s ability to innovate. In lithium, the development of plentiful but more expensive pretroubine globally means that new lithium capacity is constrained by low lithium commodity prices – Figure 7.4.

Figure 7.4: Petrobrine derived supply of Lithium (kt LCE)



Source: Dr Cameron Perks, Benchmark Mineral Intelligence, July 2024

January 2026 saw BloombergNEF forecast total lithium capacity from both primary and secondary sources could reach 4.4Mt of LCE by 2035, up from 1.5Mt in 2025.²⁴⁸

China is one of the top three lithium mining countries (with two thirds of this sourced from Jiangxi and Qinghai provinces), but accounts for a much higher 70% share of lithium refining. China has targeted significantly increased self-sufficiency in lithium extraction, with significant investments in developing petrobrines, putting self-sufficiency ahead of low cost sourcing. However, more significant is China's "Going Global" strategy that has seen very significant Chinese investment in foreign lithium resources across the globe.

December 2025 saw Bureau of Natural Resources of Yichun, a major lithium centre in China's Jiangxi province, revoke 27 expired mining permits (noting none of these permits were for mines in operation) as part of heightened government oversight into mining practices, including a move to force CATL's Jianxiawo mine to suspend operations in August 2025. The intervention evidently part of Beijing's "anti-involution" campaign that has emerged across the battery and EV industries, aimed at curbing overproduction amid deflationary pressures.²⁴⁹ This has driven share prices of lithium stocks up dramatically over the second half of 2025. This announcement has compounded concerns about a supply squeeze at a time when demand is booming.²⁵⁰

January 2026 saw a number of the world's largest lithium mining firms cited as considering reopening capacity in response to surging lithium prices.²⁵¹

²⁴⁸ BloombergNEF, [Transition Metals Outlook 2025](#)

²⁴⁹ Reuters, [What is "involution". China's race-to-the-bottom competition](#), 14 September 2025

²⁵⁰ AFR, [Lithium markets hit fever pitch as China revokes more permits](#), 18 December 2025

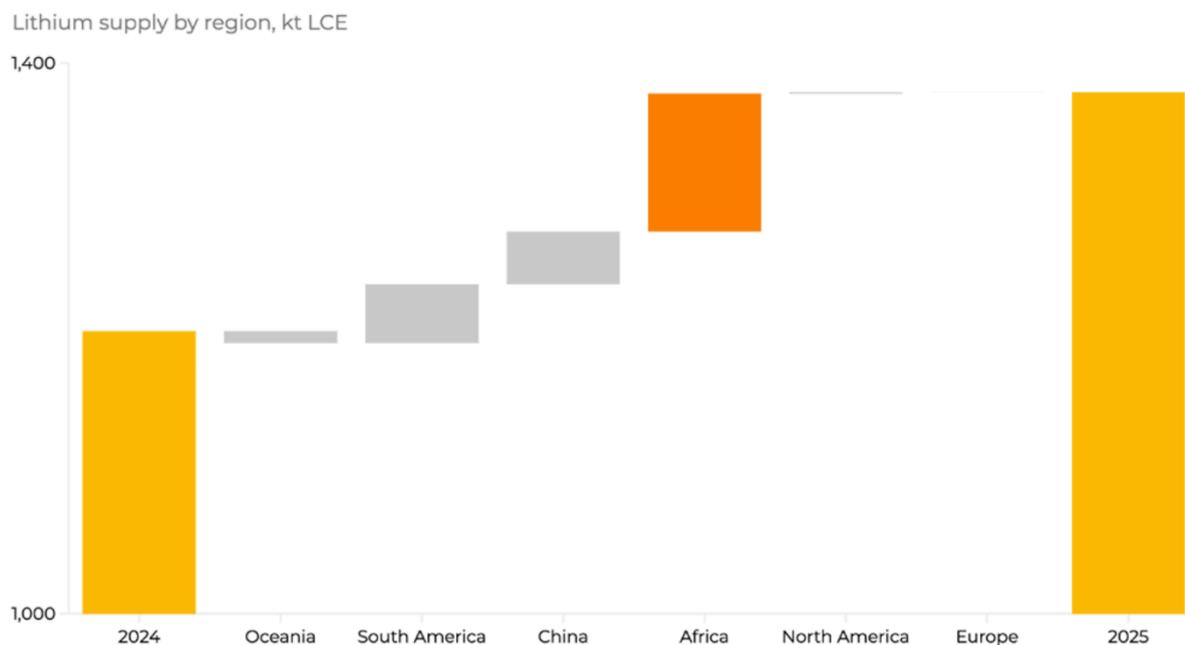
²⁵¹ AFR, [Lithium rebound fuels hope for mothballed mines' revival](#), 18 January 2026

Lithium - Africa

In the last three years Africa has become the third global producer of lithium, rapidly catching up to the two largest suppliers, Australia and China.

BMI estimates African lithium production trebled in 2024. In 2023 Africa accounted for just 4% of mined lithium globally, rising to account for 111,000t or a 10% share of global supply in 2024 and 222,000t or a 16% share over 2025, with BMI forecasting African supply will expand to 370,000tpa by 2030. Zimbabwe accounted for an estimated 80% of African lithium output in 2024, with Namibia second with a 17% share.²⁵² And Africa was the major source of new lithium supply in 2025 – Figure 7.5.²⁵³

Figure 7.5: Africa is the Main Source of New Lithium Supply in 2025 (kt LCE)



Source: Benchmark Lithium 3QCY2025 Forecast

Chinese companies currently lead African lithium investment and production, supported by financing and offtake, although sovereign wealth funds from Saudi Arabia and the UAE have also been active in targeting partnerships that secure feedstock for emerging regional battery material hubs. Africa has enabling infrastructure constraints, including power, rail and port access.

We examine some of the largest Chinese investments in new lithium mining and value-add in Africa, and then in South America et al.

Lithium – Mali – Ganfeng Lithium Corp.

May 2024 Ganfeng Lithium bought out its Mali, West Africa, joint venture partner, the Australian listed Leo Lithium's 40% stake in the Goulamina mine, for US\$343m following the Mali government's new law mandating higher government ownership of resource projects (the Mali government now owns 35% of the equity), whilst paying the Government US\$60m to settle outstanding issues.²⁵⁴

²⁵² SCMP, [China's investment in Africa's lithium mines begins to pay off with new mineral supply chains created](#), 3 May 2024

²⁵³ BMI, Mine to Grid, [2025 Year in Review](#), December 2025

²⁵⁴ Mining Technology, [Ganfeng to acquire Leo Lithium's Mali project stake for \\$342.7m](#), 8 May 2024

May 2024 saw Ganfeng Lithium Corp. confirm its rights to operate the Goulamina lithium mine in Mali in partnership with the military-led government, whose stake increased from 20% to 30-35%.

June 2025 saw first shipments to China, and the company said it is on track for a Stage 2 expansion to raise total capacity to 1Mtpa of spodumene concentrate.²⁵⁵

Lithium – Mali – Hainan Mining

December 2025 saw China's Shanghai-listed Hainan Mining Co. (a subsidiary of Fosun International) joint venture with UK-listed Kodal Minerals make its maiden shipment of spodumene from its Bougouni Lithium Project in Mali, despite ongoing civil unrest. The JV has built stage 1 of its dense media separation plant and produced 45,000t of concentrate in its first year ramping up, with a stage 2 target of 125,000tpa. Kodal Minerals entered Mali in 2016 and then secured US\$164m in financing and an offtake agreement from Hainan Mining in 2021, allowing construction to begin in 2024. The ongoing insurgency and lack of power supply means in-country value-add to lithium hydroxide is not an option.²⁵⁶

Lithium – Zimbabwe

Zimbabwe, under economic stress, holds Africa's largest lithium reserves and sees potential for an economic boost from five lithium mining developments now operationalised. Lithium represents Zimbabwe's fastest growing industry, with companies from China as the largest share of investors. For the past two decades, Zimbabwe has turned to China, adopting what the government terms a "Look East Policy." In 2020, President Mnangagwa described China as "our all-weather friends."

Major Chinese companies, including Zhejiang Huayou Cobalt, Sinomine Resource Group, Sichuan PD Technology Group, Canmax Technologies and Chengxin Lithium Group, all completed the construction or upgrades of lithium processing plants in Zimbabwe in the last 2-3 years in compliance with Zimbabwe's development plan Vision 2030, in which it aims to have a domestic value-adding mining industry that generates US\$12bn a year in revenue.²⁵⁷

Global Witness reports controversies about foreign investors' role in Zimbabwe's lithium mining, with accusations of bribery, exploitative conditions, and circumventing regulations to export raw lithium ore to China.²⁵⁸

Reports also suggest China's improving ESG standards in its domestic market are not translating into its mining practices in Africa, citing land use conflict, water contamination, poor labour practices and failure to ensure the local community actually benefits, as also seen in Indonesian nickel (refer Section 9). Rebecca Ray, an academic researcher with Boston University's Global Development Policy Center states: "China's Green Belt and Road Initiative and Green Finance Guidelines warn investors and contractors to meet host country standards or international environmental and social standards, whichever is more stringent. However, in practice, Chinese actors — and the host country governments who regulate their behaviour — have much room to improve in this regard."²⁵⁹

February 2024 saw China propose new ESG rules aligning with the EU best practice, a critically important development, if implemented globally.²⁶⁰

September 2025 saw reports the Zimbabwe government was working with China Railway Group (CRG) regarding a US\$600m deal to overhaul Zimbabwe's rail infrastructure. CRG is the largest railway

²⁵⁵ China Automotive News, [Ganfeng Lithium ships first batch of lithium concentrate from Mali's Goulamina project to China](#), 29 June 2025

²⁵⁶ BMI, ["We've been very happy working in Mali." Q&A with Kodal Minerals](#), 12 December 2025

²⁵⁷ African Leadership Magazine UK, [Zimbabwe's Long-Term Vision: Promoting Local Value Addition in Lithium Industry](#), 13 June 2025

²⁵⁸ Global Witness, [A rush for lithium in Africa risks fuelling corruption and failing citizens](#), 14 November 2023

²⁵⁹ Mongabay, [Locals slam Zimbabwe for turning a blind eye to Chinese miner's violations](#), 1 April 2024

²⁶⁰ Bloomberg, [China Proposes New ESG Rules to Keep Up With Europe](#), 21 February 2024

construction company with its main shareholder the China SOE China Railway Engineering Corp. The agreement seeks to support the modernisation and rehabilitation of existing railway lines, the installation of new signaling systems, the acquisition of 17 locomotives and 209 freight wagons, as well as building five new stations and developing a new line linking Harare with South Africa's Beitbridge border.²⁶¹ CRG has previously worked on major African railway projects, including the 1,860km TAZARA line connecting Zambia to Tanzania's ports and the Addis Ababa–Djibouti railway.²⁶²

Lithium – Zimbabwe – Bikita Mine by Sinomine

In 2022 Shenzhen Stock Exchange listed Sinomine Resource Group paid \$US180m for the Bikita lithium mine in Zimbabwe, which holds the world's largest known lithium deposit, at 11Mt.²⁶³

April 2024 saw Sinomine invest US\$300m to construct a lithium spodumene processing refinery as part of a plan to increase Bikita Mine's lithium production capacity to 300,000tpa.

October 2025 saw Sinomine plan to build a US\$500m lithium sulphate plant at its Bikita mine.²⁶⁴

Lithium – Zimbabwe – Kamativi Mine by Yahua Group

The Kamativi mine is a joint venture between China's Sichuan PD Technology Group, a subsidiary of a Chinese-listed entity Yahua Industrial Group, and local firm Defold Mine. Development of the Kamativi lithium mine, located 90km southeast of Hwange in Matabeleland North Province, is being done in two phases. May 2024 saw reports that the first phase is operational, with the mine producing 300,000tpa of raw spodumene ore and 50,000tpa of spodumene concentrate. Phase 2 aims to raise production to 2.3Mtpa of raw ore and 300,000tpa of spodumene concentrate.²⁶⁵

February 2026 saw Yahua Group report it has started building a downstream lithium sulfate plant.²⁶⁶

Lithium – Zimbabwe - Arcadia Mine by Zhejiang Huayou Cobalt

February 2026 saw reports China's Zhejiang Huayou Cobalt is set to start producing lithium sulphate from its new US\$400m 50-60,000tpa plant at its wholly owned Arcadia mine in Zimbabwe, which currently produces 500,000tpa of spodumene concentrate.²⁶⁷ Zhejiang Huayou Cobalt's subsidiary Prospect Lithium Zimbabwe acquired the Arcadia lithium mine for US\$422m in 2022 from ASX-listed Prospect Resources Ltd. July 2023 saw Huayou commission its new US\$300m facility to produce 450,000tpa lithium concentrate.²⁶⁸ Huayou is reported to have exported 400,000t of lithium concentrate from Zimbabwe in 2024.²⁶⁹

Lithium – Zimbabwe - Zulu Mine by Canmax Technologies

January 2026 saw China's Canmax Technologies extend the deadline till June 2026 on its US\$35m prepayment financing and offtake deal (including a profit share) made in 2023 with Premier African Minerals for its Zulu lithium and tantalum mine near Bulawayo in Zimbabwe, providing crucial funding for processing plants in exchange for spodumene concentrate. Canmax is the single largest shareholder in Premier African Minerals with a 13% stake.²⁷⁰

²⁶¹ Chronicle, [Zimbabwe-China in US\\$600 million railways deal](#), 3 September 2025

²⁶² China Global South Project, [China Tests Zimbabwe's Lithium Ambitions With \\$400 Million Huayou Cobalt Plant](#), 25 September 2025

²⁶³ Oxpeckers, [Zimbabwe's lithium liability](#), 28 May 2024

²⁶⁴ Reuters, [Huayou to start Zimbabwe lithium sulphate production early 2026](#), 17 October 2025

²⁶⁵ SCMP, [China's investment in Africa's lithium mines begins to pay off with new mineral supply chains created](#), 3 May 2024

²⁶⁶ Bloomberg, [China's Yahua starts building lithium sulfate plant in Zimbabwe](#), 27 February 2026

²⁶⁷ Aljazeera, [Zimbabwe imposes ban on exports of all lithium concentrate](#), 25 February 2026

²⁶⁸ Reuters, [Huayou commissions \\$300 million Zimbabwe lithium plant](#), 5 July 2023

²⁶⁹ Reuters, [Huayou to start Zimbabwe lithium sulphate production early 2026](#), 17 October 2025

²⁷⁰ Proactive, [Premier African Minerals shares jump 23% after extending lithium offtake deal with Canmax](#), 6 January 2026

Lithium – Zimbabwe – Sandawana Mine by Kuvimba House

July 2024 saw state-owned Zimbabwe firm Kuvimba Mining House sign an initial MoU for a US\$270m Build, Operate and Transfer (BOT) agreement with two unnamed Chinese investors (speculated to be Zhejiang Huayou Cobalt and Tsingshan Holding Group) to construct a 600,000tpa lithium concentration processing plant at its Sandawana Mine, with construction commenced late 2025 and the facility due to be operational early 2027. The concentrator will be initially owned by the consortium for a period of 5-6 years before being transferred to the Zimbabwean government. This BOT structure enables Zimbabwe to benefit from Chinese capital and technical expertise while retaining ownership of the resource and processing facility – which looks to CEF to be an excellent model to promote long-term skills transfer and industrial independence. Estimates are that the plant created 300–400 permanent jobs, including high-skilled roles in chemical engineering, process control, and environmental management.²⁷¹ Operations at the mine began in January 2023.²⁷²

Kuvimba was set up in the last 1-2 years with 70%-ownership held by the state sovereign wealth fund Mutapa Investment Fund, with entities held by the finance ministry, including state pension funds, power utilities and a deposit insurance fund, holding the rest. It houses assets nationalised after alleged corruption and is now looking to development banks, mining firms and traders to raise US\$950m to develop lithium, platinum and gold assets, including downstream in-country processing.²⁷³

Lithium – Zimbabwe – Sabi Star Mine by Chengxin Lithium Group

May 2023 saw Chinese company Chengxin Lithium Group commission a lithium concentrator at the Sabi Star Mine in Zimbabwe's Masvingo Province, producing 300,000tpa of lithium. The milestone is part of the firm's strategy to boost production at the mine after acquiring a 51% stake from lithium mining firm Max Mind in November 2021. Chengxin produces lithium concentrate for the EV battery market, with plans to build further downstream facilities i.e. a lithium sulphate plant.²⁷⁴

January 2025 saw Chengxin Lithium Group commission a US\$25m 15MW coal fired power plant to power the lithium mine to cut diesel reliance.²⁷⁵

Lithium – Zimbabwe - Rwizi Rukuru

April 2024 saw Chinese mining company Rwizi Rukuru commission a 300-ton-per-day lithium concentrator. Located in Mutoko in the country's Mashonaland East province, the facility is the province's third lithium processing plant.²⁷⁶

Lithium – Zimbabwe - Shengxiang Investments

Chinese miner Shengxiang Investments completed the construction and installation of a lithium processing facility in Goromonzi, Mashonaland East province in July 2023. The facility has a capacity of 360,000tpa of lithium, with testing already complete. The company plans to double capacity in phase 2. Shengxiang Investments invested US\$40m in the construction of the facility.²⁷⁷

²⁷¹ African Leadership Magazine UK, [A Strategic Counter-Cyclical Bet](#), 17 July 2025

²⁷² Reuters, [Zimbabwe aims to break ground for \\$270 million new lithium plant this year](#), 16 July 2025

²⁷³ Bloomberg News, [Zimbabwe seeks \\$950 million in new bid to kickstart mining firm](#), 13 February 2025

²⁷⁴ African Mining Week, [Investments in Zimbabwean Lithium to Drive Domestic Refining Capacity](#), 25 July 2024

²⁷⁵ The Herald, [Sabi Star power plant nearing completion](#), 8 January 2025

²⁷⁶ African Mining Week, [Investments in Zimbabwean Lithium to Drive Domestic Refining Capacity](#), 25 July 2024

²⁷⁷ African Mining Week, [Investments in Zimbabwean Lithium to Drive Domestic Refining Capacity](#), 25 July 2024

Lithium – Namibia – Tangshan Xinfeng Lithium Industry

Xinfeng Investments, a subsidiary of the Chinese firm Tangshan Xinfeng Lithium Industry, plays a significant, albeit controversial, role in Namibia's lithium mining, primarily through its operations at the Uis lithium mine, the largest lithium resource in the country. Xinfeng faces accusations of bribery, exploitative conditions, and circumventing regulations to export raw lithium ore to China, sparking legal battles and bans by the Namibian government, highlighting broader issues of Chinese dominance in African critical minerals.²⁷⁸

Lithium - Nigeria

May 2025 saw reports that some US\$1.3bn was being invested in building out lithium mining and refining in Nigeria. Chinese firms including Jiuling Lithium Mining Company and Canmax Technologies are reported to have provided more than 80% of the financing for the four facilities, with the balance held by a local company, Three Crown Mines. This includes a US\$600m lithium processing plant near the Kaduna-Niger border scheduled for commissioning in 2026, majority owned by Jiuling Lithium Mining Company. A second US\$200m lithium refinery on the outskirts of Abuja is reported as approaching completion, 85% owned by Canmax Technologies, and contracting for 100% of the offtake.²⁷⁹

Lithium - Congo

January 2025 saw China's Zijin Mining Group Co. (55% equity share) move into construction of the 5Mtpa Manono Northeast Lithium Project in JV with the Congolese state-owned enterprise Cominière (45% share). The project was granted a full mining license in September 2024. Zijin plans to start production in 2026. The Manono deposit is considered one of the world's largest hard rock lithium deposits, with reported resources of over 6.47Mt of LCE.²⁸⁰

The development of the Manono project is subject to an ongoing legal dispute. The Australian firm AVZ Minerals claims it is the legitimate owner of the original project rights, which the DRC government revoked in 2023, citing development delays.

Lithium – Ethiopia - Hua Ye Mining Processing Co.

May 2025 saw a series of investment announcements by five Chinese firms planning to invest a total of US\$1.75bn in Ethiopia's mining and solar sectors.²⁸¹

China's Hua Ye Mining Processing Co. plans to invest US\$500m in mineral exploration and processing. This investment specifically targets a range of critical minerals, including lithium, copper, and rare earths, and includes the development of a special economic zone focused on mineral processing.

Lithium – Morocco - Sichuan Yahua Industrial Group

September 2025 saw the Sichuan Yahua Industrial Group and LG Energy Solution announce a JV to undertake a US\$612m investment in a 30,000tpa lithium hydroxide refinery in Morocco to leverage local lithium mining resources for use in battery manufacturing.²⁸²

²⁷⁸ Discovery Alert, [Namibia's Investigation into Xinfeng's Illegal Lithium Mining Activities](#), 19 Dec 2024

²⁷⁹ Mining Technology, [Nigeria to launch lithium processing plants with Chinese investment](#), 27 May 2025

²⁸⁰ SCMP, [China's Zijin to start producing lithium from Congo in early 2026](#), 7 January 2025

²⁸¹ Bloomberg, [Chinese firms to invest \\$1.75 billion in Ethiopia mining, solar](#), 13 May 2025

²⁸² Electrification Solutions, [China's Battery Giants Forge Full Industry Chain in Morocco via 'Chain Investment'. Creating New Gateway to Global Markets](#), 26 September 2025

Lithium - South America

Chinese lithium producer Tianqi Lithium Corp. and its Chinese rival Ganfeng Lithium Corp. have both become a global force in the mining of lithium in recent years.

Over half the world's lithium production in 2024 was exported from hard rock mining in Australia. But the greatest concentration of deposits are found in Bolivia, Argentina and Chile — the so-called “lithium triangle” — where it is extracted from brines in evaporation ponds.

Lithium - Chile

In 2018 Tianqi Lithium Corp. acquired a US\$4bn, 23% stake in Chilean company SQM, a company reported to have obtained its assets through dubious methods by the former son-in-law of dictator Augusto Pinochet, Julio Ponce Lerou. The SQM deal brought Tianqi a heavy debt load with complicated political implications.²⁸³

SQM is one of the largest foreign investors in Australian lithium mining and refining, owning a 50% stake in Covalent Lithium in partnership with ASX-listed Wesfarmers. In March 2024 Covalent opened the Mt Holland Lithium Mine And Concentrator, and in 2025 opened a new 50,000tpa lithium hydroxide refinery at Kwinana, WA.²⁸⁴ May 2024 saw a joint venture of SQM and Hancock Prospecting complete a US\$1.1bn takeover of then ASX-listed Azure Minerals, owner of the Andover project, a lithium proposal in WA.

May 2024 saw Chile's state-run copper miner Codelco and the world's second largest lithium producer, SQM sign a definitive agreement to jointly exploit Chile's vast deposits in the Salar de Atacama salt flat. This public-private partnership is a key part of the Chilean government's National Lithium Strategy to give SOE Codelco a majority controlling stake. The partnership will run through 2060, with Codelco overseeing general management as of 2031. Chile has opened up new lithium mining areas to private companies and it is testing direct lithium extraction, or DLE. With this process, brine can be re-injected back into salt flats, reducing the environmental impact and accelerating production. The JV plans for LCE production to increase to 300,000tpa through 2060.²⁸⁵

November 2025 saw China's State Administration for Market Regulation grant approval to this merger, conditional upon the new company honouring existing commercial agreements and committing to continue supplying Chinese customers on a “fair, reasonable and non-discriminatory” basis.²⁸⁶

December 2025 saw Chile regulators approve this SQM-Codelco JV, now called NovaAndino Lito SpA.²⁸⁷

This gives NovaAndino Lito control over what BMI expects to be the world's second largest lithium mine, behind only Greenbushes in Australia. While Australia still holds five of the top 10 lithium mines globally, Chile has two, with China, Mali and Zimbabwe all now also present – Figure 7.6.

²⁸³ Mining.com, [Codelco and SQM agree on final lithium deal](#), 31 May 2024

²⁸⁴ Wesfarmers Press Release, [Covalent Lithium Opens Mt Holland Lithium Mine And Concentrator](#), 7 March 2024

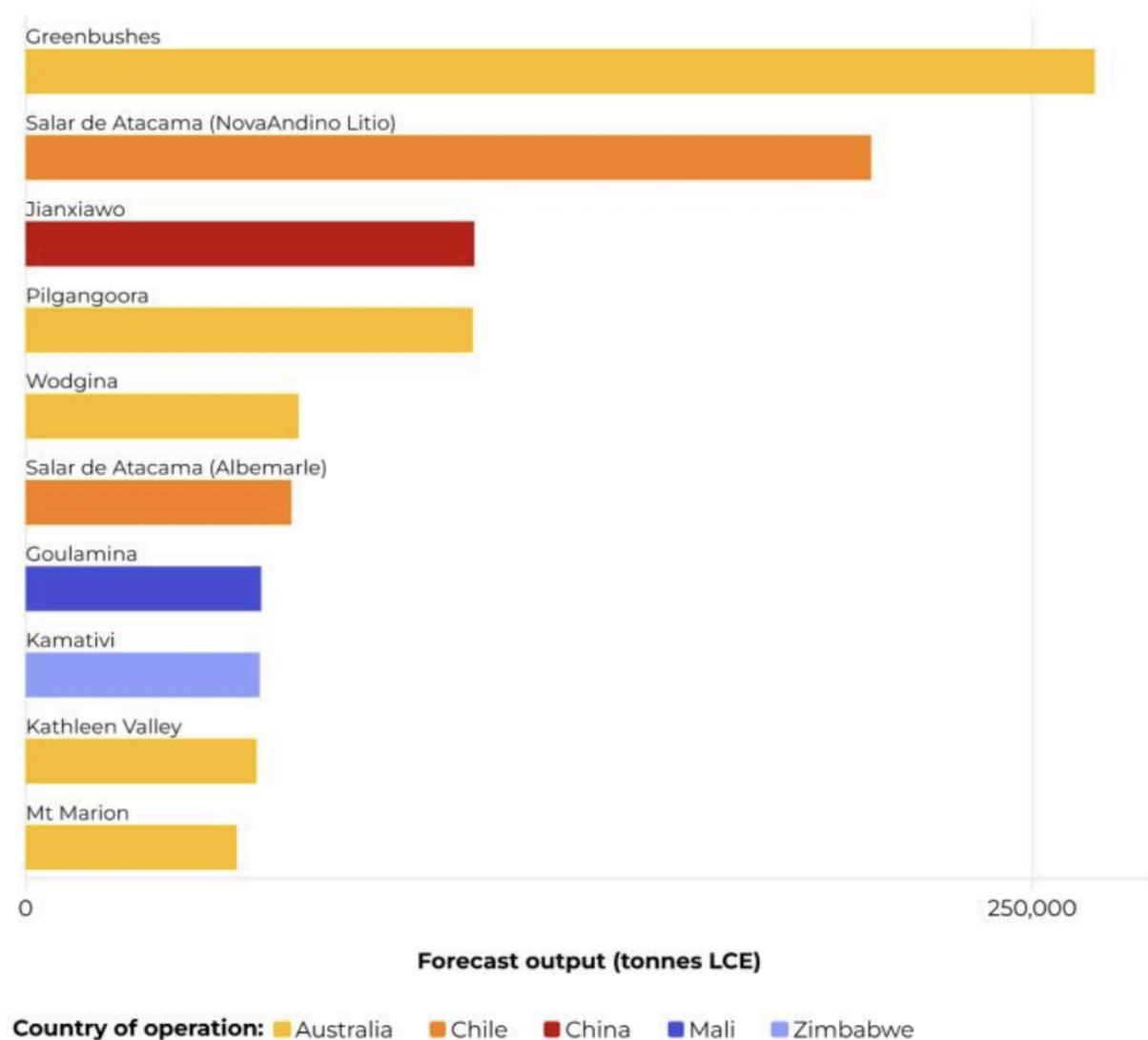
²⁸⁵ SQM Press Release, [Codelco and SQM sign partnership agreement making Chile a leader in the global lithium market](#), 31 May 2024

²⁸⁶ Reuters, [Chile's Codelco-SQM lithium deal clears last major hurdle after China greenlight](#), 11 November 2025

²⁸⁷ Bloomberg, [Codelco, SQM seal lithium venture in Chile's Atacama desert](#), 27 December 2025

Figure 7.6: China Plans Enormous Cobalt Purchases in 2024 (thousands of tons)

Top 10 lithium operations by forecast 2026 output



Source: BMI's [Matthew Bird](#), via LinkedIn, 3 January 2026

Lithium - Brazil

Brazil holds Jequitinhonha Valley, which is becoming known as Lithium Valley.²⁸⁸ Companhia Brasileira do Lítio has quadrupled its lithium production over the last five years, almost all of which goes to China.

Lithium - Argentina

July 2022 saw Ganfeng Lithium Corp. enter the Argentinean lithium market with a US\$962m investment to acquire Lithea Inc., a privately owned, Argentina-focused mining group that held the rights to the Pozuelos and Pastos Grandes lithium salt lake projects (PPG project) in Salta Province.²⁸⁹

²⁸⁸ FT, [Brazil's lithium makes its presence known with silvery-white promise](#), 15 May 2024

²⁸⁹ Reuters, [China's Ganfeng Lithium to buy Lithea Inc for \\$962 million](#), 11 July 2022

March 2024 saw Ganfeng Lithium Corp. invest US\$70m to acquire from Canadian listed Lithium Argentina a 15% stake in its Pastos Grandes project in Salta.²⁹⁰

August 2025 saw Ganfeng (67% equity share) form a new strategic partnership with Swiss-based Lithium Argentina (33% equity share), combining its PPG assets with other neighbouring deposits into a new JV aiming for a production capacity of up to 150,000tpa of lithium carbonate equivalent. Ganfeng's lithium investments in Argentina to-date are estimated at US\$5bn.²⁹¹

September 2025 saw Zijin Mining commence production at its new US\$600m Tres Quebradas phase 1 20,000tpa Lithium Carbonate Project in Argentina. Zijin Mining acquired the project by purchasing Neo Lithium Corp. in 2022 for US\$770m. Phase II permitting is underway to add another 40,000tpa of capacity using the advanced adsorption-based lithium extraction technology. Zijin holds lithium resources at two lithium brine projects and two hard-rock mines, with LCE resources exceeding 17.9Mt, placing it among first-tier global lithium miners. The company plans to reach output of 250,000-300,000tpa of LCE by 2028.²⁹²

Lithium – Bolivia - CATL

June 2023 saw a CATL-led consortium announce plans to invest US\$1bn to build lithium extraction plants to produce lithium in the Salar De Uyuni and Salar de Coipasa, Bolivia, after being selected by the government's state-owned mining firm Yacimientos de Lito Bolivianos (YLB). The consortium has committed to produce 25,000tpa of battery-grade lithium carbonate by 2024 and 100,000tpa by 2028, using direct lithium extraction (DLE) rather than large evaporation ponds. YLB holds a 51% equity stake in the JV.²⁹³

January 2024 saw YLB announce a new, more measured US\$90m deal for the consortium to build a 2,500tpa pilot DLE plant by 2025.²⁹⁴

June 2025 saw a Bolivian court suspend this proposal after a legal complaint was filed by Indigenous groups arguing that the projects had violated their environmental rights and were allowed to proceed without formal consultation.²⁹⁵

Lithium – Mexico – Ganfeng Lithium Corp.

November 2023 saw the Mexican government move to cancel Ganfeng's lithium mining rights. Mexico claims Ganfeng had failed to comply with minimum investment requirements introduced in 2022 by President Andres Manuel Lopez Obrador, as part of a sweeping lithium sector nationalisation. Ganfeng in response has put on hold further spending on the US\$800m development in the northwestern state of Sonora.²⁹⁶

June 2024 saw Ganfeng, together with London-based Bacanora Lithium, register an arbitration case against the Mexican government, according to the World Bank's International Centre for Settlement of Investment Disputes (ICSID).²⁹⁷

²⁹⁰ Lithium Argentina Press Release, [Lithium Argentina Announces Ganfeng Lithium Agrees to Acquire Interest in Pastos Grandes for \\$70M](#), 5 March 2024

²⁹¹ Discovery Alert, [Ganfeng Lithium Forms \\$2Bn Partnership with Lithium Argentina](#), 14 August 2025

²⁹² Zijin press release, [Zijin Commences Production at 20,000-tonne-per-annum Lithium Carbonate Project in Argentina](#), 16 September 2025

²⁹³ BMI, [Bolivia chooses Chinese consortium led by CATL for \\$1bn lithium investment](#), 23 January 2023

²⁹⁴ Mining.com, [Bolivia Uyuni plant to yield first lithium by 2025-end](#), 22 January 2024

²⁹⁵ Mining.com, [Bolivian court pauses Chinese, Russian lithium deals](#), 2 June 2025

²⁹⁶ Reuters, [China's Ganfeng indefinitely postpones Mexican lithium target date amid gov't spat](#), 10 November 2023

²⁹⁷ Bnamericas, [Ganfeng launches arbitration against Mexico over Sonora lithium concessions](#), 25 June 2024

China's Lithium Quest has Gone Global

Lithium – Sinomine - Canada

February 2023 saw Sinomine plan to invest C\$176m to build a 1Mtpa lithium mineral processing plant and supporting facilities at the Tanco underground mine in Bernic Lake, Manitoba province in Canada. Sinomine acquired Tantalum Mining in 2019.²⁹⁸

Following the Canadian government's order for Chinese companies to divest interests in other Canadian lithium firms in November 2022, Sinomine has explored building the refinery in partnership with a politically palatable North American partner (such as Korea's LG Energy Solutions) and redirecting the finished product to the North American EV battery market to mitigate national security concerns.

Lithium – Ireland – Ganfeng Lithium Corp.

In January 2024 it was reported the European Union, which relies on Australia for 87% of its raw lithium imports, is looking to boost exploration in line with the strategic objectives of its CRMA, and southeast Ireland is identified as one of the key potential areas of focus.

Ganfeng is well ahead, having acquired a 79% stake in the Avalonia lithium deposit back in 2014, and moved to full ownership in July 2025, but has no formal development timeline as yet.²⁹⁹

Lithium – Sinomine – Mongolia

February 2023 saw Sinomine announce a US\$20m investment to acquire a 51% stake in the universal recycling technology lithium ore project in Mongolia's Tsagan Chuluut region from a local Mongolian firm. The project is still in the primary exploration stage, and the exact lithium reserves are uncertain, but may exceed 1.7Mt of lithium ore.³⁰⁰

²⁹⁸ Yicai, [China's Sinomine Gains on Plan to Invest USD130M in Canadian Lithium Mine Project](#), 21 February 2023

²⁹⁹ S&P Global, [Challenges ahead despite optimism for Irish lithium to feed Europe supply chain](#), 9 January 2024

³⁰⁰ Yicai, [Sinomine to Buy Majority Stake in Mongolian Lithium Ore Project for USD20M](#), 14 February 2023

Lithium - Australia

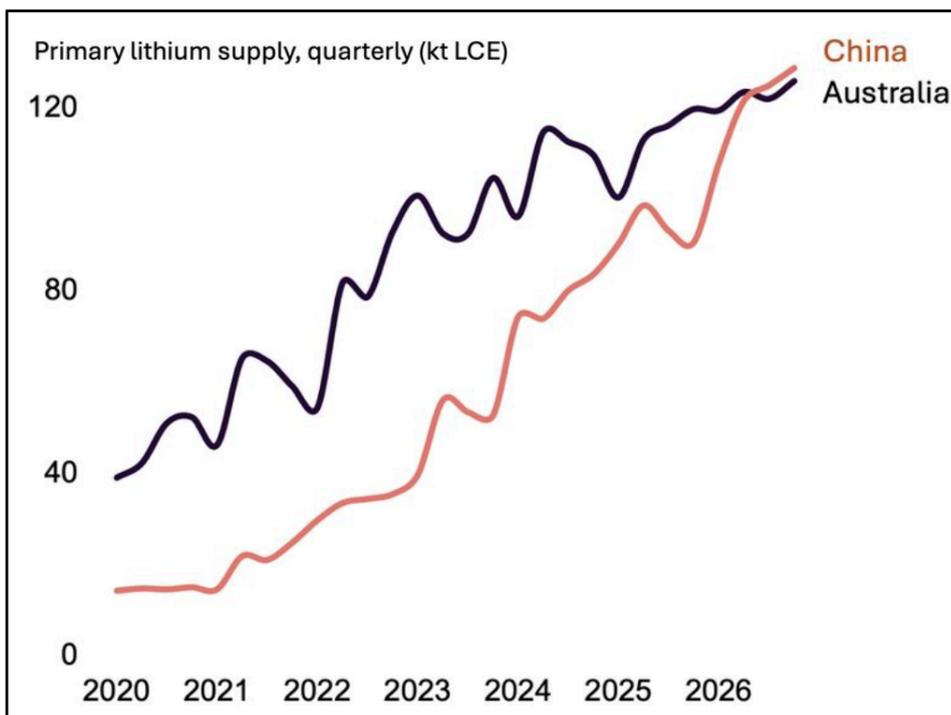
From a position where Australia exported more than half the world's lithium needs in 2023, this globally dominant position has been eroded significantly. By the start of 2026, domestic mines in China produce more than Australia. Additionally, China is developing new lithium supply at speed and scale, with new mines under development in 15 countries around the globe.

Australia had developed into the world's #1 exporter of lithium by 2023, with a global share of >50%. The Australian lithium relationship with China is very deep, with 97% of Australian exports destined for China. Co-investment with Australian lithium miners is well established, as are long term offtake agreements.³⁰¹

However, this historic position is being challenged by the strong Australia-US climate-energy-defence compact (under the US Defence Production Act) and the exclusion of preferential access if Chinese firms own 25% or more equity share in the Australian projects (under new US roles for "foreign entities of concern"), which covers most of the major mines in Australia.

China was well aware of its over-reliance on Australian lithium, as it is in iron ore, nickel, copper and coal. With batteries and EVs key strategic zero emissions industries of the future for China, the strategic risk of over-reliance on Australian supply is clearly a factor in Chinese investors supporting new lithium mine developments across Africa and South America – as per above. It is noteworthy that by 2026 China's higher cost domestic lithium production has overtaken Australia - Figure 7.7. Even with the sustained strong global growth in BESS, batteries and EVs underpinning structurally strong lithium demand growth for the foreseeable future, China is investing aggressively to assure itself of sufficient new global supply, with a diversification of its over-reliance on Australia.

Figure 7.7: China's Domestic Lithium Production has Overtaken Australia in 2026



Source: CRU's [Simon Price](#), via LinkedIn, 28 January 2026

³⁰¹ AFR, [Lithium giant says China will remain pivotal to local mining projects](#), 22 May 2024

February 2026 saw US-listed Albemarle announce it was unable to compete with China and would shut its A\$1.5bn Kwinana, WA lithium hydroxide refinery, commissioned only 4 years earlier.³⁰²

China has a significant investment history in Australia lithium, making even starker the absence of recent new Chinese investment in Australian lithium. We detail existing collaborations here:

Tianqi – Greenbushes mine and LHM refinery

Tianqi Lithium's largest investment outside of China remains its 2018 acquisition of a substantial US\$4.1bn investment in a minority 23% stake in the Chilean mining company Sociedad Química y Minera (SQM). As mentioned above, Tianqi in 2025 has seen its position at SQM heavily diluted by the SQM-Codelco joint venture.

SQM is invested in Australian lithium via its JV with Wesfarmers – refer below.

2012-2014 saw Tianqi acquire Greenbushes in WA, the largest lithium producing mine in the world. Tianqi then sold a 49% stake in Greenbushes to New York-listed Albemarle.

2021 saw Tianqi sell a 49% stake in its 51% stake in Greenbushes mine to Australian-listed IGO Limited. So Tianqi owns a 51% share of the JV that owns a 51% share in Greenbushes.³⁰³

The Greenbushes mine site comprises a large open pit mine, four processing plants and associated infrastructure. These plants combined have total nominal ore processing capacity of 6.5Mtpa producing up to 1.5Mtpa of lithium mineral concentrate (rising to 2.0Mtpa over 2025/26).

Tianqi and IGO Ltd have a 51%/49% JV that owns the single train 24,000tpa Kwinana Lithium Hydroxide (LHM) Refinery, commissioned in 2022. A planned second train was terminated in January 2025 due to the extreme pricing pressure evident in lithium. Kwinana is 200km north of the Greenbushes mine, and adjacent to major supply chain logistics.

SQM – Wesfarmers Mt Holland Lithium Mine and Kwinana LHM JV

August 2025 saw SQM and Wesfarmers' 50:50 JV Covalent Lithium – commission its new 50,000tpa LHM refinery at Kwinana, WA.³⁰⁴ The refinery is supplied by Covalent Lithium's new Mount Holland Mine and Concentrator facility, commissioned earlier in 2025, with planned production of 300,000tpa of spodumene concentrate.

Lithium – Australia - Ganfeng Lithium Corp.

January 2024 saw Ganfeng announce it was doubling its contracted offtake of lithium spodumene from Pilbara Minerals to 310,000tpa for three years.

March 2024 saw Ganfeng and ASX-Listed Pilbara Minerals Ltd jointly announce a feasibility plan for the possible construction of a 32,000tpa lithium hydroxide refinery, possibly in Australia.³⁰⁵ The feasibility study was completed at the end of 2025, but is yet to reach FID given sustained low pricing evident over 2024-2025.

Ganfeng owns a 6.4% equity stake in Pilbara Minerals.

Ganfeng also holds a 50% stake in the Mount Marion mine, 40 km southwest of Kalgoorlie, WA in partnership with ASX-listed Mineral Resources Ltd. The Mount Marion mine is one of the world's largest hard-rock lithium mines. The project was put into production in 2016, with an output of 600,000tpa lithium concentrate, which is shipped to Ganfeng's conversion facilities in China for processing into battery-grade lithium hydroxide and carbonate.

³⁰² AFR, [Lithium refinery shuts in another blow to 'Made in Australia'](#), 12 February 2026

³⁰³ IGO Limited, [Lithium JV](#)

³⁰⁴ Covalent Lithium, [Covalent Lithium achieves first product at Kwinana lithium hydroxide refinery](#), 14 August 2025

³⁰⁵ Bloomberg, [Ganfeng and Pilbara Minerals Explore Building Lithium Refinery](#), 25 March 2024

Section 7.1. Chinese Offshore Battery Materials Manufacturing

CEF has tracked over US\$38bn of new Chinese offshore investments in mid-stream battery materials manufacturing since the start of 2023, in addition to over US\$52bn of new Chinese overseas FDI in downstream battery manufacturing capacity (refer Section 7.2).

China is expected to remain the dominant global refiner of critical minerals by 2030, even amid growing US, EU and QUAD geopolitical efforts to diversify global supply chains. China's dominance is both by country of origin and by corporate-ownership of foreign capacity – Figure 7.11.³⁰⁶ China also dominates global battery materials refining – Figure 7.12.

Below we examine the growing investments by Chinese firms globally in value-adding battery materials offshore e.g. in Indonesian nickel, Zimbabwe lithium and alumina, as well as by the use of strategic financial support in return for long term offtake agreements. We note China is also a major provider of enabling rail, road, power and port infrastructure for mining in emerging markets.

Figure 7.11: China's Dominant Share of Key Battery Minerals (2025)

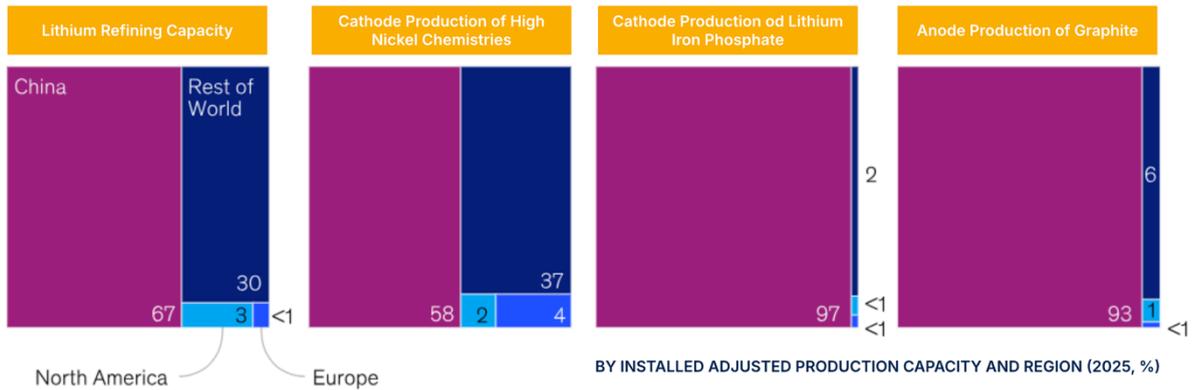


Source: Benchmark Minerals Intelligence (BMI), Visual Capitalist, December 2025

³⁰⁶ BMI, [Visualising Critical Mineral Refining by 2030](#), 22 December 2025

According to the latest BloombergNEF report, we have hit a new milestone: Lithium-ion battery pack prices have plummeted to record lows, globally averaging US\$108/kWh in 2025. In China, pack prices have hit an incredible low of US\$84/kWh in 2025, and lower for EV suppliers given their massive scale. But China’s battery sector is currently locked in a state of involution – a cycle of hyper competition where supply vastly outstrips demand. It is possible the surging critical mineral prices into the end of 2025 will combine with the Chinese government’s jaw-boning to encourage industry-led solutions to stop destructive price competition, but with the state of global oversupply already in place, and many new factories coming outside of China to avoid tariff imposts, this is going to be a hard road, unlikely to see much sustained price upside, if past Chinese practice to gain market share despite ongoing losses is any guide.

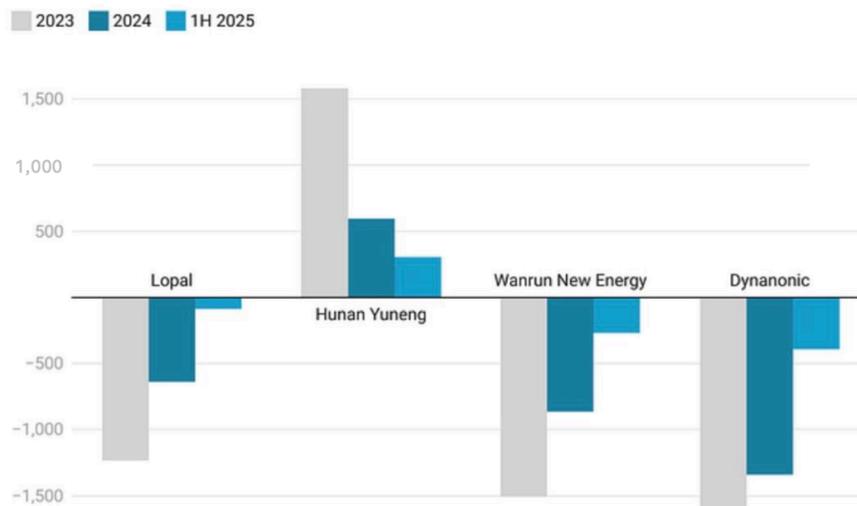
Figure 7.12: China's Dominant Share of Key Battery Materials Refining (2025)



Source: Volta Foundation, [Battery Report](#), January 2026

While the global majors CATL,³⁰⁷ BYD³⁰⁸ and LGE,³⁰⁹ have increased profits, mid-stream battery manufacturing margin erosion is pervasive, driven by ultra-competitive bidding on supply, rising raw material commodity prices and under utilisation of factories only just completed – Figure 7.13.³¹⁰ The South Korea’s battery sector margin pressure is likewise very clear in the 4QCY2025 results, seeing a collective US\$1bn in operating losses.³¹¹

Figure 7.13: China's LFP Cathode Producers are Unprofitable (Rmb Million)



Source: Henry Sanderson, China's overcapacity in battery materials, December 2025

³⁰⁷ SCMP, [China's CATL profit surges 42% as global market share soars to all-time high](#), 9 March 2026

³⁰⁸ Reuters, [China's BYD reports biggest quarterly profit fall in over four years](#), 30 October 2025

³⁰⁹ LGES press release, [LG Energy Solution Releases 2025 Third-Quarter Financial Result](#), 30 October 2025

³¹⁰ Henry Sanderson, [China's overcapacity in battery materials is now a threat to its dominance](#), 6 Dec'25

³¹¹ Henry Sanderson, [LinkedIn](#), 6 February 2026

Cathode Active Materials

CAM – Spain - Shenzhen Dynanonic Co., Ltd

January 2025 saw Shenzhen Dynanonic Co., Ltd. (20% equity) and ICL Group (80%), an Israeli specialty minerals company, sign a JV agreement to establish a production facility located at ICL's existing industrial site in Sallent, Spain, a former potash production site that offers strategic logistical advantages with rail and port access. The initial investment for the project is €285m. The project is currently in the planning and permitting phase, subject to regulatory approvals and FID. The project aims to begin production of Lithium Iron Phosphate (LFP) cathode active material to meet growing European demand.³¹²

LFP cathodes – Spain - Hunan Yuneng

April 2024 saw China's largest lithium iron phosphate (LFP) producer Hunan Yuneng announce plans to invest Rmb982m (US\$136m) to build a 50,000tpa LFP production plant in Spain's Extremadura region.³¹³

CAM – Hungary – Zhejiang Huayou Cobalt

November 2025 saw China's Zhejiang Huayou Cobalt move towards an early 2026 commissioning of the 25,000tpa phase 1 of its planned 100,000tpa ternary precursor cathode materials plant in Acs, Hungary. The Hungarian plant has a total planned investment of €1.3bn (US\$1.5bn), with the first phase costing €252m. September 2025 saw Huayou Cobalt win a contract to supply 164,000t of cathode materials through the end of 2030 to LG Energy Solution's Poland factory. November 2025 saw Zhejiang Huayou Cobalt win a contract to deliver 127,800t of cathode material to Eve Energy's lithium EV battery plant in Hungary from 2027 through 2035.³¹⁴

CAM – Finland - Beijing Easpring Material Technology Co.

March 2024 saw the establishment of Easpring Finland New Materials Oy, a JV between Beijing Easpring Material Technology Co., Ltd. (owning a 70% share) and Finnish Minerals Group (30%). The purpose of the company is to produce in phase 1 a planned 60,000tpa NCM (nickel-cobalt-manganese) cathode active materials (CAM) at the Keltakallio industrial area in Finland for the needs of the European production facilities. By November 2025 construction was well underway and the plant is scheduled to start commercial production in 2027.³¹⁵ Business Finland has granted investment aid of €115m as an incentive for the €800m total capex.³¹⁶

CAM – Poland – Ningbo Ronbay Technologies

October 2024 saw confirmation that Ningbo Ronbay Technologies' €1bn CAM factory in Konin, Poland, is under construction and phase 1 comprising 25,000tpa of mid- to high-nickel ternary cathode materials is expected to begin production in 2026, creating 600-800 new jobs. Ronbay acquired the former Johnson Matthey cathode materials facility in Konin, Poland, with basic infrastructure already in place, including factory buildings and laboratories.³¹⁷

In June 2025, Ronbay signed a strategic partnership with Rock Tech Lithium to explore local sourcing of lithium hydroxide from Rock Tech's planned refinery in Guben, Germany, to supply the Polish

³¹² ICL press release, [ICL Signs Strategic Agreement with Dynanonic to Produce Lithium Iron Phosphate for European Battery Market](#), 16 January 2025

³¹³ Argus Media, [China's Hunan Yuneng to build Spain battery LFP plant](#), 24 April 2024

³¹⁴ Yicai Global, [Huayou Cobalt's Hungarian Plant Lands Another Big Battery Materials Order](#), 26 November 2025

³¹⁵ Easpring Finland press release, [Construction work progressing in Kotka – the frame of the plant's main building will be completed in 2025](#), 3 October 2025

³¹⁶ Easpring Finland press release, [Business Finland granted an investment aid of EUR 115 million for the Kotka CAM factory](#), 10 July 2025

³¹⁷ JE Bridge, [Overseas Manufacturing Investments in Poland Accelerating](#), 20 August 2025

factory to localise the European supply chain. The long-term plan for the European base is much larger, with overall capacity potentially reaching 105,000 tpa of NCM cathode material, a €1bn investment.³¹⁸

CAM – France - Hunan Changyuan Lico (China) industrial

May 2024 saw Hunan Changyuan Lico (China) and France's Axens Group propose a JV to build a new €600m CAM plant in France, scheduled to be operational progressively from 2027 and 2030.³¹⁹

CAM & pCAM - France - XTC New Energy Materials

December 2024 saw French group Orano announce the creation of two joint ventures with Chinese group XTC New Energy Materials for the production of EV battery components in Dunkirk, France. The plan calls for the creation of a CAM manufacturing plant and a Precursor Cathode Active Material (pCAM) production plant, under the project name Neomat. This follows an announcement in May 2023 by French President Emmanuel Macron about a JV by the two groups with an expected investment of €1.5bn, adding that the venture would create 1,700 jobs.³²⁰

CAM – South Korea – Ningbo Ronbay Technologies

January 2025 saw Ronbay accelerate its operational manufacturing presence in South Korea to supply major customers like Panasonic and LG Energy Solution whilst leveraging local expertise, an established battery supply chain, and favorable trade agreements with the U.S. and Europe. Ronbay's subsidiary Jae Se Energy has operational factories in Chungju City, having completed construction of a 20,000tpa high-nickel ternary cathode plant in 2024, and a second 40,000tpa plant which went into operation in 2025. The total investment is US\$362m.³²¹

CAM – South Korea - CNGR Advanced Material

April 2025 saw CNGR announce plans to establish a new production facility in South Korea for nickel-based pCAM, with an investment value of Rmb1.9bn (US\$260m).³²²

CAM – South Korea - GEM-SK On-Ecopro

April 2025 saw China's Green Eco-Manufacture (GEM) partner with South Korea's SK On and Ecopro to build a 43,000tpa precursor plant in the Saemangeum Industrial Complex in South Korea, with commercial operations expected in early 2026. The project's equity structure was adjusted to satisfy the requirements of the then US Inflation Reduction Act (IRA) and the EU CRMA, allowing products to be used in US and EU EV battery supply chains. The partners agreed to invest 1.2 trillion Korean won (US\$927m) for the initial phase. The plant is designed to receive intermediate raw materials (nickel mixed hydroxide precipitate) from GEM's HPAL facility in the Morowali Industrial Park Indonesia, creating an integrated supply chain from nickel mining to the final cathode material.^{323 324}

³¹⁸ BMI, [Ningbo Ronbay to enter cathode production in Europe with Polish factory](#), 25 October 2024

³¹⁹ Axens Group press release, [At the Choose France 2024 summit, Axens and Hunan Changyuan Lico announce their Joint Venture project for the production of Cathode Active Materials in France](#), 3 May 2024

³²⁰ Reuters, [France's Orano to set up two JVs with China's XTC](#), 10 December 2024

³²¹ SMM, [Ronbay Technology: Anticipates Large-Scale Deployment of Sodium-Ion Batteries Next Year. Advancing Collaboration with Downstream Humanoid Robot Clients](#), 2 January 2025

³²² Petromindo, [CNGR plans major nickel-based pCAM and nickel production expansion in Indonesia](#), 30 April 2025

³²³ The Korean Economic Daily, [SK On, EcoPro, China's GEM to jointly build precursor factory](#), 23 March 2023

³²⁴ The Korea Economic Daily, [EcoPro, China's GEM to build cathode complex in Indonesia](#), 10 September 2024

³²⁵ Yicai Global, [China's GEM to Build Lithium Battery Materials Supply Chain in Indonesia With EcoPro, Local Miners](#), 11 April 2025

LFP cathodes – Malaysia - Hunan Yuneng

July 2025 saw Hunan Yuneng announce plans to establish a new company in Malaysia to build a lithium battery cathode material project with a capacity of 90,000tpa to better serve battery manufacturers in ASEAN. The total investment is 560m Malaysian Ringgit (Rmb950m / US\$136m).³²⁶

CAM - Indonesia – Jiangsu Lopal Technology

China's Jiangsu Lopal Technology runs Indonesia's only operating LFP CAM facility. The factory at the Kendal Special Economic Zone was built in two phases, with 30,000tpa of capacity in phase 1 coming online in 2024, and phase 2 taking the total capacity up to 120,000tpa and the total investment to US\$290m. The project has also attracted external funding, with the Indonesian Investment Authority (INA) sovereign wealth fund and co-investor Aisis Alliance LP investing a combined US\$200m into Lopal's Indonesian unit to support the project's development, taking a combined 45% equity share.³²⁷

CAM - Morocco - BTR New Material Group (BTR)

March 2024 saw BTR commence construction on a new US\$300m two-phase 50,000tpa lithium-ion battery cathode material plant in Tangier Technology City, Morocco. Due for commissioning in 2026 and 2027³²⁸ alongside its anode plant – refer next section. Morocco is seeking to build up an integrated mining-battery materials-battery-EV manufacturing hub, leveraging its FTA access to the EU, and for export to North African countries. Stellantis-owned Citroen has a plant in Kenitra in northwest Morocco with capacity to produce 50,000 supermini electric cars, while Renault and Stellantis-owned Peugeot make combustion-engine cars in Morocco, which is also a base for a cluster of car parts makers.³²⁹ BTR reports this is part of China's wider Belt and Road Initiative.³³⁰

CAM - Morocco - CNGR Advanced Material

July 2025 saw CNGR Advanced Material's COBCO joint venture with Moroccan investment fund Al Mada CAM manufacturing plant in Jorf Lasfar, Morocco, officially commence operations for its first phase. The total investment for the integrated industrial base is projected to be over 20bn Moroccan dirhams (US\$2bn). The facility will over several phases eventually produce 120,000tpa ternary precursors (NCM/pCAM), with plans for a subsequent 60,000tpa Lithium Iron Phosphate (LFP) cathode facility plus battery recycling processing capacity of 60,000tpa of black mass. The facility also plans for up to 100% zero emissions electricity supply by 2026.³³¹

CAM - US – Wanrun New Energy

September 2024 saw Wanrun New Energy Technology unveil plans to invest US\$168m in building a new 9,000tpa cathode material factory in South Carolina, US, with a plan to expand to 50,000tpa over time.³³²

³²⁶ EnergyTrend, [Hunan Yuneng Expands Overseas with New LFP Project in Malaysia](#), 24 July 2025

³²⁷ INA press release, [Lopal Technology: Indonesia's Sovereign Wealth Fund Completed a USD 150 Million Investment in Lopal Technology's Indonesian Factory](#), 11 February 2025

³²⁸ BTR press release, [BTR plans to construct a lithium battery cathode material project in Morocco with an annual capacity of 50,000tons](#), 28 December 2023

³²⁹ Reuters, [China EV battery maker BTR to build cathode plant in Morocco](#), 30 March 2024

³³⁰ BTR press release, [A new milestone in the globalisation strategy!](#), 29 March 2024

³³¹ Mysteel, [Phase I of CNGR's Morocco base has been fully put into operation](#), 9 July 2025

³³² Yicai Global, [China's Wanrun New Energy Soars on Plan to Invest USD168 Million in Battery Material Plant in US](#), 24 September 2024

Anode Active Material (AAM)

Graphite is the predominant material used for the anode (negative electrode) in virtually all commercial lithium-ion batteries today. 2025 saw demand for synthetic graphite based anode active material (AAM) outpace that for natural graphite materials. Synthetic graphite AAM offers cycle life improvements and higher discharge efficiency compared to its natural graphite counterparts. Some 95% of the world's total graphite supply comes from China, and almost all natural graphite processing and 98% of synthetic graphite production for battery-grade anodes is presently conducted in China. Natural graphite is mined, whilst synthetic graphite is manufactured through high-temperature treatment of carbon precursors, and whilst it can have a higher purity and hence performance, it comes at a higher cost.

Within this, BMI estimates that China accounted for 76% of global natural or flake graphite output in 2024, dominating the lowest cost sources of supply, but also notes synthetic graphite blending ratios have increased, progressively crowding out natural graphite demand, as is the development of other next-generation anode engineered materials (silicon, lithium, sodium). BMI also forecasts that by 2035 Africa could quadruple natural graphite production vs 2025 levels to nearly match China's global market share leadership in a commodity expected to double in demand this coming decade.

Whilst new sources of flake graphite supply are being developed in Africa, Australia, Canada and Brazil to diversify global supply, BMI estimates these to be more than double the cost of Chinese production, highlighting the critical need for western governments to value supply chain diversity via ongoing public subsidies to support non-Chinese supply, particularly at a time when Chinese batteries and EVs are exceptionally price competitive and rapidly gaining global market share.³³³

The White House National Security Strategy specifically designated graphite as a critical mineral where supply concentration poses strategic vulnerabilities.³³⁴

June 2024 saw the US announce it would apply 25% tariffs on natural and synthetic graphite anodes from China, despite Chinese production accounting for 97% of global anode output after years of underinvestment in the material by the west, despite natural graphite being relatively abundant.

February 2026 saw the US Department of Commerce complete its comprehensive investigation into Chinese graphite active anode material trade practices, establishing anti dumping rates and tariffs of 160% on Chinese imports.

BTR New Material Group (BTR) – Tanzania, Morocco, Indonesia

March 2024 saw BTR invest A\$4m in a direct 9.9% share in the ASX-listed Evolution Energy Minerals (EV1) project in Tanzania, with plans for a potential downstream processing joint venture.

April 2024 saw BTR commence construction on a new US\$366m 60,000tpa lithium-ion battery anode material plant in Tangier Technology City, Morocco, due for commissioning early 2027.³³⁵

August 2024 saw BTR commence production at its new US\$478m 80,000tpa lithium-ion battery anode material plant in Indonesia. BTR flagged a second phase investment of another US\$299m to double capacity to 160,000tpa, becoming the largest anode plant outside of China.³³⁶

³³³ BMI, Mine to Grid, [2025 Year in Review](#), December 2025

³³⁴ Discovery Alert, [Syrah Resources Benefits from US Graphite Tariffs in 2026](#), 13 February 2026

³³⁵ BTR press release, [BTR Group invests in Morocco for lithium-ion battery anode material project](#), 15 August 2024

³³⁶ BTR press release, [BTR Indonesian facility becomes largest anode plant outside of China](#), 7 August 2024

Permanent Minerals - Tanzania

China's Permanent Minerals has built two 100,000tpa natural graphite mine and processing plants in Manyara province, Tanzania, which began operation in 2024 and 2025 respectively.³³⁷

Shanghai Shanshan - Finland

September 2025 saw Shanghai Shanshan partner with France's Imerys Graphite and Carbon Switzerland Ltd., a global leader in conductive additives for Lithium-ion batteries. Shanghai Shanshan is due to commission its €1.28bn two-phase 100,000tpa total capacity synthetic graphite anode manufacturing plant in the GigaVaasa industrial zone in Finland over 2026. The Finnish factory and partnership with Imerys are part of Shanshan's strategy to meet Europe's growing demand for electric vehicle battery materials and establish a localised supply chain.³³⁸

Hunan Zhongke Electric Shinzoom - Oman

June 2025 saw Hunan Zhongke Electric's subsidiary Shinzoom announce plans for an investment over two phases totalling Rmb8bn (US\$1.1bn) for 200,000tpa of battery anode capacity in the Sohar Port and Free Trade Zone of Oman. Zhongke is one of China's largest suppliers of anode materials for lithium-ion batteries.³³⁹

Shandong Yulong Gold - Mozambique

July 2024 saw China's Shandong Yulong Gold announce the proposed A\$17m acquisition of a 70% stake in ASX-listed Triton Minerals' graphite assets, the Ancuabe project in Mozambique, through a joint venture partnership. The transaction has faced some payment disputes but is progressing, with February 2025 seeing Triton shareholder approval confirmed.³⁴⁰

³³⁷ BMI, [Site visit: Permanent Minerals highlights Africa's growing flake graphite role](#), 10 September 2025

³³⁸ Imerys press release, [Imerys and Shanghai ShanShan partner to supply Europe's battery anode market](#), 19 September 2025

³³⁹ Yicai Global, [China's Zhongke to Build Lithium Battery Material Plant in Oman for USD1.1Bn](#), 5 June 2025

³⁴⁰ Triton Minerals press release, [Quarterly activities report](#), 30 April 2025

Other Battery Material Facilities

Copper foil - Zhejiang Hailiang – Morocco, Indonesia

May 2024 saw China's Zhejiang Hailiang, the world's largest supplier of copper tubes and rods, propose to invest US\$288m in the Mohamed VI Tangier Tech City, Morocco to build a lithium-ion battery copper foil manufacturing plant, due to be operational by mid-2027.³⁴¹

Zhejiang Hailiang plans to commission in 2027 the first 50,000tpa of a two phase 100,000tpa US\$850m investment located in the Java Integrated Industrial and Port Estate in Indonesia in a new facility producing copper foil, which is primarily used as the negative electrode current collector for lithium-ion batteries.

Electrolytes - Tinci Materials Technology – Morocco, US

June 2025 saw China's Tinci Materials Technology announce a US\$280m investment to build a major lithium-ion battery materials plant with production capacity of 150,000tpa of lithium-ion battery electrolytes and their key raw materials. The project is a key part of Morocco's push to become a central hub in the global EV supply chain, specifically targeting the European market.³⁴²

November 2025 saw Tinci Materials Technology announce a US\$200m investment to build a major lithium-ion battery materials plant with production capacity of 200,000tpa of electrolytes at a new plant in Baytown, Texas, US.³⁴³

Electrolytes – Kunlun Chemicals – Hungary

Kunlun Chemicals, one of China's top electrolyte producers, is actively developing its first European plant in Szolnok, Hungary, but it is not yet operational as of early 2026. The project reached FID in March 2025. The total investment exceeds €100m. The long-term plan is for the facility to have a production capacity of up to 100,000tpa of lithium-ion battery electrolytes, with an initial capacity of 36,600tpa. The plant will serve major battery manufacturers establishing themselves in Hungary, including CATL in Debrecen and EVE Power, to supply automakers like BMW and Mercedes-Benz.³⁴⁴

³⁴¹ Yicai Global, [China's Hailiang to Build Copper Products Plant in Morocco for USD288m](#), 8 May 2024

³⁴² China Global South Project, [Morocco Secures \\$282M Chinese Battery Plant Pushing Deeper Into EV Supply Chain](#), 13 June 2025

³⁴³ EnergyTrend, [Tinci Materials Breaks Ground on First 200,000-Ton Electrolyte Plant in North America](#), 25 November 2025

³⁴⁴ Doing Business in Hungary, [Kunlun Chemicals – Electrolyte plant in Szolnok](#), 18 March 2025

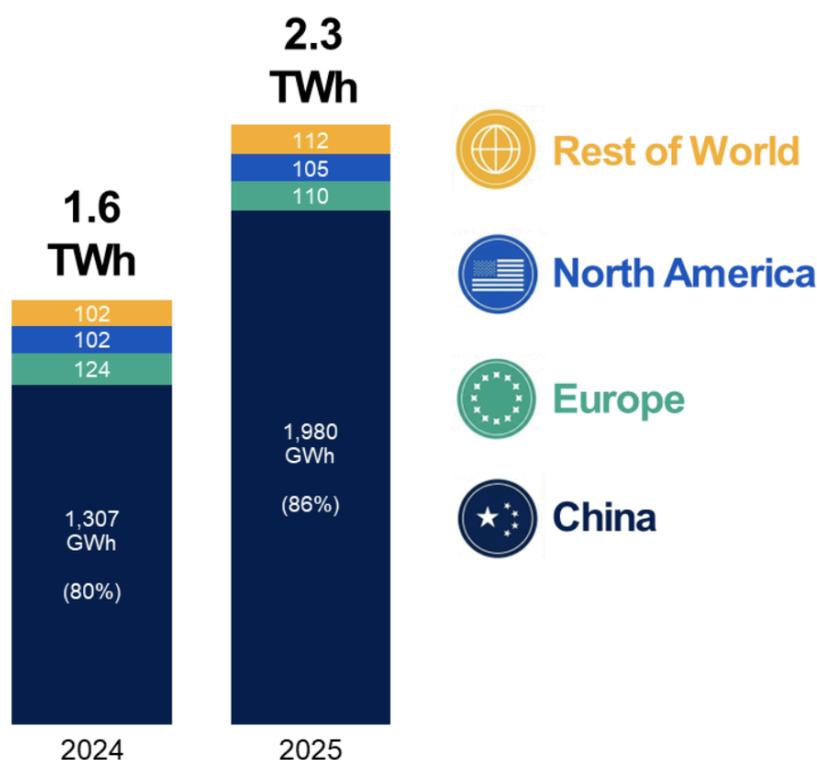
Section 7.2. Chinese Offshore Battery Manufacturing

CEF has tracked over US\$50bn of new Chinese offshore investments in downstream battery manufacturing since the start of 2023 across more than 50 new factories. Many of these build within market manufacturing capacity that pre-empts trade or tariff barriers aimed at reducing over-reliance on a single export nation, bringing investment, jobs and some technological capacities to ensure a more win-win outcome.

Since the start of 2023, CEF has tracked over US\$220bn of outbound foreign direct investment (FDI) by China in cleantech sectors,³⁴⁵ with much of this involving technology and manufacturing know-how transfer from China as it invests in building out overseas manufacturing capacity. A win for the recipient countries building energy security, domestic jobs and manufacturing capacity. A win for China as it builds global market share in cleantech sectors of the future through collaboration and partnerships. And a win in building cooperation and investment in global decarbonisation and energy independence from our collective addiction to fossil fuel imports. CEF strongly encourages China to accelerate this trend of collaboration, particularly with the EU and Global South at a time the US is increasingly isolating and driving deglobalisation.

Batteries accelerated and led the global energy system disruption in 2025, and CEF expects this megatrend has only just started (refer Section 2.2). China owns some 86% of global battery cell and pack manufacturing capacity in 2025 – Figure 7.21, with an increasing share of this is Chinese owned, but located offshore. This serves the multiple strategies of reducing China’s trade surplus, and increasing collaboration, cooperation and often co-investment with key trade partners, allowing vertical integration of manufacturing supply chains for hub precinct developments.

Figure 7.21: Global Battery Manufacturing Capacity (TWh pa)



Source: Volta Foundation, [Battery Report](#), January 2026

³⁴⁵ Climate Energy Finance, [Rising Tide: China’s Outbound Cleantech Capital Surge Drives Global Collaboration Toward Net Zero](#), 8 December 2025

This report is focused on China's increased FDI in upstream critical minerals and strategic metals, and midstream resource value-adding investments. Our recent China Cleantech Outbound FDI report details downstream investments by Chinese technology leaders in manufacturing and renewable energy projects. Here we summarise some of the largest recent overseas downstream battery manufacturing investments by China, which total over US\$50bn of foreign investments since 2023.

CATL – Hungary, Indonesia, Spain, US

The world's leading battery manufacturing firm is Contemporary Amperex Technology Co., Limited (CATL), with a global share approaching 40%. CATL is building: a staged €7.3bn 100GWh capacity battery facility in Debrecen, Hungary³⁴⁶; a staged US\$6bn facility West Java, Indonesia (in partnership with Antam and IBC)³⁴⁷; a €4.1bn 50GWh capacity battery facility in Spain (in partnership with Stellantis)³⁴⁸; and participating in technology licensing for three new US battery manufacturing facilities (in partnership with Ford, Tesla, GM and TDK). CATL started investing overseas by building a battery manufacturing plant in Arnstadt, Germany, that was commissioned in 2022, and with upgrades involves a reported investment of €1.8bn.^{349 350}

Gotion High-Tech – Germany, US, Slovakia, India, Vietnam, Thailand, Malaysia, Morocco

Gotion High-Tech is in the process of building battery manufacturing facilities in: Göttingen, Germany; Manteno, Illinois (US\$2bn) and Fremont, California, US; Surany, Slovakia (€1.23bn); Pune, India; Rayong, Thailand; Vung Anh Economic Zone, Ha Tinh, Vietnam (in partnership with VinFast); and a planned plant in Malaysia. Gotion also announced back in 2023 a massive integrated US\$6.5bn investment in an integrated battery supply chain precinct at Kenitra, Morocco (in partnership with Morocco's CDG Group), with the US\$1.3bn 20GWh phase 1 reported in September 2025 to have reached FID with construction set to start. The vast majority of output is planned to be exported to the EU under Morocco's EU FTA.³⁵¹

CEF notes VW holds a 26.5% equity shareholding in Gotion High-Tech, providing some alignment.

EVE Energy – Hungary, Malaysia, Thailand, US

China's fourth largest battery manufacturer, EVE Energy, has recently accelerated its 'Going Global' strategy, investing in: US\$1.4bn for 28GWh pa of capacity at Debrecen, Hungary³⁵²; a US\$1.6bn 2-phase facility Kedah, Malaysia³⁵³; Thailand (in partnership with Energy Absolute); and US\$2.6bn to build 21GWh pa of truck battery manufacturing capacity planned for Mississippi, US (EVE holds a 10% equity share in partnership with Cummins, Daimler Truck and Paccar (each with a 30% share)).³⁵⁴

Envision AESC – Japan, France, Spain, UK, US

China's Envision Group acquired a majority shareholding from Nissan in 2018 of Automotive Energy Supply Corporation (AESC), which is now one of the top 10 global battery manufacturers. Envision AESC has recently accelerated its 'Going Global' strategy, investing: US\$1.4bn for a phased 18GWh pa

³⁴⁶ News, [CATL Expects Hungarian Production to Start by Early 2026](#), 9 September 2025

³⁴⁷ CATL press release, [CATL and Partners Break Ground on US\\$6 Billion Battery Integration Project in Indonesia](#), 30 June 2025

³⁴⁸ Battery News, [CATL Still Wants Spain to Allow 2,000 Chinese Workers For Battery Plant](#), 14 November 2025

³⁴⁹ Bloomberg, [China's EV Battery Giant Is Trying to Find a New Road](#), 24 December 2025

³⁵⁰ Electrive, [CATL doubles testing capacity in Germany](#), 15 October 2025

³⁵¹ Weetracker.com, [Morocco Secures Africa's First Battery Gigafactory in USD 5.6 B Deal with China](#), 15 September 2025

³⁵² CEEnergyNews, ["Not only a manufacturing base, but an R&D hub" – Interview with Zhang Huanting, Managing Director of EVE Power Hungary](#), 12 November 2025

³⁵³ BatteryNews.com, [EVE Energy to Expand Battery Production in Malaysia](#), 3 July 2025

³⁵⁴ Electrive, [US cell production by truck alliance delayed til 2028](#), 22 October 2025

of capacity at its Ibaraki plant in Japan; US\$1.45bn for 10GWh pa at Douai, France³⁵⁵; a US\$1bn 16GWh pa facility at Sunderland, UK; and US\$500m in Tennessee, US (although it has been forced to pause its US\$1.6bn plan for a 30GWh pa second US plant in South Carolina and cancel a third US\$2bn 30GWh pa plant in Kentucky due to political interference).

Sunwoda – Hungary, Vietnam, Thailand

China's Sunwoda is a top 10 global battery manufacturer, having gone global with new investments: €1.43bn at Nyiregyhaza, Hungary (supported by €264m in Hungarian state aid)³⁵⁶; US\$330m two-phase investment in Bac Giang, Vietnam; and US\$1bn in Chonburi Province, Thailand.³⁵⁷

CALB Group – Portugal, Thailand

China's third largest EV battery manufacturer, CALB Group, in 2025 commenced construction on its €2bn capital investment in a new 15GWh lithium-ion battery manufacturing facility in the Sines Industrial Park, Portugal, with suggestions of a phase 2 expansion to 45GWh.³⁵⁸ CALB opened a battery pack assembly factory in Thailand in 2025.

Canadian Solar - US

China's Canadian Solar has diversified from solar module manufacturing to solar plus battery EPC and investments, and then further in 2024 into battery manufacturing, with its first battery plant outside of China in Shelbyville, Kentucky, US, a US\$712m investment in 6GWh pa of capacity.³⁵⁹

Xiamen Hithium Energy Storage – US, Saudi Arabia

September 2025 saw Hithium commence 10GWh pa battery manufacturing in Texas, US, having also committed in October 2024 to building a 5GWh pa factory in Saudi Arabia.³⁶⁰

³⁵⁵ Caixin Global, [Chinese EV Battery Maker Switches on Gigafactory in France](#), 5 June 2025

³⁵⁶ Euractiv, [European Commission nods on Hungarian state aid for battery plant](#), 28 August 2025

³⁵⁷ Electrive, [Thailand approves large investment by battery firm Sunwoda](#), 4 April 2025

³⁵⁸ Reuters, [China's CALB to invest \\$2.09 billion in EV battery factory in Portugal](#), 21 February 2025

³⁵⁹ EnergyStorageNews, [Canadian Solar to manufacture BESS and cells at Kentucky plant after EnerVenue backs out](#), 20 November 2024

³⁶⁰ Renewables Now, [Hithium forms Saudi Arabian JV for 5-GWh battery factory](#), 16 October 2024

Section 8. Critical Minerals – Other

Brazil’s global domination of Niobium

An example of Chinese corporate leaders using joint ventures and strategic alliances to build out its global influence and enhance its global supply chain security is in Brazil in niobium, a niche critical mineral playing a key role in EV batteries. The dominant global producer is Companhia Brasileira de Metalurgia e Mineração (CBMM), reported to be responsible for three-quarters of global niobium supply. Founded in the 1950s and controlled by the Moreira Salles business dynasty, CBMM’s other shareholders are a Japanese-Korean grouping and a consortium of Chinese steelmakers.³⁶¹ CBMM generates 30% of its revenue from the steel sector.

Brazil’s other dedicated niobium mine, located in the city of Catalão, was purchased by China’s China Molybdenum Co., Ltd. (CMOC) from Anglo-American in 2016.³⁶²

China is the main destination for Brazilian exports of the metal. Niobium is ranked the second-most “critical mineral” by the US Geological Survey, which estimates that 90% of output is from Brazil.

With its usage long established in aerospace and astronautics from the Nasa Apollo program to SpaceX rockets — they described the metal as “indispensable” for critical components in hypersonic missiles – the US failure to invest is leading to a strategic supply chain security issue there.

Vanadium - Kuncai Material Technology – South Africa

August 2024 saw Kuncai Technology sign an MoU for investment in the vanadium titanium resource base project in South Africa. The project aims for a throughput of 10Mtpa and investment in supporting mineral processing projects by 2025. It targets 60Mtpa by 2030, producing 50Mtpa of high-grade iron ore, 5Mtpa of high-grade titanium powder and 100,000tpa of vanadium pentoxide. Kuncai is working with HK’s International Resources to construct an ore processing plant at the Mapochs mine, which is one of the largest vanadium mines in the world.³⁶³

Cesium - Sinomine Resources Group Co. – Canada, Zimbabwe

Cesium is a critical mineral used in advanced technologies and has a limited and highly concentrated global supply chain, 100% controlled by China’s Sinomine Resources Group Co. Russia’s occupation of Ukraine’s cesium-rich regions underscores how precarious the global cesium supply can be.

2019 saw Sinomine Resources Group Co. acquire for US\$135m the Tanco Mine and smelter in Manitoba, Canada. The Tanco mine holds a unique pegmatite deposit that is rich not only in lithium spodumene and tantalum but also in high-grade cesium. Tanco is cited as the world’s leading producer of pollucite (cesium ore) and is one of only two major global sources of the mineral currently in operation (Australia’s Essential Metals Ltd’s Sinclair Mine in WA has reached end of mine life). Sinomine is vertically integrated and processes the raw pollucite ore at its own facilities in China to produce high-purity cesium chemicals and metals.

July 2025 saw Sinomine commission the world’s second cesium smelting plant as part of a US\$400m investment in Zimbabwe for the construction of a lithium spodumene floatation plant to process cesium ore from Sinomine’s Bikita Minerals’ lithium mine (acquired by Sinomine in 2022).^{364 365}

³⁶¹ FT, [Brazilian niobium carves out an energy niche](#), 15 May 2024

³⁶² Caixin Global, [In Depth: How a Chinese Mining Giant Learned to Win in Brazil](#), 18 December 2025

³⁶³ Yicai, [China’s Kuncai Plan to Co-Develop South African Vanadium Mine](#), 5 August 2024

³⁶⁴ China Global South Project, [China Corners the Market on a Little-Known but Crucial Tech Mineral](#), 30 July 2025

³⁶⁵ MiningZimbabwe.com, [Bikita Minerals Unleashes US\\$400M Smelter Vision as Sinomine Deepens Zimbabwe’s Beneficiation Drive](#), 16 July 2025

Section 9. Strategic Metals - Nickel

Similar to critical minerals like lithium and rare earths, China has been investing in new strategic metals capacity globally, particularly in Indonesia which has since the start of this decade quadrupled its global share of the nickel market to reach some 70% in 2026. The resulting oversupply and price depression saw long time exporters' profitability collapse, with a resulting capacity closure. Indonesia's government has acted to limit oversupply into 2026, with a resulting price rise.

Nickel saw a price decline of almost 40% to US\$16,000/t by mid-2024 as new capacity continues to be brought on line, led by a massive Chinese investment in nickel mining and refining in Indonesia.

Nickel is a key strategic metal with lower grade nickel ore used in the production of stainless steel (two-thirds of global use) and higher grade ores used to manufacture battery cathodes for EVs. Nickel is a critical component in high-performance lithium-ion batteries, particularly in nickel-manganese-cobalt (NMC) and nickel-cobalt-aluminum (NCA) chemistries that dominate the premium EV segment. These formulations typically contain 60-90% nickel in their cathode materials.

Indonesia has been a complete disruptor of the global nickel market over the last decade. Massive Chinese investments in mining, smelting and refineries have given Indonesia a globally dominant 70% share of the world nickel market, with additional HPAL refineries due on stream in 2026 and 2027. This saw the nickel price collapse over 2022-2024, with resulting capacity closures in Australia and New Caledonia.

But moves into 1HCY2026 from the Indonesian government strongly suggest a more orderly supply dynamic that has seen nickel prices surge to reach almost US\$18,000/t. February 2026 saw Indonesia cut Weld Bay Nickel ore supply cut more than two-thirds to just 12Mt quota in 2026.³⁶⁶ The emergence of alternative battery chemistries has fundamentally altered demand projections, with new lithium iron phosphate (LFP) formulations now challenging nickel-intensive NCM battery designs (BMI put LFP demand at +34% yoy in 2025, vs just 6% for NCM).³⁶⁷

Nickel in Indonesia

Indonesia has been a complete disruptor of the global nickel market over the last decade – Figure 9.1, starting with a 2014 decision by then-President Susilo Bambang Yudhoyono to ban exports of unprocessed nickel ore. Massive Chinese investments in mining, smelting and refineries totalling over US\$65bn have given Indonesia a globally dominant 70% share of the world nickel market, thanks to the world's largest reserves (approximately 22% of global share) but also to Chinese technology and investments that have lowered the cost of production.

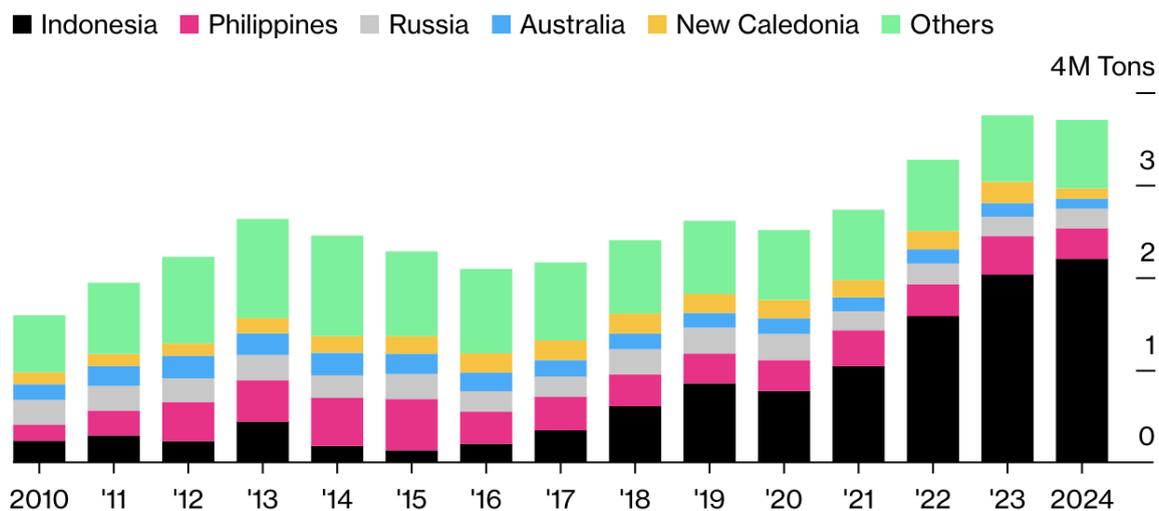
Indonesia's deployment of the HPAL technique (high-pressure acid leaching) made it possible to produce battery-grade nickel from its plentiful, but lower-grade ore. HPAL requires less energy than other types of nickel processing. The downside is that it generates huge amounts of waste, known as tailings.³⁶⁸

China has become the biggest investor in Indonesian nickel, and China is reported to have offtakes in 2024 for over 80% of Indonesia's nickel production.

³⁶⁶ Bloomberg, [World's Biggest Nickel Mine in Indonesia Told to Cut Output](#), 11 February 2026

³⁶⁷ Discovery Alert, [Nickel Price Surge Reaches Nine-Month High Following Indonesian Cuts](#), 31 December 2025

³⁶⁸ Bloomberg, [How a Reclusive Ex-Glencore Trader Became Indonesia's Nickel King](#), 29 December 2025

Figure 9.1: The Rise and Rise of Indonesia's Nickel Dominance (Mining, Mtpa)

Source: United States Geological Survey, Bloomberg

The Indonesian nickel sector has been dominated by Chinese companies, including:

- Tsingshan Holding Group Co. (through its subsidiary Shanghai Decent Investment Group) via:
 - its 22% shareholding in ASX-listed Nickel Industries
 - Its 66% ownership in Indonesia Morowali Industrial Park (IMIP), alongside PT Bintang Delapan Group (34%) and
 - PT Weld Bay Nickel (a JV between Tsingshan Holdings (51%), France's Ermet SA (38%) and PT Aneka Tambang (Antam, 10%);
- Jiangsu Delong Nickel Industry Co. via its subsidiary PT Gunbuster Nickel Industry;
- Zhejiang Huayou Cobalt via its subsidiaries PT Huayue Nickel Cobalt and PT Kolaka Nickel Indonesia, alongside Vale;
- CNGR Advanced Material via its wholly-owned subsidiary PT Nadesico Nickel Industry;
- GEM Co. via its subsidiary PT QMB New Energy Materials; and
- CATL's BRUNP (via PT QMB New Energy Materials).

January 2024 saw China's CATL (via its subsidiary Ningbo Contemporary Brunp Lygend (CBL)) agree to invest US\$420m in Indonesia's nickel mining and EV battery manufacturing industries. CATL has partnered with state-owned diversified miner PT Aneka Tambang (Antam) and battery maker PT Industri Baterai Indonesia (IBC).³⁶⁹

June 2025 saw CATL announce that its Indonesian battery JV with Antam and IBC was to be expanded in phases to be an integrated battery materials, battery manufacturing and battery recycling facility with a total investment proposed of US\$6bn, creating 8,000 direct and 35,000 indirect jobs. The facility is to span over 2,000ha at the FHT Industrial Park of East Halmahera, North Maluku Province, with battery manufacturing in Artha Industrial Hill and KNIC of Karawang, West Java Province. The battery plant in Karawang will deliver an annual capacity of 6.9 GWh in the first phase, possibly expanding to 15GWh in phase 2.³⁷⁰

December 2025 saw CATL's JV battery manufacturing facility win a 4GWh battery order from Vena Energy for a BESS to be built in the Riau Islands of Indonesia, just 40 nautical miles from Singapore, as an important part of the Indonesia-Singapore "Green Economic Corridor" cooperation plan,

³⁶⁹ Charged, [China's CBL to invest \\$420m in Indonesian nickel mining and EV battery manufacturing](#), 31 January 2024

³⁷⁰ CATL press release, [CATL and Partners Break Ground on US\\$6 Billion Battery Integration Project in Indonesia](#), 30 June 2025

highlighting the energy security and energy independence benefits of cleantech manufacturing investments, done in collaboration with global cleantech technology and investment leaders.³⁷¹

October 2024 saw CNGR announce grand plans to invest up to US\$10bn in a vertically integrated nickel production facility in Indonesia in three phases over the next 10-15 years. The proposal is reported to have been granted national strategic project status from the government and will require 3,000-5,000ha.³⁷²

November 2024 saw first production at CNGR Advanced Material (via PT Nadesico Nickel Industry) of 6-8 planned production lines with total capacity of up to 40,000tpa of high grade and 80,000tpa of low grade nickel matte at its industrial base in North Morowali, Central Sulawesi, Indonesia. The high grade nickel matte is a key intermediate product for EV battery materials.³⁷³

April 2025 saw CNGR announce follow-on investment expansion plans for its PT Nadesico Nickel Industry Indonesia facility, including pCAM production, doubling its Indonesian value-add manufacturing investment to Rmb7.6bn / US\$790m. It plans to add an electrolytic nickel production line with a capacity of 10,000tpa by the end of 2025, and a new nickel-based pCAM production facility for batteries with a designed capacity of 20,000tpa, expected to commence operations by the end of 2026.³⁷⁴

April 2025 saw China's Zhejiang Huayou Cobalt propose to take on the development of Indonesia's high-profile Project Titan, a proposed US\$8.45bn EV battery hub following the withdrawal of the South Korean consortium led by LGES (including LG Chem, LX International, POSCO). Ground breaking is expected to occur by the end of 2025.³⁷⁵

July 2025 saw reports that Vale Indonesia and China's Zhejiang Huayou Cobalt Co. were considering the strategic option of taking on a Korean investor in their US\$1.9bn development of a 60ktpa HPAL smelter in Sorowako, South Sulawesi to process nickel ore from Vale's existing Sorowako Block mine. Completion is expected by 2027.³⁷⁶

November 2025 saw Indonesia's new sovereign wealth fund, BPI Danantara, acquire a 45% equity share in the Indonesia Growth Project (IGP) Morowali, an integrated nickel mining and processing project with an investment of up to US\$2.0bn, alongside China's GEM Co Ltd (25% equity) and PT Vale Indonesia Tbk (30%). The plant in Central Sulawesi Province will process nickel laterite ore supplied by Vale to produce 66,000tpa of mixed hydroxide precipitate (MHP).³⁷⁷

December 2025 saw reports that construction is due to be completed by 1QCY2026 at PT Kolaka Nickel Indonesia (KNI)'s Pomalaa Block Project, with a total investment package of Rp67.5 trillion (US\$4.3bn) for a HPAL based processing plant and mine producing nickel, set to produce 120ktpa of intermediate ~50% nickel product, Mixed Hydroxide Precipitate (MHP). KNI is a joint venture controlled by Zhejiang Huayou Cobalt Co. (73%), Vale Indonesia (18%) and Ford Motor (8.5%).^{378 379}

January 2026 saw South Korea's Sphere Corp, a key supplier of nickel to Elon Musk's SpaceX, take a 10% stake in the US\$2.3bn, 70ktpa nickel Excelsior Nickel-Cobalt HPAL project development located

³⁷¹ China5e.com, [CATL Signs Another Major Energy Storage Contract \(4GW\)](#), 19 December 2025

³⁷² Reuters, [China's CNGR planning \\$10 bln battery material facility in Indonesia](#), 30 October 2024

³⁷³ Argus, [CNGR's NNI produces high-grade Ni matte in Indonesia](#), 13 November 2024

³⁷⁴ Petromindo, [CNGR plans major nickel-based pCAM and nickel production expansion in Indonesia](#), 30 April 2025

³⁷⁵ SCMP, [Indonesia to keep EV battery goal after LG-led IV's 'very significant' exit](#), 25 April 2025

³⁷⁶ Indonesia Business Post, [Vale confirms talks, no deal yet with Korean investor in \\$1.9 billion Sorowako project](#), 25 July 2025

³⁷⁷ WINDONESIA, [Danantara enters GEM-Vale HPAL project in Sulawesi](#), 22 September 2025

³⁷⁸ Indonesia Business Post, [Ford Motor joins Vale Indonesia, Zhejiang Huayou Cobalt in nickel battery project](#), 28 December 2023

³⁷⁹ Project Blue, [PT KNI delivers first autoclave at Indonesian HPAL project](#), 15 December 2025

in the IMIP in Central Sulawesi, Indonesia, due for commissioning in early 2026. Excelsior Nickel-Cobalt is now owned 45% by ASX-listed Nickel Industries (which is 22% owned by Tsingshan Holding Group Co.), 20% by United Tractors (a subsidiary of PT Astra International), 10% by Sphere Corp, and 20% by Tsingshan Holding Group Co.³⁸⁰

January 2026 also saw the proposed creation of HYD Investment Ltd, a partnership of Huyou Cobalt (70%), EVE Energy (15%) and PT Daaz Bara Lestari (an Indonesian logistics firm, 15%) that has partnered with Indonesian SOEs Antam and IBC to collectively invest US\$6-8bn in a new integrated battery supply chain from mining, smelting, refining, precursor/cathode manufacture, and potentially 3 phase 20GWh pa of battery manufacture. Mining and intermediate processing is proposed for East Halmahera, with battery manufacturing in West Java.³⁸¹

The rapid expansion of Indonesian nickel capacity has flooded the world market and saw nickel prices drop >40% from 2021 peaks, resulting in a significant financial cost, both to western competitors like BHP's NickelWest (refer below), as well as the July 2024 bankruptcy of China's Jiangsu Delong Nickel Industry Co., with reported debts of Rmb72bn due to too-rapid investment in new capacity. Delong's Indonesian assets have been taken over by its major state-owned enterprise partners.³⁸²

Controlled by Chinese metals giant Tsingshan Holding Group Co., Indonesia Morowali Industrial Park (IMIP) is a complex of factories, ultra-high temperature nickel smelters, 5.3GW of BTM coal-fired power plants and ports on the island of Sulawesi, first conceived of back in 2013. IMIP is the product of more than US\$30bn in investment covering over 3,000ha, and reportedly employing over 100,000 workers.³⁸³

IMIP is also an illustration of privatising the profits, and socialising the costs of industrialisation, doing substantial environmental and health damage to workers and the local community. In Transparency International's most recent Corruption Perceptions Index, Indonesia ranked 115th.³⁸⁴

China's Tsingshan was investing to replicate its success at IMIP some 700km away on the island of Halmahera, in a development called Indonesia Weda Bay Industrial Park. While Tsingshan is the majority shareholder, France's Eramet SA is also an investor. September 2025 saw Indonesian authorities seize 148 hectares of the PT Weda Bay Nickel operation, citing alleged permit violations as justification.³⁸⁵

Non-Chinese investment in Indonesian Nickel

May 2024 saw Stellantis enter talks with Brazil's Vale and China's Huayou Cobalt to jointly invest in a nickel smelter in Indonesia and secure supplies of the battery metal critical to its EV expansion plans. Huayou is one of the world's top producers of nickel and cobalt. This proposed MoU reflects a potentially strategically important global collaboration with China, Brazil and Europe in Indonesia.³⁸⁶

June 2024 saw BASF and Eramet cancel a proposed US\$2.6bn investment to build 67,000tpa nickel and 7,500tpa cobalt refining capacity in Indonesia. The firms cited the global oversupply and resulting price collapse.³⁸⁷ Eramet Indonesia CEO Jerome Baudelet said: "You can actually be profitable as a western company if you have the plant built by a Chinese [company], and maybe get the operations done in that particular plant by the Chinese, because they have built a lot of

³⁸⁰ AFR, [SpaceX supplier buys into \\$3.6b Nickel Industries project](#), 2 January 2026

³⁸¹ YiCai Global, [China's Huayou Cobalt Falls After Indonesian JV Agrees to Build NEV Battery Supply Chain With Local SOEs](#), 2 February 2026

³⁸² SMM Analysis, [The Rise and Fall of Jiangsu Delong: Reflections Behind the Collapse of a Billion-Dollar Steel Giant Amid the Shutdown Turmoil of Its Indonesian Project](#), 7 March 2025

³⁸³ Bloomberg, [The Deadly Mining Complex Powering the EV Revolution](#), 17 June 2024

³⁸⁴ Bloomberg, [The Deadly Mining Complex Powering the EV Revolution](#), 17 June 2024

³⁸⁵ Discovery Alert, [Nickel Prices Surge as Indonesia Seizes Part of Tsingshan Mine](#), 12 September 2025

³⁸⁶ AFR, [Stellantis, Vale in nickel talks in Indonesian coup](#), 14 May 2024

³⁸⁷ Bloomberg, [BASF, Eramet Cancel \\$2.6 Billion Nickel Project on EV Slump](#), 25 June 2024

expertise. They also have economies of scale in all the equipment they build for those plants.”³⁸⁸ May 2025 saw Stellantis respond to eNGOs’ ESG concerns by stating this proposal had not proceeded.³⁸⁹

Eramet is one of a handful of western companies in the nickel industry in Indonesia, operating the Weda Bay mine in Indonesia with its Chinese partner, Tsingshan Holding Group. However, September 2025 saw Indonesia’s Forestry Taskforce seize 148ha of their 45,000ha concession citing absence of valid forestry permits, a sign of the growing crackdown.

Indonesia exerts more strategic control on nickel

Since being elected in 2024, President Prabowo has sought to better manage nickel supply to cut excessive production via the introduction of annual mining quota quotas, a crackdown on illegal mining and higher royalties (moving to a new progressive tiered structure of 14–19% royalty system to replace the previous flat 10% rate³⁹⁰) so as to improve pricing and gain more benefits for Indonesia. Increased fines for environmental violations have also resulted.

July 2024 saw Indonesia’s government start to recognise the implications of China’s dominance of investment into Indonesian nickel, with the government starting to reference their preference for reduced Chinese ownership so as to protect Indonesia’s access to the US market under President Joe Biden’s Inflation Reduction Act. Indonesia’s government and industry are now working to structure new nickel investment deals with Chinese firms as minority shareholders to less than 25% equity share, the threshold set by the US DoE under then President Biden’s Inflation Reduction Act.³⁹¹

January 2026 saw Indonesia revoke the mining permits for 28 resource firms after the government taskforce found that the firms had violated regulations and caused severe environmental disasters, including flooding that killed over 1190 people in November 2025.³⁹²

January 2026 saw Vale Indonesia temporarily suspend operations at its nickel mines after not receiving approval for its annual work plan from Indonesian authorities, probably a response to the desire to limit overproduction of nickel. Vale is one of the country’s biggest nickel miners, operating in partnership with the Indonesian government, and is reported to be making large investments in expanding its HPAL nickel refining capacity rapidly, from six facilities to at least 14.³⁹³

Nickel refining in Philippines

June 2024 saw the Philippines (the world’s #2 nickel producer, ahead of Australia and Russia) scouting for western investment to further develop both the mining and refining of its nickel reserves, pitching itself as an alternative to the China-dominated global supply chain via Indonesia for this critical battery metal. Whilst the Philippines welcomes Chinese investment, it is angling to position itself as a strategic partner to the US IRA amid escalating tensions with Beijing in the South China Sea and the opportunity to lock in US public finance support under the IRA to supply green nickel (i.e. where the refining is powered by renewable energy) in contrast to the poor ESG standards of Indonesian nickel mining and refining.³⁹⁴

³⁸⁸ Financial Times, [Western miner Eramet sees no profits in nickel processing without Chinese partners](#), 24 November 2024

³⁸⁹ Business and Human Rights Centre, [Stellantis response to Joint Letter by 25 CSOs on a potential Nickel Smelter Project in Indonesia](#), 30 May 2025

³⁹⁰ Discovery Alert, [Indonesia Raises Nickel Royalties: Impact on Mining Industry](#), 17 April 2025

³⁹¹ FT, [Indonesia moves to reduce Chinese ownership of nickel projects](#), 26 July 2024

³⁹² FT, [Indonesia revokes mining and plantation permits after deadly floods](#), 21 January 2026

³⁹³ Bloomberg, [Vale Indonesia Halts Nickel Mining on Delayed Work Plan Approval](#), 2 January 2026

³⁹⁴ FT, [Philippines Courts Investors For ‘China-Free’ Nickel Supply Chain](#), 30 June 2024

Nickel in Tanzania

August 2025 saw Chinese firm Zhongzhou Mining breaking ground on what is poised to be Tanzania's first nickel and copper refining plant processing 280,000tpa, a US\$15m investment creating 300 direct jobs, aligning with Tanzania's policy of local value addition.³⁹⁵

Nickel in Brazil

September 2025 saw China's MMG acquire Anglo American's nickel assets in Brazil in a US\$500m transaction. The assets include the Barro Alto and Codemin ferronickel operations as well as the Jacaré and Morro Sem Boné greenfield projects.³⁹⁶

Nickel in Russia

The Russia-China Investment Fund (RCIF) is a private equity fund established in June 2012 with initial capital of US\$2bn by Russian Direct Investment Fund (RDIF), Russia's sovereign wealth fund and the China Investment Corporation (CIC), which is the sovereign wealth fund of China.

By November 2025 the RCIF reports "the Fund has invested US\$1.3bn in over 40 projects, and taking partner funds into account, total investment has exceeded US\$7.9bn."³⁹⁷ CEF found no details of any such transactions, which is surprising.

March 2019 saw the RDIF, the RCIF and a Middle East SWF collectively acquire a 9.5% stake in Intergeo Management Company, a Russian metals and mining company, for the US\$2.7bn investment in developing the Kingash and Ak-Sug nickel deposits in Russia. Kingash is the second-largest nickel deposit in Russia, while Ak-Sug is one of Russia's top five in terms of copper reserves. The planned capacity of the Kingash mining and processing plant is 520,000tpa of copper-nickel concentrate plus 500,000tpa of copper concentrate from Ak-Sug. Production began at both in 2024.³⁹⁸

Nickel in New Caledonia

Indonesia's grip over the global nickel market has also only strengthened with rivals in both Australia and New Caledonia squeezed out by its low-cost and massive scale integrated production structure.

August 2024 saw the closure of New Caledonia's 60,000tpa nickel mine and factory when minority stakeholder Glencore pulled out of the operation, resulting in more than 1,200 people losing their jobs. It is 51% owned by the Northern Province Government investment branch Société Minière du Sud Pacifique (SMSP).³⁹⁹

Nickel in Australia

Historically a top 5 nickel producing nation, Australian nickel miners have been smashed by the global oversupply and resulting near 40% price collapse since 2022, with export volumes expected to collapse by three-quarters by 2027 if a sustained price recovery does not emerge.

2023 saw Australia's Panoramic Resources Ltd. suspend a key mine after entering voluntary administration.

July 2024 saw BHP announce it would put its massive Nickel West operations into care and maintenance after losing US\$50m per month over 2024. This was accompanied by a \$5.4bn pre-tax

³⁹⁵ Ecofin Agency, [Tanzania Emerges as New Front in US-China Race for Critical Metals](#), 2 September 2025

³⁹⁶ Bnamericas, [Brazil to clear Anglo American-MMG US\\$500mn nickel deal](#), 18 September 2025

³⁹⁷ Russia's pivot to Asia, [The Russia-China Investment Fund Has Invested In Over 40 Bilateral Projects](#), 25 November 2025

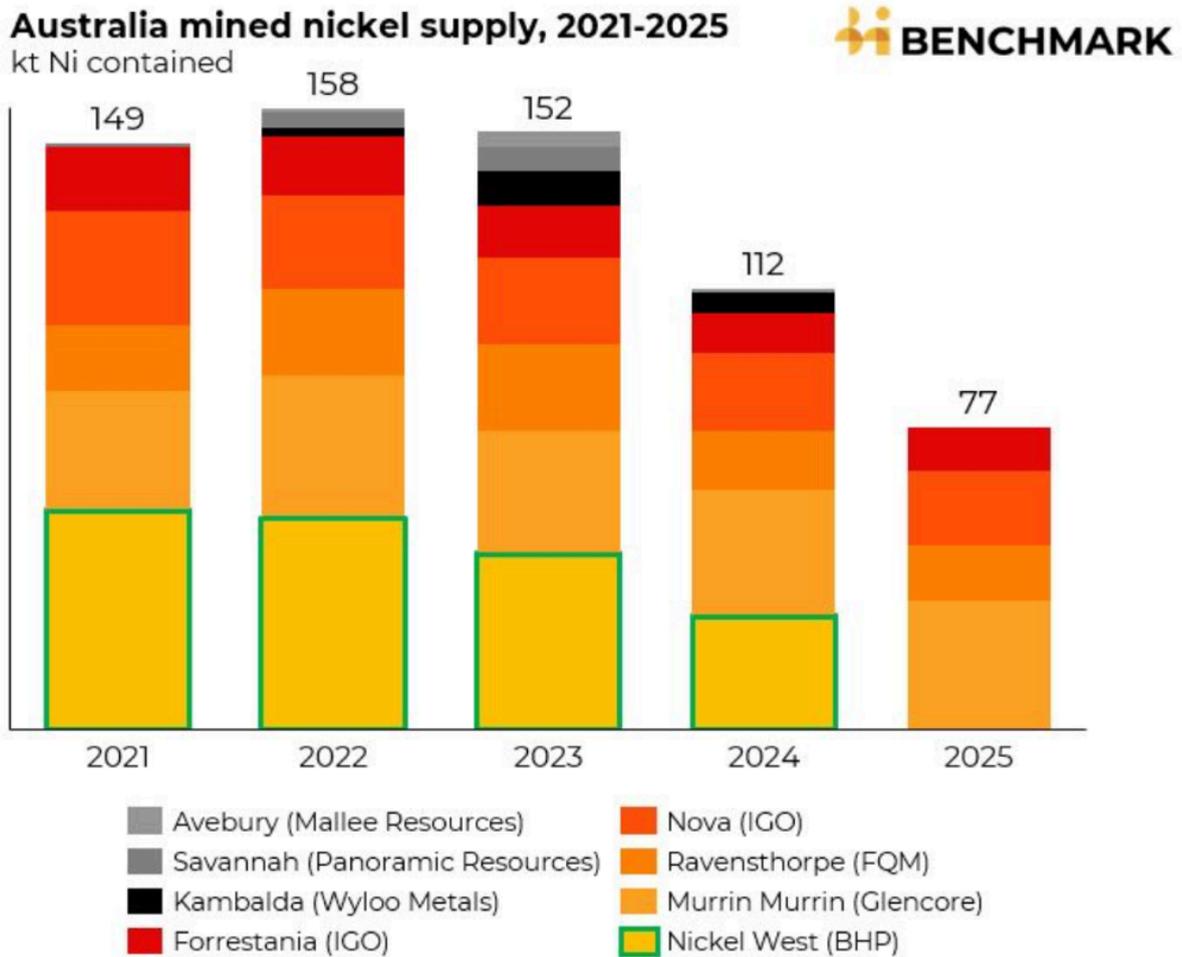
³⁹⁸ The Asset, Russia-China Investment Fund takes stake in Intergeo, 19 March 2019

³⁹⁹ ABC, [Nickel, paradise and 'emancipation'](#), 11 April 2025

write-down of the business.⁴⁰⁰ Nickel West represented a third of Australian nickel production in 2023. BHP will shut Nickel West permanently by February 2027 if a buyer can't be found.⁴⁰¹

Andrew Forrest's Wyloo Metals, IGO and First Quantum Minerals Ltd also cut capacity – Figure 9.2:⁴⁰²

Figure 9.2: Australian Nickel Supply faces Significant Capacity Reductions



Source: Benchmark Mineral Intelligence, July 2024

⁴⁰⁰ AFR, [BHP shuts nickel business to arrest losses](#), 11 July 2024

⁴⁰¹ AFR, [Nickel hits 15-month high as Indonesian production stalls](#), 7 January 2026

⁴⁰² Bloomberg, [From Green Hype to Bailouts, the Nickel Industry Has Imploded](#), 4 February 2024

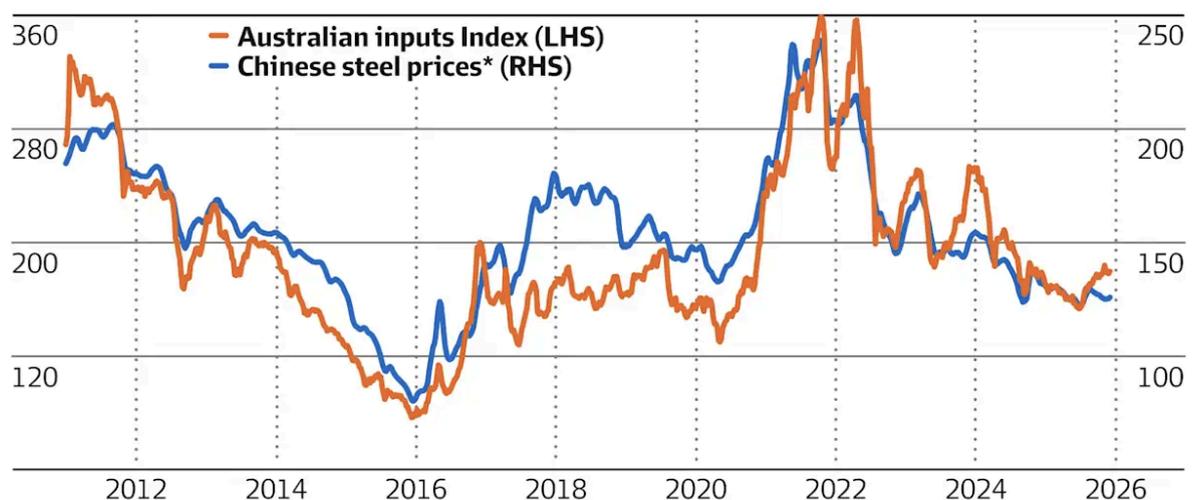
Section 10. Strategic Metals - Iron Ore

A US\$23bn investment by mainly Chinese entities in Simandou iron ore mining and the enabling power, rail and port infrastructure should see Guinea become the third largest exporter of iron globally by 2029, significantly eroding the long held near export duopoly of Australia and Brazil. Meanwhile, China's domestic demand for steel peaked back in 2020, and scrap steel fed, renewable energy powered electric arc furnaces (EAF) are also slowly eroding China's dependence on imported iron ore.

China produced over 50% of the world's steel in 2025. However, China's domestic steel consumption peaked back in 2020, and with the continued slowdown in the property sector over 2024/25, domestic demand has continued to slowly decline. China has turned to exporting surplus capacity to shore up its steel sector utilisation rate – exporting close to 120Mt in CY2025, crushing internationally traded steel prices and profitability and undermining viability in the process, which has in turn undermined investment capacity in steel sector decarbonisation.

As in critical minerals, China is very dependent on imports of iron ore and coking coal to underpin its steel manufacturing sector, the vast majority of both sourced from Australia (which exported >50% of world seaborne iron ore and coking coal trade in 2025). The price of Chinese steel sector inputs – primarily iron ore and coking coal – are highly correlated with Chinese steel prices – Figure 10.1. Prices have corrected over 2025 even as shipments remain strong into China, the world's biggest buyer of iron ore (having an imported iron ore share of 70-75%), with imports climbing to a record high even as new supply sources loom, particularly from Guinea.⁴⁰³

Figure 10.1: Chinese Steel Input and Output Prices (US\$)



Source: Westpac via AFR

Global steel demand is forecast by Rio Tinto to grow 10% over the decade to 2035 to 2.0Bn tpa, driven primarily by Indian and ASEAN construction growth of ~65% by 2035, even as China steel consumption slowly declines. Within this, increased global use of scrap steel recycling means raw iron ore demand is likely to be flat.⁴⁰⁴

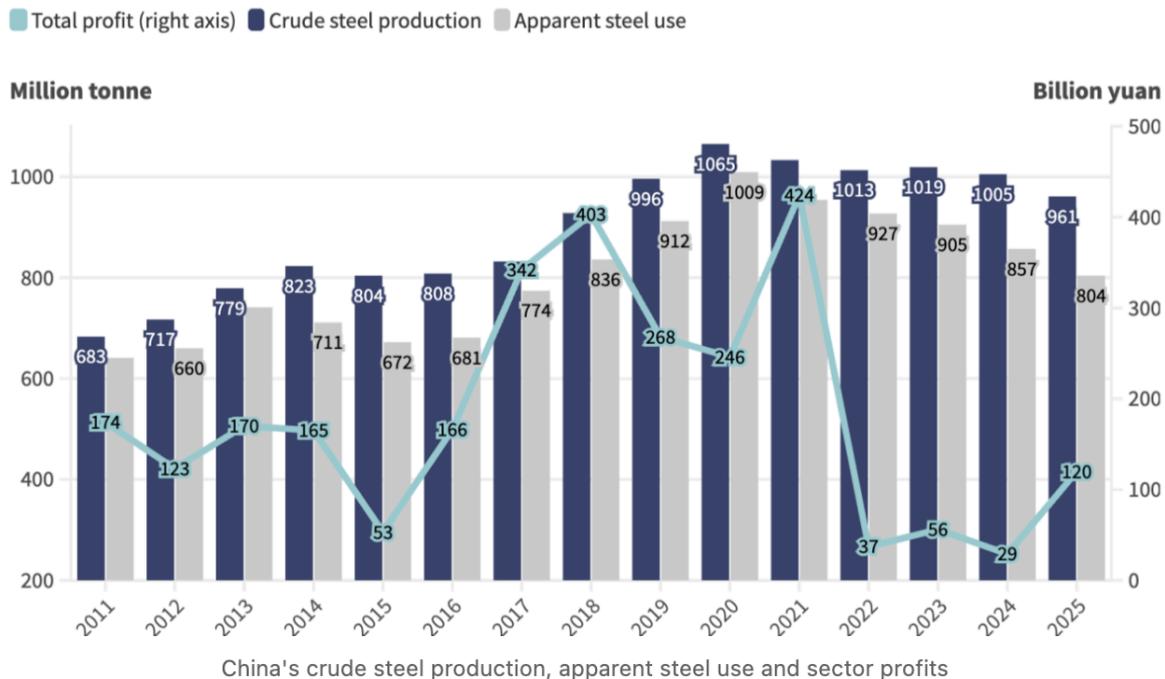
But China's steel production and consumption peaked back in 2020, and declined 4.4% yoy in 2025 to 961Mt – Figure 10.2. Even with greater exports (China steel exports in 2025 reached a world record high of 119Mt), lower construction activity in China means this slow progressive decline will

⁴⁰³ AFR, [Iron ore tipped to plunge into a bear market in 2026](#), 18 December 2025

⁴⁰⁴ Rio Tinto, [Capital Markets Day](#), 4 December 2025

continue. Combined with progressively increased scrap recycling and a slow conversion from high emissions blast furnaces to scrap and DRI-based electric arc furnaces (EAF) means progressively lower demand for low Fe (iron) grade high impurity iron ore imports, and lower emissions. China is >50% of the world's steel production, so this has global significance. But even more so for Australia, given 85% of our iron ore exports go to China.

Figure 10.2: Global Development Capital Investment in Iron Ore (US\$bn, nominal)



China's crude steel production, apparent steel use and sector profits

Source: CREA's [Xinyi Shen](#), via LinkedIn

In July 2022 China created China Mineral Resources Group Co., a state-backed iron ore company with the mandate to oversee everything from massive mine investments in West Africa to acting as a centralised monopoly buying agent for steelmaking material from global suppliers and undermining the global market power of BHP and Rio Tinto.⁴⁰⁵ December 2025 saw China Mineral Resources Group Co. announce a plan to make it harder for international miners and traders to hold iron ore at ports for lengthy periods, reducing their ability to influence supply and prices.⁴⁰⁶

Aided by a progressive decline in domestic steel consumption, the long term decarbonisation plan for China's steel sector (with its 1.8bn tpa of CO₂ emissions) is by a progressive pivot to renewable energy powered EAFs utilising DRI combined with a progressive increase in scrap steel recycling, with China's national emissions trading scheme (ETS) expanding to cover the steel sector emissions in 2025, along with cement and aluminum.⁴⁰⁷

While Australia is an important Chinese trade partner, it is also a US security partner. Therefore, absent stronger cooperation and co-investment with Australia, China will continue to diversify its supply sources as both an economic and a national security imperative.

To reduce dependence on Australia's BHP and Rio Tinto, plus Vale of Brazil, China has been busy investing in new iron ore supply, with the majority of global development capex going outside of Australia and Brazil over the last two years for the first time in the last two decades – Chart 10.3.

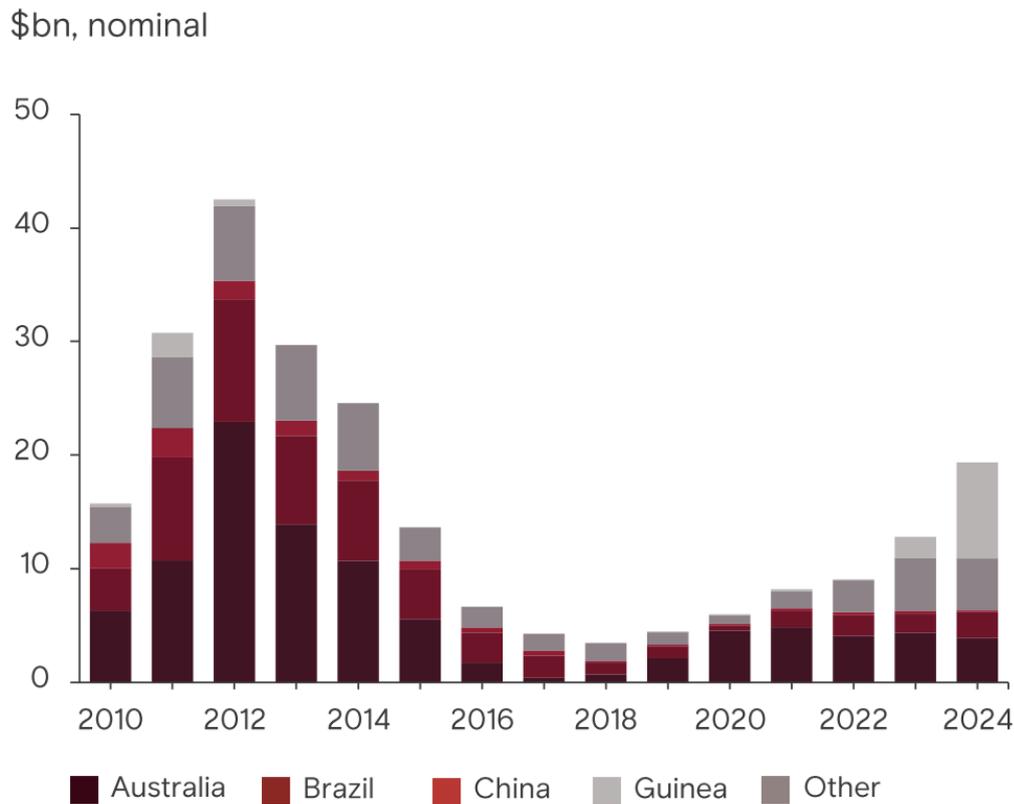
⁴⁰⁵ AFR, [China looks to recoup pricing power through \\$4.3b iron ore firm](#), 20 July 2022

⁴⁰⁶ Bloomberg, [China's Iron Ore Buyer Seeks New Port Rules to Tighten Its Grip](#), 12 December 2025

⁴⁰⁷ International Carbon Action Partnership, [China officially expands national ETS to cement, steel and aluminum sectors](#), 10 April 2025

But we note both BHP and Rio Tinto continue to aggressively invest in progressive expansions of their world-leading Pilbara iron ore businesses. Mitsui & Co invested US\$5bn in February 2025 to take a 40% equity stake in the development of the Rhodes Ridge deposit,⁴⁰⁸ which has an estimated 6.8bn tonnes of high-grade ore and potentially 100Mtpa of new supply.⁴⁰⁹

Figure 10.3: Global Development Capital Investment in Iron Ore (US\$bn, nominal)



Source: Rio Tinto Capital Markets Day, Woodmac, 6 December 2025

A Progressive Move Away from USD Pricing

August 2025 saw Fortescue secure a Renminbi-denominated Rmb14.2bn (A\$3bn) syndicated 5-year term unsecured loan, marking the first Rmb facility of its kind by an Australian company. The facility was arranged by the Bank of China and Industrial and Commercial Bank of China. Proceeds from the five-year unsecured facility will support general corporate purposes and Fortescue's decarbonisation goals, including partnerships with Chinese suppliers and technology leaders. Fortescue Chair Andrew Forrest stated: "China continues to lead the world in industrial scale and innovation. Fortescue shares that ambition and drive. This landmark RMB financing strengthens our long-standing partnerships with Chinese institutions and opens new frontiers for collaboration."⁴¹⁰

September 2025 saw Fortescue announce key partnerships with global cleantech leaders including China's LONGi, BYD, XCMG Group and Envision Energy.⁴¹¹ This two-way collaboration between Fortescue and key Chinese corporations has allowed Fortescue to continue consistently shipping iron ore to China at a time when BHP is suffering from an ongoing dispute with its major customer.⁴¹²

⁴⁰⁸ AFR, [Reclusive iron ore magnates \\$8b richer after selling to Japan's Mitsui](#), 19 February 2025

⁴⁰⁹ AFR, [Rio Tinto begins work on Pilbara's 'last crown jewel'](#), 16 December 2025

⁴¹⁰ Australian Mining, [Fortescue secures \\$3 billion loan in landmark China deal](#), 8 August 2025

⁴¹¹ Fortescue press release, [Fortescue unites world's best technology and manufacturing to accelerate decarbonisation globally](#), 25 September 2025

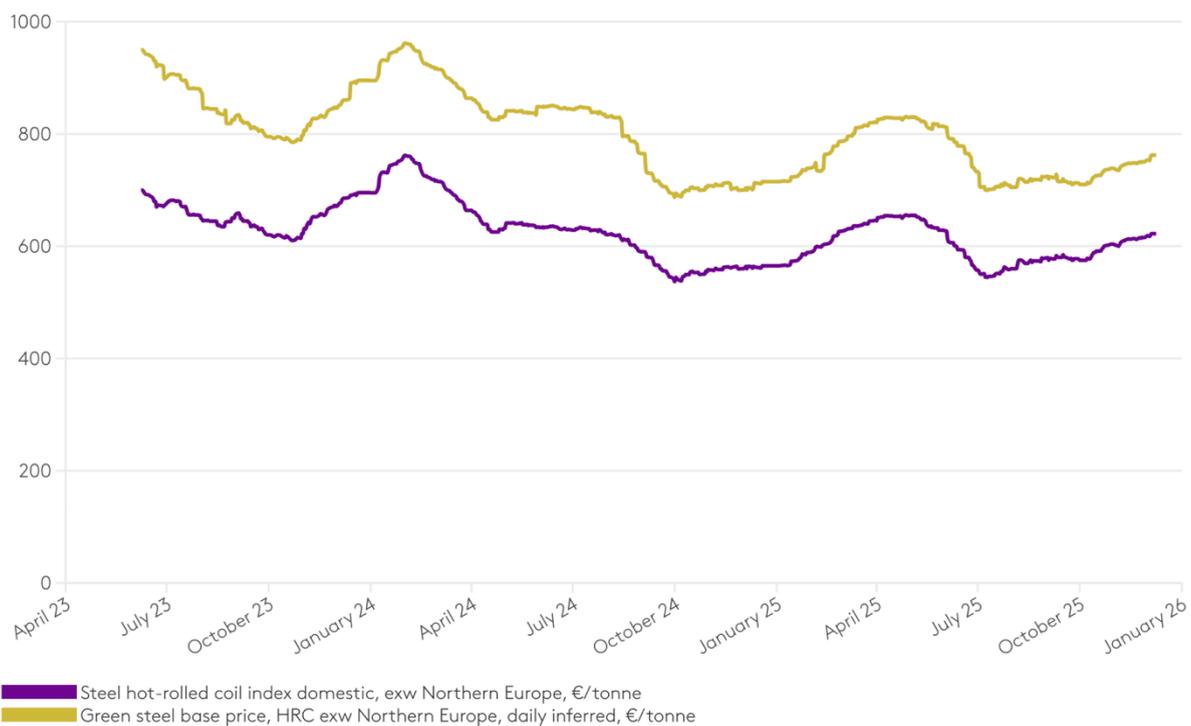
⁴¹² AFR, [Buy 'Made in China', says Fortescue, to ease Beijing iron ore spat](#), 22 January 2026

October 2025 saw BHP settle its new iron ore pricing contract with China Mineral Resources Group that for the first time sees settlement of 30% of iron ore sales in renminbi, up from 5% previously.⁴¹³ China is also pushing Australian iron ore exporters to move from using the S&P Global Energy Platts Iron Ore Index to ones prepared by Fastmarkets, China's Mysteel and/or Argus. BHP exports 330Mtpa, the vast majority of which goes to China. Beijing began in earnest trying to increase usage of the yuan (the basic unit of the renminbi) as an international currency after the global financial crisis in 2008.⁴¹⁴

The development of green iron trade

January 2026 sees the phased introduction of the EU Carbon Border Adjustment Mechanism (CBAM), putting a carbon price on embodied emissions in commodity imports, including steel. Green steel price premiums of €120-180/t are already clear in Northern Europe, even before the CBAM has taken effect – Figure 10.4.⁴¹⁵ A price on 'embodied carbon' in international trade is a key pre-requisite to the steel sector decarbonisation. Green iron is processed iron ore, where the refining is powered by renewable energy, both directly or via green hydrogen. Green iron can replace or blend with scrap steel in EAFs to drive a rapid steel sector decarbonisation, as and when major investments are made in this global steel sector realignment.

Figure 10.4: Green Steel Premiums in Northern Europe (€/tonne)



Source: Fastmarkets

CEF is closely tracking new investments like Rio Tinto and Calix's JV pilot facility in Kwinana, WA, and Fortescue's Christmas Creek pilot plant, to see the technology readiness levels (TRL) move up, and keenly awaits a path to a viable price on embodied carbon in international trade to unlock capital.

⁴¹³ AFR, [Funny buggers about BHP's China iron ore may have serious consequences](#), 16 October 2025

⁴¹⁴ AFR, [Why China wants to price more iron ore contracts in its own currency](#), 24 November 2025

⁴¹⁵ Fastmarkets, [Global Green Steel Markets in 2026: Regulation, Costs and Regional Divergence](#), 16 January 2026

Iron Ore – Africa And South America

Chinese companies are investing aggressively in Africa. Beyond the US\$23bn Simandou iron ore integrated mine-rail-port development in Guinea, China is also looking at the Mbalam-Nabeba project, which will develop the total iron ore resources of 6,440Mt of deposits in Cameroon.⁴¹⁶

In Algeria, a consortium of Chinese companies are investing in the Gara Djebilet iron ore mine located in the Tindouf province of western Algeria, while in Liberia, Baowu shipped its first cargo of iron from its flagship Bomi project in December 2023.

These are just some of the mining projects in Africa which form part of China's iron ore "foundation plan" to address the vulnerability of its over-reliance on Australia and Brazil for more than 80% of China's current iron ore supply, with the resulting high price of iron ore delivering exceptional gross profit margins of 60-70% to BHP and Rio Tinto.⁴¹⁷

Iron Ore – Simandou, Guinea (China's Baowu & Chinalco, Rio Tinto)

July 2024 saw the massive US\$23bn Simandou iron ore project win final approval from the Guinean and Chinese governments, with Rio Tinto reporting in December 2025 that the mine, rail and port capex is 60% complete and targeting first iron ore shipments of 5-10Mt in 2026.⁴¹⁸ Simandou would bring 120Mtpa of high quality 65% iron content ore to the market with first production by 2025 and a full ramp-up expected by 2029, positioning Guinea as the world's third-largest iron ore exporter with an expected 5% global share by the end of this decade. The project involves building the required infrastructure as well, including the Transguinean heavy haulage railway of 650km (comprising 12 stations, 206 bridges and four tunnels⁴¹⁹) plus the Morebaya port. This is the largest integrated greenfield mine and infrastructure investment in Africa⁴²⁰ and provides a significant step towards decarbonising China's steel industry.⁴²¹

This project is a consortium of consortiums. The Government of Guinea has a direct 15% equity stake, while China Baowu holds an indirect 25% share, China's Chinalco has a 15% stake, a Singapore consortium (Winning International Group) has 21.7% and Rio Tinto about a 22.5% share. Chinalco also owns a 11.2% stake in Rio Tinto.⁴²²

September 2025 saw pressure building from the Government of Guinea for the Simandou consortium to build an iron refinery in country. The government has made similar demands of bauxite mine proposals to include refineries and aluminium smelting, a bid to ensure value-adding and more national benefit from the resource exploitation by foreign mining giants.⁴²³

January 2026 saw the first 200,000t shipment of iron ore arrive in China.⁴²⁴

Iron Ore – Cameroon

China is also looking at the Mbalam-Nabeba project, which will develop the total iron ore resources of some 6,440Mt of deposits that straddle Cameroon and neighbouring Congo-Brazzaville in

⁴¹⁶ Shanghai metal market, [Another "Simandou-level" iron ore project is expected to commence production by the end of the year!](#), 29 July 2025

⁴¹⁷ SCMP, [China is planning to break its dependency on Australia and Brazil for iron ore. Africa is the key](#), 16 March 2024

⁴¹⁸ Rio Tinto, [Capital Markets Day](#), 4 December 2025

⁴¹⁹ S&P Global, [Simandou iron ore project: A game changer for global supply](#), 4 September 2025

⁴²⁰ AFR, [Rio Tinto's A\\$34.3b African iron ore project gets green light](#), 16 July 2024

⁴²¹ SCMP, [Why first Simandou iron ore shipment to China marks a global milestone](#), 15 November 2025

⁴²² Rio Tinto Press Release, [Conditions on Simandou investment now satisfied](#), 16 July 2024

⁴²³ AFR, [Rio faces pressure from Guinea to build refinery for Simandou ore](#), 8 September 2025

⁴²⁴ Reuters, [China receives first shipment of Simandou iron ore](#), 18 January 2026

central-west Africa. The aim is for a mining-rail-port development for Direct Shipping Ore (DSO)-quality hematite (typically 56% to over 60% Fe) at 40Mtpa. While ASX-listed Sundance Resources is trying to develop an 85% equity share of the proposal, there is a 10-15% free state carry proposal (where the government gets shares in a project for free), but it has been in litigation for the last five years.⁴²⁵ China Railway Group Corporation, China Machinery Engineering Corporation, China Civil Engineering Construction Corporation, China National Chemical Engineering Heavy Machinery Co., Ltd., and China Construction Mining Group Co., Ltd. are all named in association with this proposal.⁴²⁶

Iron Ore – Sierra Leone

April 2025 saw the full commissioning at a cost of US\$230m of a 12Mtpa 65% iron ore processing plant to lift the grade up from 55% previously at the Tonkolili iron ore mine by Leone Rock Metal Group (LRMG), a subsidiary of Chinese mining and metals company China Kingho Energy Group. The mine, in the northern province of Sierra Leone, has an estimated 13.7bntonnes of iron ore. LRMG is spending US\$153m to upgrade the 192km railway and Pepel port infrastructure, with the target to double iron ore exports to 20Mtpa.⁴²⁷ LRMG is reported in 2025 to now provide 18% of Sierra Leone's GDP and employ 9,000 people, cementing its position as a foundation of the local economy. LRMG is shifting from producing low-grade DSO (57%) to high-grade concentrated ore (65%) to create value addition and technology transfer within Sierra Leone. Gilbert Zhao, CEO of LRMG states: "Our goal is to help Sierra Leone transition from a mineral-export economy to an industrialized economy."⁴²⁸

SCMP reported that when Sierra Leone President Julius Maada Bio made a state visit to Beijing in April 2023, China Kingho Energy Group, one of China's largest privately owned energy groups, promised to build a steel factory in Sierra Leone for iron ore processing in 2025.

Deep water port - Nigeria

China played a pivotal role in the development of the Lekki Deep Sea Port, Nigeria's first deep-water port, located in the Lagos Free Zone. The US\$1.6bn project was a collaboration under China's Belt and Road Initiative and began commercial operations in April 2023. The port was constructed by the China Harbour Engineering Company (CHEC), which holds a majority share in the project's operating company, with the remaining 25% shared between the Lagos State Government and the Nigerian Ports Authority. The Lekki Deep Sea Port is a major infrastructure development that positions Nigeria as a potential transshipment hub for West and Central Africa, including iron ore.⁴²⁹

Pig Iron – Zimbabwe (China's Tsingshan)

January 2026 saw reports that Dinson Iron and Steel Company, a subsidiary of Chinese stainless steel and nickel making company Tsingshan Group, is nearing completion of a US\$1.5bn 600,000tpa expansion of its pig iron plant in Manhize, south of Harare in Zimbabwe, with scope to ramp this up to 5Mtpa by 2030. This is expected to leverage local mining of iron ore, coal, chrome, limestone and nickel to cut steel imports into Zimbabwe by 90% and create 10,000 new jobs. Tsingshan, the world's biggest stainless steel producer, also operates a ferrochrome smelting factory in Selous, a village in Mashonaland West province.^{430 431}

⁴²⁵ Sundance Resources, [Company overview](#), December 2025

⁴²⁶ Shanghai metal market, [Another "Simandou-level" iron ore project is expected to commence production by the end of the year!](#), 29 July 2025

⁴²⁷ Leone Rock Press Release, [LEONE ROCK METAL GROUP COMMISSIONS 12 MILLION METRIC TONS PROCESSING PLANT](#), 11 April 2023

⁴²⁸ Forbes Africa, [Sierra Leone's Mining Growth Paves the Way for Industrialization](#), 14 April 2025

⁴²⁹ SCMP, [China is planning to break its dependency on Australia and Brazil for iron ore. Africa is the key](#), 16 March 2024

⁴³⁰ Dialogue Earth, [Can Zimbabwe's steel ambitions be green?](#), 27 January 2026

⁴³¹ SCMP, [Chinese-built steel plant in Zimbabwe fires up its furnace as it 'builds the nation'](#), 22 June 2024

Zimbabwe has been largely locked out of global capital markets since its 1999 default on loans from lenders including the World Bank, the Paris Club and the African Development Bank. China stepped into this gap, with China's Sinohydro Ltd building a 1.5GW coal fired power plant and then doing the EPC on a 300MW expansion of the now 750MW of capacity at Kariba Hydro Power.⁴³²

Iron Ore - Peru

2026 is likely to see construction commence on Jinzhao Mining's US\$1.8bn 22Mtpa Pampa de Pongo iron proposal in the Arequipa region of Peru. The project is a large, world-class iron ore deposit that will also produce copper and gold concentrate.⁴³³ Jinzhao was contracted by the Peru government in March 2024 to build and operate a new US\$405m port to enable exports from this mine.

Middle East and Africa – China Collaborations in Steel

In response to pressure to decarbonize its massive steel industry, Chinese steelmakers are investing in low-carbon production facilities abroad, primarily using the DRI and Electric Arc Furnace (EAF) routes, which often leverage gas reserves in the Middle East.

June 2024 saw China's Delong Steel announce an MoU with Emirates Steel Arkan to build a low-carbon raw materials facility in UAE, but with no reported progress since.⁴³⁴

October 2024 saw China's Jinnan Iron & Steel Group partner with Brazil's Vale to invest US\$627m to build an iron ore concentration plant in Oman's Sohar Port and Freezone to process 18Mtpa of iron ore to produce 12.6Mtpa feedstock pellets suitable for the DRI-EAF process.⁴³⁵ June 2025 saw this investment progressing.⁴³⁶

February 2025 saw a consortium involving Shougang Group's engineering arm (BSIET) and two Chinese strategic investment partners led by Fujian Hengwang Investment Co., Ltd break ground on a US\$1.2bn low-carbon steel plant in Kazakhstan's Jambyl region leveraging locally sourced iron ore (including the new Lomonosovskoye mine), gas and limestone. The facility is planned to have 3Mtpa capacity of DRI, powered by a 350MW gas power plant. Full capacity is expected to be reached by 2029.⁴³⁷

August 2025 saw Tsingshan Holding Group (through its subsidiary Dinson Iron and Steel Company (DISCO)) announce a US\$800m new investment in steel in Zimbabwe to take the total project value to US\$1.5bn. The project, located in Manhize near Mvuma, is a large-scale integrated steel plant designed to be Africa's largest steelworks, doubling existing capacity to 1.2Mtpa, sourcing iron ore and coking coal locally.⁴³⁸

September 2025 saw confirmation that the new US\$4bn investment in a 2.5Mtpa DRI / 1.5Mtpa metal plate integrated manufacturing facility in Ras Al-Khair SEZ in Saudi Arabia was on track for commissioning in 2026. The project is a JV between China's Baoshan Iron & Steel Co. (50% of the equity), Saudi Aramco (25%), and Saudi Arabia's PIF (25%).⁴³⁹

⁴³² Bloomberg, [Global Firms Vie With China in Zimbabwe Energy, Minister Says](#), 2 October 2025

⁴³³ BNamericas, [Peru expects progress on four Arequipa mining projects totaling US\\$6.95 billion in investments](#), 23 September 2025

⁴³⁴ Steel Radar, [June 2024 saw China's Delong Steel announce a collaboration with Emirates Steel Arkan to build a low-carbon raw materials facility in UAE](#), 6 June 2024

⁴³⁵ Vale press release, [Vale and Jinnan Steel & Iron Group announce investment in iron ore concentration plant in Oman](#), 28 October 2024

⁴³⁶ InvestMETS, [Chinese group buys equipment for Oman iron concentrator](#), 17 June 2025

⁴³⁷ Prime Minister of Kazakhstan press release, [3 million tonnes of steel capacity metallurgical plant to be built in Zhambyl region](#), 27 February 2025

⁴³⁸ Business Insider Africa, [Chinese nickel giant Tsingshan to invest \\$800m in Zimbabwe steel](#), 18 August 2025

⁴³⁹ Zawya, [China's Baosteel says work progressing on \\$4bln steel plant in Saudi Arabia](#), 2 September 2025

December 2025 saw China's Tsingshan Group developing its US\$10bn integrated green steel industrial precinct and supply chains in the Duqm Special Economic Zone, Oman. The partnership is said to be a cornerstone of Oman's Industrial Strategy 2040 and targets 5Mtpa production of green steel by 2030. The facility has a stated aim of using green hydrogen produced from 4GW of solar and 1.5GW of wind capacity.⁴⁴⁰

Australian Iron Ore Ties with China

Some 85% of Australian iron ore exports go to China, making this a profoundly important trade relationship, particularly for Australia given the sustained high profit margins, as well as the resulting corporate tax and royalty flows to the Federal and WA governments respectively.

Australia - Citic Pacific Mining's Sino Iron

HK listed Citic Pacific Mining has invested over US\$12bn since 2006 to build Sino Iron, the largest magnetite mining and processing project in Australia, in operation 100km south west of Karratha in the Pilbara, WA, including a desalination plant and 480MW gas power plant.. Processed into a concentrate using beneficiation, it produces a high quality 65% Fe product that has low impurity levels.⁴⁴¹ But the resource access agreement with Clive Palmer's Mineralogy is coming to an end, and lack of goodwill and ongoing legal issues have undermined further investment. Mine output declined 30% from 21 million wet metric tonnes (wmt) in 2023 to 14M wmt for CY2024.

Australia – Rio Tinto (54%) and China Baowu (46%)

September 2022 saw Rio Tinto (54%) and China Baowu (46%) enter into a JV for the Western Range iron ore project in the Pilbara, WA, investing jointly US\$2bn to develop the mine by 2025. Western Range's production capacity targets 25Mtpa. The project includes construction of a primary crusher and an 18km conveyor system linking it to the existing Paraburdoo processing plant.^{442 443} Rio Tinto has earmarked US\$13.3bn capex in the Pilbara over the next five years.

June 2023 saw Rio Tinto and Baowu announce an MoU to explore a range of industry leading new projects in China and Australia to help decarbonise the steel value chain. This includes the intention to research, build and demonstrate a pilot-scale electric smelter at one of Baowu's steel mills in China. This will enable low-carbon steel making utilising DRI that has been produced from lower grade ores. This also covers optimisation of pelletisation technology for Australian ores as a feedstock and, critically, is an opportunity to jointly study opportunities for producing low-carbon iron in Western Australia.⁴⁴⁴

CEF notes Chinalco owns 14.0% of Rio Tinto PLC and must stay below 14.99% under a 2008 foreign investment ruling by then Australian Treasurer Wayne Swan.⁴⁴⁵

CEF sees this as a critically important collaboration, both for Australia to value add our strategic metals by exporting embodied decarbonisation, and to help China put its steel industry on an acceptable pathway towards decarbonisation.

⁴⁴⁰ Oman Daily Observer, [Oman-Tsingshan advance green steel plans](#), 31 December 2025

⁴⁴¹ Citic Pacific Mining, [Our operation – Sino Iron](#)

⁴⁴² Rio Tinto Press Release, [Rio Tinto and Baowu agree to JV to develop Western Range](#), 15 Sept 2022

⁴⁴³ Rio Tinto Press Release, [Rio Tinto and Baowu open Western Range iron ore mine in the Pilbara with Yinhawangka Traditional Owners](#), 6 June 2025

⁴⁴⁴ Rio Tinto Press Release, [China Baowu and Rio Tinto extend climate partnership to decarbonise the steel value chain](#), 12 June 2023

⁴⁴⁵ AFR, [How a Glencore deal can solve Rio's many problems in one fell swoop](#), 19 January 2026

Fortescue - China Baowu

December 2025 saw Fortescue and China Baowu sign a technology development agreement to explore new low-carbon metallurgical processes to help the steel industry accelerate its decarbonisation.⁴⁴⁶ This is a small part of a major strategic cooperation plan.

Fortescue ships 200Mtpa of iron to Asia, with the vast majority of this going to China. 2025 saw first production of green iron from Fortescue's 1,500tpa pilot green iron project located at the Christmas Creek operations in WA.

China's Hunan Valin Holdings Group Co. holds an 8.8% equity stake in Fortescue Ltd.

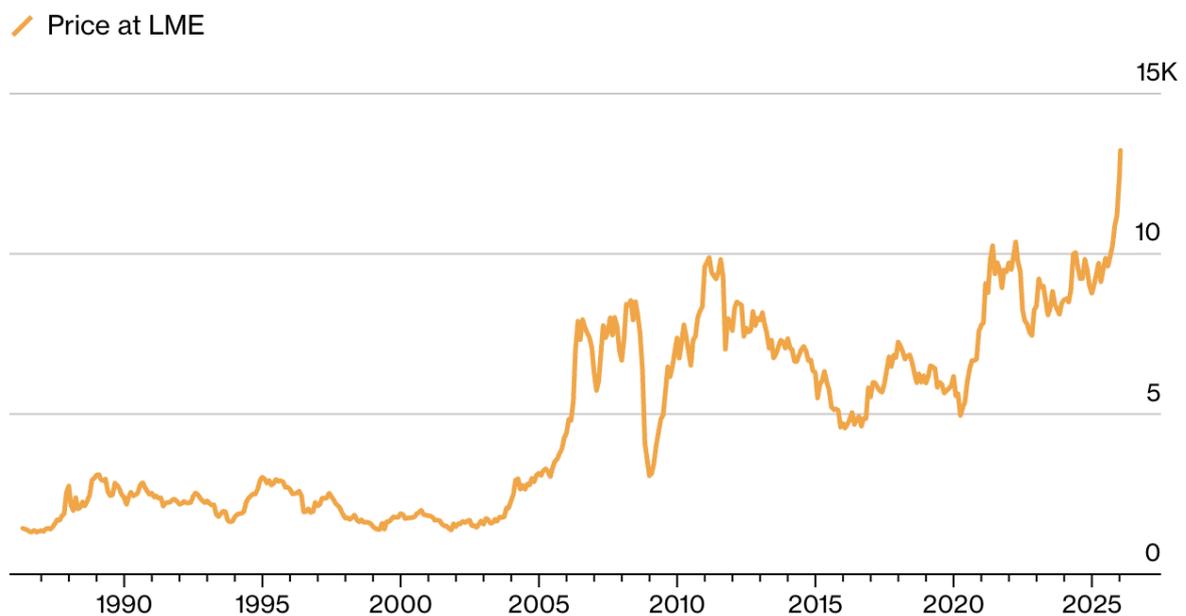
⁴⁴⁶ Discovery Alert, [Fortescue and China Baowu Lead Green Steel Revolution with Pioneering Decarbonization Partnership](#), 9 January 2025

Section 11. Strategic Metals - Copper

Copper is used in just about everything that's electrified: smartphones, refrigerators, EV and power grids. BloombergNEF estimates global copper consumption could increase by 60% in the coming decade in its baseline scenario. China has long been expanding its global investment in copper mining, and upstream smelting processing capacity.

The copper market has been hit by a range of mine outages over 2025 from Chile to Indonesia. And increased fears that President Trump will impose tariffs on refined copper have also driven stockpiling in the US (up 450% over 2025), draining inventories elsewhere. Even as global demand for copper is growing, many of the world's major mines are aging, becoming less productive and deeper, posing a potential systemic risk to the global energy system transformation and electrification and data centre growth. Demand growth is outstripping forecast supply – Figure 11.1.⁴⁴⁷ As concerns over supply mount, copper prices have been on a record-breaking run, rising 40% over 2025 to reach >\$13,000/t in January 2026 on the London Metal Exchange.⁴⁴⁸

Figure 11.1: Copper is Trading at Record Highs (LME, US\$/t)



Source: Bloomberg

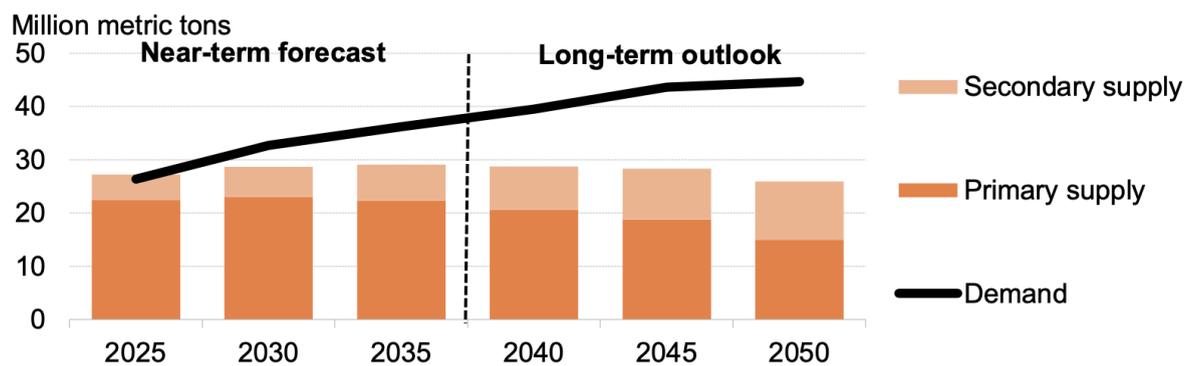
Analyst Kevin Walmsley notes two key aspects to illustrate the scope of the copper issue: 42% of copper consumption in the US is by the construction industry. Outside the US, 70% is used for electronics, renewable energy, and EVs. Green energy projects use 12 times more copper than fossil fuel systems, and electric cars demand more than twice as much.⁴⁴⁹

These mining setbacks have exacerbated the pressure on copper smelters. For years, smelting capacity, particularly in China, has expanded faster than miners' output, eroding smelters' already-thin profit margins.

⁴⁴⁷ FT, [Big copper shortage to pose 'systemic risk' to global economies](#), warns S&P, 8 January 2026

⁴⁴⁸ FT, [Copper price hits new record amid concerns over supply disruption](#), 6 January 2026

⁴⁴⁹ Kevin Walmsley, [Copper blows up: Speculators are hoarding metals that are needed by manufacturers, builders](#), 16 January 2026

Figure 11.2: Global copper demand is forecast to rapidly outstrip supply by 2050

Source: BloombergNEF [Transitions Metals Outlook 2025](#)

December 2025 saw China’s Shandong province plan to invest US\$28bn to create a world-class smelting hub by 2027 to secure supply chains for copper. SCMP reports Shandong is home to major global copper firms such as Yanggu Xiangguang Copper and CNMC Albetter Copper. The government vowed to “cultivate key enterprises” and support them by building world-scale industrial precincts so as to “lead on the national level in the copper-smelting sector”: “We support qualified enterprises to ‘go global’ and cooperate with [member countries participating in] the Belt and Road Initiative,” encourag[ing] cross-border mergers and acquisitions, equity participation and technological cooperation, “so as to deeply integrate into the global copper industry value chain”, the Provincial Government’s plan states.⁴⁵⁰ This looks to follow the same path as China has done in many resources sectors from rare earths and lithium to aluminium smelting, and by financing the massive scaling up of nickel supply chains in Indonesia.

Underinvestment in new mine development combines with accelerating electrification creating a more structural problem: new deposits are getting harder and costlier to extract as ore grades fall, meaning more rock needs to be mined to secure the same amount of metal. Growing scrutiny of the environmental impact of copper mining, including water consumption and contamination, is also making it more politically challenging and expensive to develop new projects. And the mining industry notes the average lead time from discovery to first output is more than 15 years.

Just three countries are responsible for almost 50% of mined copper production: Chile, the DRC and Peru. Russia and Australia are the other two largest copper producers.

China’s global share of copper refining has risen from 45% in 2020 to a record high 52% in 2025, with refining China’s smelter and refining capacity growing 10% yoy.⁴⁵¹

Global miners are moving into copper in recognition of its energy system transformation opportunities. Rio Tinto grew its exposure to Mongolian copper in 2022, BHP invested US\$8bn buying copper miners OZ Minerals and Argentina’s Filo Corp. And December 2025 saw Fortescue launch a formal takeover bid for Alta Copper, a Canadian listed Peruvian copper exploration firm, with a US\$2bn capex development proposal.⁴⁵²

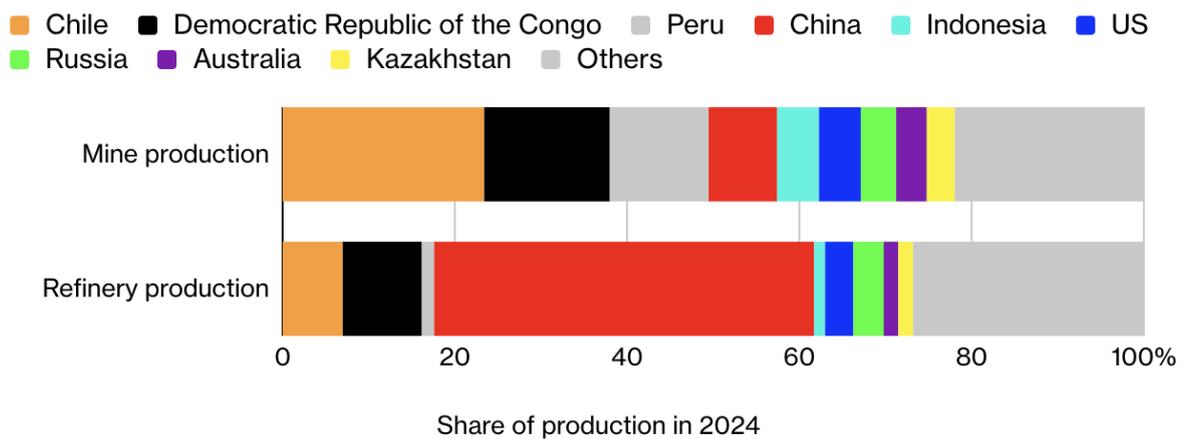
China only has the world’s eighth-largest copper reserves, according to the US Geological Survey, putting it behind leaders in Latin America and even the US. But China has compensated for this by acquiring mines overseas and building out massive smelting capacity domestically. China accounted for more than 40% of global refined copper production in 2024 – Figure 11.3.⁴⁵³

⁴⁵⁰ SCMP, [China’s copper heartland vows to build US\\$28 billion empire, dominate in global market](#), 13 December 2025

⁴⁵¹ BMI, [In charts: Copper’s shifting trade flows](#), 14 January 2026

⁴⁵² AFR, [The curious case of Fortescue’s perfectly priced copper target](#), 30 December 2025

⁴⁵³ Bloomberg, [The World Needs a Lot More Copper. But Will There Be Enough Supply?](#) 11 December 2025

Figure 11.3: Global copper mine and refinery production, by country, 2024

Source: US Geological Survey via Bloomberg

And with this comes a growing risk that China will further undermine global copper refinery margins. China's state owned firms work in the national interest, but this can massively undermine the financial viability of private non-Chinese market participants.

January 2026 saw BMI report a Chinese smelter had contracted with Chilean miner Antofagasta for 2026 at a record low US\$0/t annual copper concentrate treatment and refining charges, and then Escondida copper refining being transacted at -US\$0-50/t. This is well below the previous record low of just US\$21/t set for 2025 by China, and well below the US\$60-100/t averages seen in the past decade. Ignoring economics to ensure in-country capacity, ignoring the economics.⁴⁵⁴

Copper – Chile – China Minmetals Corp

Chile is now the world's leading copper producer. The majority of Chile's copper is exported to China. The Chile-China free trade agreement (FTA) of 2005 was upgraded to a Comprehensive Strategic Partnership in 2016.

Back in 2006 China's Minmetals Corp. signed a US\$2bn JV with Chile's SOE Codelco for the long term development and offtake of Chilean copper reserves. As of 2025 the majority of Chile's copper exports go to China, as it does in lithium exports.

Copper – Peru – China Minmetals Corp

China's largest operation in Peru is the Las Bambas 400,000tpa copper mine, source of 2% of the world's copper.⁴⁵⁵ The Las Bambas project is owned by a consortium of three firms: China Minmetals Corporation (62.5%); Hong Kong-based Guoxin International Investment Co. Ltd. (22.5%); and CITIC Ltd. (15%). Since purchasing Las Bambas from Glencore for US\$5.85bn in 2014, the consortium has invested some US\$10bn in the project.

Copper – Peru – Chinalco

The Aluminum Corporation of China (Chinalco) acquired the Toromocho mine proposal in Peru in 2007 for C\$840m, and then invested US\$2.15bn to commission this mine in 2015, such that it is now one of the world's largest copper projects.

May 2023 saw Chinalco commence a US\$1.35bn investment to expand production at its Toromocho mine by 20%,⁴⁵⁶ with capacity expected to reach 300,000tpa of copper concentrate.

⁴⁵⁴ BMI, [Chinese smelter reportedly agrees to record low copper concentrate TC/RCs](#), 23 December 2025

⁴⁵⁵ Mining Technology, [MMG and Hudbay warn of impact from miners' protests in Peru](#), 14 July 2025

⁴⁵⁶ Reuters, [Chinalco expects to start Peru copper mine expansion no later than end-June](#), 23 May 2023

Copper – Peru – Zijin Mining Group

China's Zijin Mining Group has been trying to develop the Río Blanco Copper-Molybdenum Mine proposal (one of the world's largest undeveloped copper deposits) since 2007, with little success to-date due to deep seated community resistance.

Copper – Brazil – Baiyin Nonferrous Group

April 2025 saw Baiyin Nonferrous Group acquire Mineração Vale Verde (MVV) for US\$420m. MVV owns the Serrote greenfield open-pit copper-gold asset in Alagoas, Brazil.⁴⁵⁷

Copper – Congo DRC - CMCGC

September 2023 saw China Metallurgical Construction Group Corporation (CMCGC) commission its Longxi mining and smelting project in the Congo, undertaken for the production of 40,000tpa of cathode copper.⁴⁵⁸

Copper – Congo DRC – China Molybdenum (CMOC)

CMOC operates the Kisanfu (KFM) and Tenke-Fungurume copper and cobalt mines in the Democratic Republic of Congo (DRC). CMOC holds an 80% ownership stake with the remaining 20% stake held by the DRC's state-owned mining company (Gécamines).

July 2024 saw CMOC sign a cooperation agreement with Lualaba Power SA (a JV with the national electricity company (SNEL)) of the DRC for the Nzilo II hydropower project, accelerating the development of the 200MW electricity project to provide stable power supply for the company's next wave of capacity expansion. Power supply is a major bottleneck in the development of the mining industry in the DRC, with power shortages severely limiting production at mines and smelters. This hydro development is a significant infrastructure project for CMOC to achieve its copper production target of 0.8-1.0Mtpa by 2028 and become one of the world's top copper producers.⁴⁵⁹

October 2025 saw CMOC Group provide a progress report on its US\$1.1bn KFM Phase II Project. With a construction period of two years, this project is scheduled to be put into production in 2027, increasing the mine's processing capacity of raw ore by 7.26Mtpa, with an expected average increase of 100,000tpa of copper metals.⁴⁶⁰

CMOC has global revenues of Rmb190bn in CY2025 and produces 0.7Mtpa of copper, 0.12Mtpa of cobalt and 14ktpa of molybdenum, plus 10ktpa of niobium. The copper and cobalt output comes exclusively from CMOC's Kisanfu and Tenke-Fungurume mines in the DRC.

Copper Mine and Smelter – Congo DRC – Ivanhoe Mines & Zijin Mining

The Kamoakakula copper mine in the Congo DRC was commissioned in 2021 by a joint venture operated by Kamoakakula Copper S.A., owned by Canadian listed Ivanhoe Mining (40%), China's Zijin Mining Group (40%) and the government of the Congo DRC (20%).

December 2025 saw Kamoakakula Copper S.A.'s new US\$1.1bn blister copper concentrate refinery reach first copper anode production at the location of its Kamoakakula mine. Kamoakakula Copper S.A. invested US\$450m in ongoing electricity grid modernisation investments, including rehabilitating the 78MW

⁴⁵⁷ Mining Technology, [Appian Capital divests MVV to Baiyin Nonferrous for \\$420m](#), 3 April 2025

⁴⁵⁸ CNMC, [The Longxi mining and smelting project in the Congo undertaken by China Metallurgical Construction Group Corporation was put into operation](#), 21 September 2023

⁴⁵⁹ CMOC press release, [CMOC Signs Contract for Nzilo II Hydropower Project to Provide Power Assurance for Next Capacity Surge](#), 1 July 2024

⁴⁶⁰ CMOC press release, [3QCY2025 Financial Report](#), 24 October 2025

Mwadingusha dam and the 178MW Inga II hydroelectric dam as part of this total project.⁴⁶¹ The facility has a processing capacity of 500,000tpa, making it Africa's largest.⁴⁶²

Zijin Mining holds a greater indirect share given its 14% shareholding in Ivanhoe Mines. China's CITIC Metal Co. holds another 23% equity stake in Ivanhoe Mines. CITIC Metal and Zijin Mining have offtake agreements to purchase 80% of the copper anode production from the Kamoa-Kakula smelter.

Copper Smelter – Congo DRC - China Nonferrous Metal Mining Corp

2020 saw China Nonferrous Metal Mining Co. commission its US\$880m 100,000tpa Lualaba Copper and Cobalt Smelter located in southern Lualaba, Congo DRC.⁴⁶³

Copper – Congo DRC – Sino-Congolaise des Mines (Sicomines)

China's involvement in the Sicomines 200,000tpa copper and 6,000tpa cobalt mine is a large-scale, long-term "minerals-for-infrastructure" deal. The operating entity, Sino-Congolaise des Mines (Sicomines) SARL, is a JV between a Chinese consortium (68% equity share) and Congo DRC state-owned mining company, Gécamines (20-32%). The Chinese consortium includes China Railway Group Limited (CREC), Sinohydro, and Zhejiang Huayou Cobalt.

China in 2008 initially agreed to invest US\$3bn in the original mine development plus another US\$3bn for infrastructure development (roads, hospitals, power plants), but with this second commitment lifted in May 2024 to US\$7bn of public infrastructure investment over the mine's life to 2040.⁴⁶⁴

Copper Smelter – Congo DRC – Dowstone Technology

July 2025 saw China's Dowstone Technology propose a US\$165m investment in a copper smelter in the Congo DRC to produce 30,000tpa of copper cathodes.⁴⁶⁵

Copper – Ecuador - Jiangxi Copper

December 2025 saw China's Jiangxi Copper propose a US\$1bn bid for the 88% LSE-listed SolGold, an explorer with deposits of 14.1Mt copper and 33.1Moz gold in Ecuador, a challenging jurisdiction for western mining companies to proceed.⁴⁶⁶

Copper – Morocco - Boway Alloy

October 2025 saw Boway Alloy announce it will build a US\$150m facility to produce 30,000tpa of special copper alloy electronic material strips in Nador Province, Morocco.⁴⁶⁷

Copper Smelter – Kazakhstan - China Nonferrous Metal Mining Corp

June 2024 saw China Nonferrous Metal Mining Co. announce a new US\$1.5bn 300,000tpa copper smelter in the Abay region, Kazakhstan sourcing copper concentrate from within the region.⁴⁶⁸

⁴⁶¹ Bankable Africa, [Kamoa-Kakula Smelter Investment Reaches \\$1.1 Billion](#), 8 January 2026

⁴⁶² Ecofin Agency, [Ivanhoe Mines Starts Up \\$700M Copper Smelter at Kamoa-Kakula](#), 2 December 2025

⁴⁶³ SASAC, [CNMC-Invested Mining, Copper Smelting Projects Go into Production](#), 22 January 2020

⁴⁶⁴ Bloomberg, [Congo's \\$7Bn Deal With China Linked to Copper Price Under New Contract](#), 7 May 2024

⁴⁶⁵ Bankable Africa, [China's Dowstone Announces \\$165 Million Copper Smelter in DRC](#), 9 July 2025

⁴⁶⁶ AFR, [BHP backs \\$1.69b Chinese bid for copper star SolGold](#), 15 December 2025

⁴⁶⁷ Solarbe Global, [US\\$150M Boway Alloy Makes a Major Shift in Overseas Capacity Investment Plan](#), 11 October 2025

⁴⁶⁸ Mining Technology, [Kazakhstan signs agreement for \\$1.5bn copper smelter project](#), 3 June 2024

Copper – Afghanistan - CMCGC

July 2024 saw CMCGC hold the groundbreaking ceremony to commence construction of what could be the world's second largest copper mine in Afghanistan. When CMCGC won the 30-year rights to develop Mes Ayank way back in 2007, it was hailed by the Assets Supervision and Administration Commission, which oversees China's state-run companies, as a successful attempt "to greatly alleviate the shortage of copper resources in China, increase China's strategic resource reserves and enhance China's influence in international mining industry". The US\$4.2bn investment agreement was signed in 2018, with an expected five-year construction project that was to also include a power plant and a water pumping station, as well as other public facilities such as schools, hospitals, mosques and housing. The deal was expected to create 10,000 jobs and an annual output of US\$1.2bn, accounting for about half of Afghanistan's GDP at the time. However, the project has been plagued by delays as a result of problems such as the security situation and disputes between CMCGC and the previous US-backed Afghan government.⁴⁶⁹

Copper – Serbia - Zijin Mining

In 2018, China's Zijin Mining made a US\$1.26bn investment with the Serbian government to gain a 63% stake in the Bor copper mining and smelting complex (the rest is still owned by the state), as well paying off a US\$200m debt. The consequences of the environmental and health costs associated with the mining are clear, and externalised on the local community.⁴⁷⁰

Zijin Mining's Serbian copper production in 2025 was 290,000tpa, coming from the Bor copper complex and Zijin's nearby wholly-owned Ćukaru Peki mine. Zijin Mining's Serbian workforce totals 7,700.

September 2023 saw Zijin Mining sign an MoU with the Serbian government to invest an additional US\$3.8bn in Serbia. The investment will be made to develop the Lower Zone of the Cukaru Peki Mine, and is expected to place Serbia among the largest European copper and gold producers. As part of this, Zijin agreed to develop a US\$200m 300MW solar power plant to help meet the company's needs for electricity.⁴⁷¹

December 2025 saw Zijin report on the significant investments it has made to improve environmental performance of its Serbian copper mine.⁴⁷²

⁴⁶⁹ SCMP, [Afghan copper mine holds promise for Taliban, tempered expectations for China](#), 25 July 2024

⁴⁷⁰ Financial Times, [The Serbian mining town where copper is everything](#), 12 December 2025

⁴⁷¹ Zijin press release, [China's Zijin Mining to invest \\$3.8bn in Serbia](#), 11 September 2023

⁴⁷² Zijin press release, [2500 Days of Transformation: Zijin Resolves Water Pollution in Serbian Mining Town](#), 11 December 2025

Section 12. Strategic Metals - Aluminium

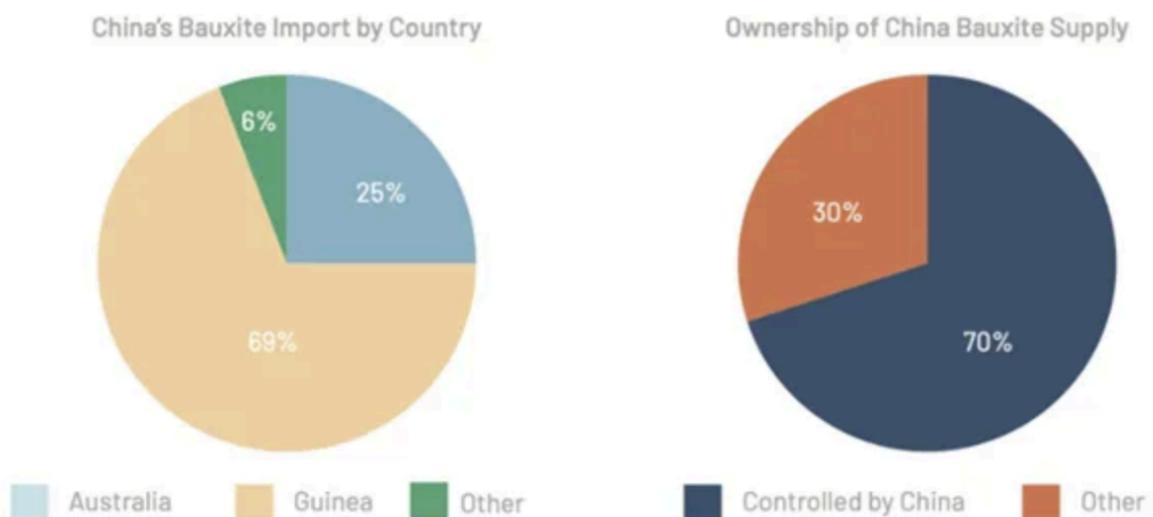
China entered the global aluminium smelting sector in 2000 and by 2025 controlled a global market share approaching 60%. The US exited WWII with a 50% global share, but by 2025 this was whittled away to just 2% share. With China imposing an aluminium capacity cap in its domestic market, Chinese investors are now rapidly looking to build value-added alumina and aluminium smelter capacity at speed and scale in Indonesia, powered by behind-the-meter coal power plants. This risks repeating a global overbuild of new capacity as seen in Indonesian nickel since 2020.

China has just 2-3% of the world's total bauxite reserves, but by 2025 accounts for 60% of global aluminium smelting, up from 41% in 2010.⁴⁷³ The rapid expansion of China's aluminium industry has led to a surge in alumina production globally, accelerating the depletion of high-quality bauxite resources. China is also accelerating aluminium recycling, with a target of 15Mtpa to provide a higher degree of self-sufficiency. And relocating Chinese aluminium smelters to provinces supplied by hydro-electricity and then building behind the meter renewables towards complete decarbonisation, domestically. Offshore, it is a different picture, with behind the meter coal plants powering brand new refineries and smelters.⁴⁷⁴

With accelerating energy system transformation, BloombergNEF expects global aluminium demand to increase 50% in the coming decade to 2035. This is very strong sustained growth, but short of some more fanciful projections, along with resulting claims of looking massive shortfalls in supply.⁴⁷⁵

In 2024 China sourced 75% of its bauxite from Guinea (69%) and Australia (6%), a shift away from its reliance on Indonesia post that government implementing unprocessed raw material export bans. Noteworthy is that China has control of the majority of this bauxite import supply – Figure 12.1.

Figure 12.1: China's Sources of Bauxite and % of Bauxite Supply Under China's Control (2024)



Source: China Customs data, [Kevin Walmsley](#), 3 January 2026

Growing China-Guinea Ties

China has built up strong geopolitical relations with the military junta of Guinea over the last decade, which is increasingly a key strategic supplier for China of both bauxite and iron ore (refer Section X).

⁴⁷³ [International Aluminium](#)

⁴⁷⁴ FT, [China's aluminium smelters embark on green long march](#), 8 February 2026

⁴⁷⁵ Michael Barnard, [The Copper Constraint That Isn't](#), 3 October 2025

2017 saw a broad agreement to secure bauxite resources with China committing to provide a US\$20bn loan to Guinea over 20 years, with the loan to be repaid through revenues from various mining and enabling infrastructure projects, including those by SPIC, Chalco and CHICO, and in exchange for concessions on bauxite mined in the West African country.⁴⁷⁶

Guinea's bauxite export volumes have trebled in the last decade, resulting in global oversupply and pressuring bauxite export pricing.⁴⁷⁷ And China controls the majority of Guinea's bauxite exports (which are high alumina content and lower in impurities), both directly in terms of mining, as well as indirectly through building the enabling port and rail infrastructure, and through long term offtake agreements. This investment is mainly: Société Minière de Boké (SMB)-Winning Consortium (that includes China Hongqiao, UMS International, and the Guinea government); CDM-CHINE, a subsidiary of China Henan International Cooperation Group (CHICO); and State-owned CHALCO (Aluminum Corporation of China).⁴⁷⁸

Recent Chinese investments into aluminium supply chains in Guinea include:

- October 2025 saw China's SPIC commence construction of phase 2 of the first Guinea alumina refinery, plus an associated captive 250MW coal fired power plant. This US\$1.03bn investment represents a significant investment in within-country downstream processing capacity with an expected capacity of 1.2Mtpa, due for commissioning by 2028.⁴⁷⁹
- Winning Consortium Alumina Guinea (WCAG) officially launched construction of its US\$1.2bn, 1.2Mtpa alumina refinery project in December 2025. WCAG includes China's Shandong Weiqiao Aluminum and Power Co., and China Yantai Port Group.
- Chalco made an investment of US\$500m to develop a 12Mtpa bauxite mine in the Boffa area, which was commissioned in 2024 (a proposal abandoned by BHP). This is the first phase of Chalco's project. Chalco is proceeding with a US\$700m Boffa expansion. This second phase, which also involves collaboration with Ashapura Minechem and China Railway on logistics and port development, is on track to start production in 2026/27.⁴⁸⁰
- February 2024 saw the SMB consortium announce plans to invest a further US\$1bn over five years to upgrade its river terminals and buy vessels, aiming to increase export capacity.⁴⁸¹

December 2025 saw United Arab Emirates-based bauxite miner Axis International initiate a US\$29bn claim in a case before the World Bank following the "illegal revocation" of its mining permit in Guinea in 2025, when it said the government had also seized its mining equipment and frozen its bank accounts. Axis owned 85% of the second largest bauxite export mine in the country.

The Guinean government has revoked a range of licences over 2025 across its gold, bauxite, diamond, graphite and iron sectors as the government of President Mamadi Doumbouya seeks to extract more value from value-adding domestically from the country's significant mineral resources, as well as increasing Government equity stakes in the projects. The Guinean government has demanded more bauxite and iron ore processing occur in the country and BMI has predicted a "full-scale ban on bauxite exports by Guinea as a high-probability event in 2026".⁴⁸²

⁴⁷⁶ AL Circle, [China agrees to a loan of \\$20 billion to Guinea in exchange of concession on bauxite](#), 7 September 2017

⁴⁷⁷ AL Circle, [Guinea's increased bauxite exports to China lead to oversupply and an alumina price squeeze](#), 22 December 2025

⁴⁷⁸ Discovery Alert, [Chinese Demand Drives Record Growth in Guinea's Bauxite Exports](#), 1 July 2025

⁴⁷⁹ Asian Metal, [SPIC Guinea phase II alumina project breaks ground](#), 3 November 2025

⁴⁸⁰ Mysteel, [Guinea's red earth rolls on: Bauxite exports race toward 200 mln t in 2026](#), 7 November 2025

⁴⁸¹ AL News, [Guinea's top bauxite producer announces \\$1 billion investment for terminal upgrades and vessel acquisition](#), 6 February 2024

⁴⁸² FT, [Bauxite miner Axis launches \\$29bn claim against Guinea](#), 29 December 2025

This is part of a wider resource nationalism push by some African nations, particularly Mali, Niger, Ghana, Tanzania and DR Congo in addition to Guinea. International firms need to engage in more sustainable practices that ensure a more win-win outcome from finite resource extraction efforts in countries in desperate need for sustainable development.⁴⁸³ Greater global mineral traceability standards are also needed to overcome conflict minerals.⁴⁸⁴

China's state-owned Aluminum Corp of China (Chinalco) also owns a 11% equity stake in Rio Tinto, Australia's largest bauxite-alumina-aluminium exporter.

Saudi Arabia's PIF - Shandong Innovation Group

January 2026 saw a consortium of PIF and Red Sea Aluminium Holdings (a subsidiary of China's Shandong Innovation Group) to invest SR38bn (US\$10bn) in the development of an advanced, integrated aluminum complex in Yanbu, Saudi Arabia.⁴⁸⁵

Aluminium Corporation of China (Chinalco) – Rio Tinto – Brazil

January 2026 also saw Chinalco (67% share) partner with Rio Tinto (33% share) bid to acquire from Brazilian conglomerate Grupo Votorantim their controlling 68.6% stake in Companhia Brasileira de Alumínio, for US\$902m. Companhia Brasileira de Alumínio owns a portfolio of 1.6GW of hydro and wind farms across Brazil which supply power to an aluminium smelting network.⁴⁸⁶

China - Indonesia

Chinese-backed consortiums have four major aluminium smelters under construction in Indonesia, and plenty more under consideration. The capex cost of new smelters in Indonesia is reported to be US\$2,800/t, double that required in China, but half the expected construction cost required in the west.⁴⁸⁷

The Kaltara Project, located in the Kalimantan Industrial Park Indonesia (KIPI), is a partnership between Indonesia's Alamtri Resources (formerly Adaro Energy, 65% equity share), the Harita Group (12.5% share), and China's Lygend Resources (22.5%). There are three phases of 500,000tpa each. Phase I began partial operations in January 2026, with phase 2 expected on line by the end of 2026, both powered by behind the meter coal power. The third 500,000tpa phase is due by 2029 and will be powered from the new 1,375MW Mentarang Induk Hydroelectric Project.⁴⁸⁸

The Huafeng Group and Tsingshan Holding Group have created a JV for the Huaqing Aluminium Project. The phase 1 of 500,000tpa is nearing completion at the IMIP, with an ultimate goal of 1Mtpam supported by 1.5GW of behind the meter coal fired power generation.⁴⁸⁹

The Juwan & Taijing Projects represent a collaboration between Xinha Group (one of China's largest smelters) and Tsingshan Holding Group. These two facilities are nearing completion at Weda Bay and the IMIP. The first phase of 500,000tpa has been energised, with an ultimate goal of 1Mtpa.⁴⁹⁰

The Bintan Project is being developed by Shandong Nanshan Aluminium. This facility is located in the Galang Batang Special Economic Zone, with a phase I of 400,000tpa is expected online by end 2026, with a final planned capacity of 1mtpa.

⁴⁸³ FT, [How mining companies are adapting to newly assertive African states](#), 13 July 2025

⁴⁸⁴ FT, [Rwanda builds 'global scale' mines to shake off conflict mineral label](#), 30 December 2025

⁴⁸⁵ PIF, [PIF and Red Sea Aluminium Holdings sign initial terms to develop an advanced integrated aluminum complex in Saudi Arabia](#), 14 January 2026

⁴⁸⁶ AFR, [Rio Tinto partners with Chinalco on \\$1.3bn Brazilian aluminium deal](#), 30 January 2026

⁴⁸⁷ Aluminium Market Update, [The third coming of Indonesia in aluminium](#), 3 October 2025

⁴⁸⁸ Reuters, [Chinese firms drive aluminum expansion in Indonesia, raise surplus fears](#), 27 October 2025

⁴⁸⁹ SMM, [2025 SMM Field Trip to Indonesia's Aluminum Industry: Second Stop - Huafon Group's Jakarta Office](#), 23 June 2025

⁴⁹⁰ Argus, [Asean aluminium output to reach 2.7mn t](#), 22 December 2025

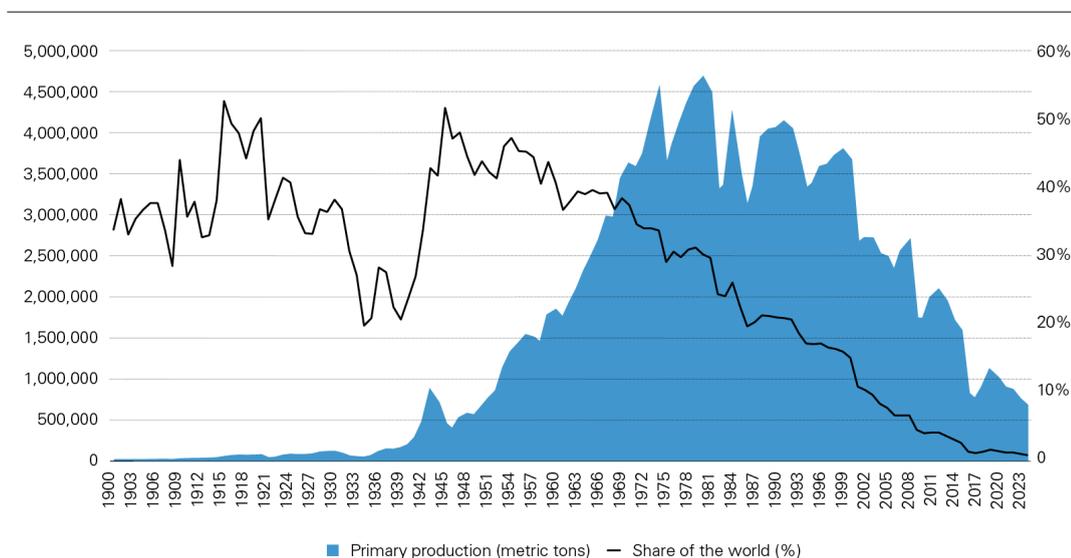
China - Kazakhstan - Xinfu Group

January 2026 saw China's Xinfu Group (an industrial conglomerate that in 2026 is the world's fourth largest aluminium producer) propose a US\$15bn industrial park in the Pavlodar region of Kazakhstan, integrated from coal and bauxite mining to aluminium smelters, and downstream manufacturing of wires and smartphone components.⁴⁹¹ This followed a June 2025 announcement that China's East Hope Group proposed to invest US\$12bn in building an integrated Kazakhstan bauxite-to-aluminium complex, proposed to be powered by 4.5GW of new domestic coal fired power and 3GW of wind.⁴⁹²

The steady collapse of the US aluminium industry

The absolute progressive gutting of the US aluminium capacity over the last fifty years is starkly evident in Figure 12.2.⁴⁹³ Whereas the US held a global share of >50% at the end of World War 2, by 2025 China held a 60% global share, with the US reduced to a ~2% share, and with proposed massive Chinese funded capacity expansions in Indonesia, Saudi Arabia and Kazakhstan, the US share will fall progressively shrink further.

Figure 12.2: The US Primary Aluminium Production and Global Share (1990-2024)



Source: The Aluminium Association, USGS via White & Case

June 2025 saw the Trump administration expand the use of Section 232 to lift US aluminum import tariffs from 10% to 50% to protect and incentivise US production.

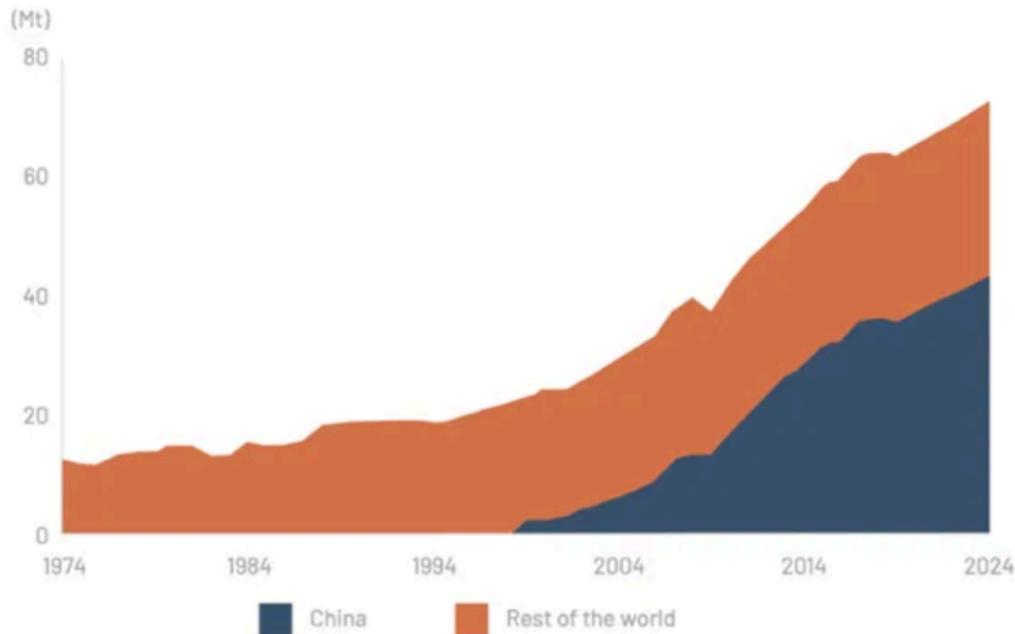
By contrast, China's aluminium manufacturing capacity global share has risen from near zero in 2000 to a record high 60% in 2024 – Figure 12.3.⁴⁹⁴ Almost all of this is used domestically, although this impacts global markets given much is used in China's consumer goods and packaging sectors, much of which is then exported.

⁴⁹¹ The Astana Times, [Kazakhstan, China Discuss \\$15 Billion Industrial Park Project](#), 9 January 2026

⁴⁹² Discovery Alert, [China's Strategic Mining Investments Expand Across Central Asia](#), 27 August 2025

⁴⁹³ White & Case, [Shovel-ready? Building US critical mineral resilience](#), 7 October 2025

⁴⁹⁴ Kevin Walmsley, [Aluminum prices soar on Trump tariffs, global shortages, and China supply chain moves](#), 3 January 2026

Figure 12.3: China's Primary Aluminium Production and Global Share (1974-2024)

Source: Kevin Walmsley, 3 January 2026

Australia should follow Indonesia, Guinea and Zimbabwe's lead, and ban the dig-and-ship resource extraction model of old that sees the progressive deindustrialisation of our economy. Exporting aluminium rather than bauxite would see a 7-11x value-up lift per tonne of final product. Or a 76x value uplift for ultra-high purity aluminium e.g. from Alpha HPA – Figure 12.4.

Figure 12.4: Value-adding Bauxite to Aluminium

| | | Price CY2024 | Price CY2025 | Ratio of bauxite to alumina to aluminium | Value Equivalent CY2024 | Value Ratio C2024 | Value Equivalent CY2025 | Value Ratio C2025 |
|-----------|--------------------------|-----------------|-----------------|---------------------------------------------------|-------------------------------|-------------------------|-------------------------------|-------------------------|
| Bauxite | US\$/t - fob Australia | 37 | 66 | 6 | 222 | 1.0 | 396 | 1.0 |
| Alumina | US\$/t | 492 | 407 | 2 | 984 | 4.4 | 814 | 2.1 |
| Aluminium | US\$/t | 2,487 | 2,600 | 1 | 2,487 | 11.2 | 2,600 | 6.6 |
| Aluminium | US\$ - Ultra-high purity | n.a. | 30,000 | 1 | n.a. | n.a. | 30,000 | 75.8 |

Source: OCE [Resources and Energy Quarterly](#) Dec'2025, CEF calculations

Section 13. Future Made in Australia (FMiA)

Australia is ranked 105th among the 145 countries tracked by Harvard's Atlas of Economic Complexity, falling behind countries like Botswana and Côte d'Ivoire.⁴⁹⁵ This reflects the progressive closure of much of our manufacturing industry (manufacturing was just 7% of GDP in 2025⁴⁹⁶) and an overreliance on dig-and-ship zero value add exports of iron ore, LNG and coal. Australia needs to adopt Green Energy Statecraft similar to the approach of our key North Asian trade partners in order to ensure our economy transitions from our current over-reliance on zero value-add fossil fuel exports to zero emissions industries of the future, collaborating with our key trade partners to help them deliver on their carbon pollution reduction commitments.

Many of Australia's refineries and smelters are under growing financial distress, reflective of many of the facilities approaching end-of-life and under-investment in sustaining capex. This has worsened over the last decade with increased international pricing pressures, much of which has arisen as China has progressively and continually increased its global share of critical mineral and strategic metals processing, with a resulting increase in demands for anti-dumping protection. The Australian government in 2025 was under growing pressure to provide financial support for resource value-adding in Australia as a series of temporary or permanent closures across alumina, aluminium, nickel, lithium hydroxide and steel have been announced – Figure 13.1.

Figure 13.1: Australian Refineries and Smelters Bailouts (A\$m)

| Structure | Parent Entity | Use of taxhavens & foreign entities | Government support A\$m | Date | Reducing Emissions? | |
|-----------------------------------------------|---------------------------------|-------------------------------------|-------------------------|----------|---------------------|----|
| Mt Isa smelter & Townsville Copper refinery | Glencore | Yes | 600 | Oct'2025 | No | |
| Port Pirie & Hobart lead smelters | Trafigura's Nystar | Yes | 135 | Aug'2025 | No | |
| Whyalla Steelworks | GFG Alliance | Yes | 2,400 | Feb'2025 | No | |
| Liberty Bell Bay Manganese refinery, Tasmania | GFG Alliance | Yes | 20 | Aug'2025 | No | |
| Phosphate Hill | Dyno Nobel | n.a. | 28 | Jul'2024 | Yes | |
| Tomago NSW Aluminium smelter | Rio Tinto (52%), CSR, Hydro Al. | No | ** | Dec'2025 | Yes | |
| Bell Bay Tasmania Aluminium smelter | Rio Tinto | No | n.a. | n.a. | Yes | |
| Pt Kembla Blast Furnace #6 | BlueScope | No | 137 | Jan'2024 | No | |
| Nickel West WA | BHP | No | n.a. | Jul'2024 | Yes | |
| TLEA Kwinana LHM Refinery, WA | Tianqi (51%), IGO Ltd (49%) | No |] | | | |
| Kemerton LHM Refinery, WA | Albermarle US | n.a. |] | 150 | Nov'2024 | No |
| Covalent Kwinana LHM Refinery, WA | Wesfarmers (50%), SQM (50%) | No |] | | | |
| Rare earths refinery, Eneabba, WA | Iluka Resources | No | | 1,600 | Progressive | No |
| Nolans rare earth mine and refinery, NT | Arafura Rare Earths | No | | 1,040 | Progressive | No |

Source: Climate Energy Finance estimates

May 2024 saw Resources Minister Madeleine King and Trade Minister Don Farrell announce an MoU to work with the EU to align on critical minerals, aiming to secure supply chains for the energy transition while promoting high Environmental, Social, and Governance (ESG) standards, initiatives similar to the EU's battery passport system. CEF endorses geopolitical efforts to both diversify and improve international transparency in supply chains and encourage the incorporation of best-in-class mining and refining standards, in particular explicitly encouraging decarbonisation.⁴⁹⁷

⁴⁹⁵ Harvard Growth Lab's [Atlas of Economic Complexity](#)

⁴⁹⁶ Trading Economics, [Australian GDP from Manufacturing](#), September 2025

⁴⁹⁷ Trade Minister Don Farrell press release, [More opportunities to work with the EU on critical minerals](#), 28 May 2024

Australia should have a competitive advantage in resource value-adding as and when we develop low cost zero emissions firm renewable energy at world scale. The emergence of the EU carbon border adjustment mechanism (CBAM) provides a path towards a clear price value for ‘embodied decarbonisation’ for green metal exports to the EU. CEF argues we need a path to an Asian CBAM to extend and leverage the EU CBAM to explicitly value our potential renewable energy competitive advantage, particularly for highly energy intensive smelting and refining products like green iron, aluminium and polysilicon.⁴⁹⁸

September 2025 saw the Australian Critical Minerals Research and Development Priorities Symposium recommend a greater public-private collaboration and enhanced international collaboration to encourage downstream value-adding in Australian critical minerals pre-export.⁴⁹⁹

January 2026 started with China imposing quotas on Australian beef exports, with a 55% tariff applying above the quota. As Prof. James Laurenceson at UTS’s Australia-China Relations Institute, these quotas don’t single out Australia, they are a reflection that China is focused on achieving self-sufficiency. Australia needs to understand China will serve its own national interests. And Australian exports to China in 2025 were an all time record high. And Australia’s economy remains highly complementary to China.⁵⁰⁰

February 2026 saw US-listed Albemarle announce it was unable to compete with China and would shut its A\$1.5bn Kwinana, WA lithium hydroxide refinery, commissioned only 4 years earlier.⁵⁰¹ CEF would recommend the Australian government’s NRF should buy this facility for \$1 and keep it open, in the national interest.

Australia needs to be firm and look after our own national interests, rather than vainly relying on other countries to protect our national interests. Trump has made that crystal clear. But there are massive investment, employment and net export opportunities for Australia to partner with cleantech leaders in zero emissions growth industries of the future, be that solar modules manufacturing, battery and mining EV equipment assembly, or green iron processing onshore here.

But Green Energy Statecraft is going to be needed, particularly in terms of navigating the global trade wars being promulgated by our so-called ally, over in the US.

Australia is at the forefront of the global energy system transformation, with renewable energy’s share of the total electricity market exceeding 50% for the first time in 4QCY2025, and Australia in 2025 becoming the third largest installer of batteries globally – behind only China (adding 162GWh) and the US (adding 46GWh)⁵⁰², adding 5GW / 12GWh of new BESS capacity⁵⁰³ and a world record 4.3GWh of home battery capacity.

⁴⁹⁸ CEF, [A Price on Carbon: Building Towards an Asian CBAM](#), June 2025

⁴⁹⁹ Australian Critical Minerals Hub, [Critical Minerals Research and Development Priorities Symposium](#), September 2025

⁵⁰⁰ The Conversation, [Despite new tariffs on beef, China is far from closing the door on trade with Australia](#), 9 January 2026

⁵⁰¹ AFR, [Lithium refinery shuts in another blow to ‘Made in Australia’](#), 12 February 2026

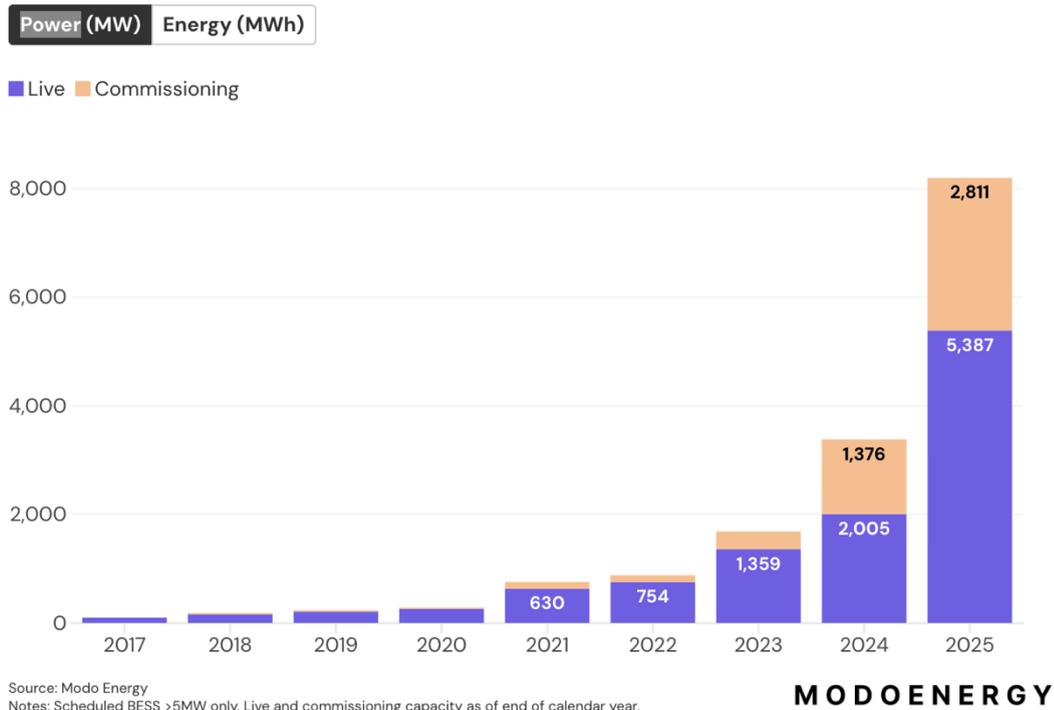
⁵⁰² BMI, [Iola Hughes](#), LinkedIn, 9 January 2026

⁵⁰³ Modo Energy, [2025: What the year meant for battery energy storage in the NEM](#), 15 December 2025

Figure 13.2: Australian BESS Deployments Accelerate (2017-2025, MW)

2025 was the year BESS scaled up – with **live** capacity more than doubling and another 2.8 GW in **commissioning**

Total BESS capacity



Source: Modo Energy, 15 December 2025

Recommendations

Balance maximising policy support and targeted anti-dumping measures: Australia has a strong and positive relationship with our key North Asian trade partners, including China. Australia needs to adopt a Green Energy statecraft approach to maximise the value of government policy and public finance support to encourage cooperation and onshore investments in Australian value-adding capacities to our resources pre-export, ideally mostly done in partnership with global cleantech leaders to bring robotics, expertise and whole-of-supply chain support to keep costs as close to globally competitive as possible. Australia should avoid import tariffs, but should consider rapid deployment of anti-dumping tariffs / local content mandates to protect strategic industries e.g. steel manufacturing and associated downstream processing.

Encouraging zero emissions industries of the future: Australia needs to limit policy interventions to protect end-of-life refineries, smelters or manufacturing unless it also incentivises an accelerated path towards zero emissions industries. For example, spending \$2bn of tax payer monies to bailout Whyalla steelworks should only be undertaken if it incentivises green iron (magnetite iron ore value-adding) and green steel (replacing the blast furnace with a renewable energy powered electric arc furnace).⁵⁰⁴ This also needs to prioritise ownership of these facilities dependent upon public financial support in the hands of strategically aligned partners working towards zero emissions e.g. China Baowu Steel or Korea Zinc, potentially supported by strategic equity stakes by the NRF or Future Fund. There are simply too many rundown, end-of-life refineries across Australia owned by

⁵⁰⁴ CEF, [A Strategy for Whyalla: Enabling the Transformation and Decarbonisation of the Steelworks](#), 17 November 2025

largely foreign myopically short term focused firms – Rio Tinto, Glencore, Trafigura, GFG – Figure 13.1. Industry Minister Tim Ayres and Resources Minister Madeleine King need to prioritise on protecting and aligning these facilities with Australia’s strategic national interests.

Australia needs to widen and deepen the Safeguard Mechanism to accelerate a path towards a whole of economy explicit carbon price. And incentivise electrification of mining and transport by capping and phasing out the \$12bn annual imported diesel fuel subsidy.⁵⁰⁵ Australia also needs to leverage Minister Chris Bowen’s COP31 Presidency to advocate for carbon pricing internationally i.e. a path to an Asian CBAM.⁵⁰⁶

Accelerate public capital deployments: The Australian government has allocated over A\$81bn of budget and capital support to zero emissions industries, grid transmission modernisation and resource value-adding since the start of 2023, with another A\$6bn of financial support from the state governments. CEF strongly advocates for more public investment to derisk and crowd-in private investment, both domestic and foreign, into new zero emissions firmed renewable energy and value-adding manufacturing in strategically important sectors e.g. resource value-adding. This is particularly important in protecting and modernising key manufacturing sectors like aluminium (CEF applauds the public capital support to decarbonise and lower the electricity costs of Tomago) that are vulnerable from rising fossil fuel energy prices and the absence of an explicit price on embodied decarbonisation in international trade. The EU CBAM is a really important policy to rectify this. It is really encouraging to see A\$15bn of capital and budget support allocated over the year to December 2025 (and another A\$2.1bn in the first two months of 2026), showing an accelerating ambition and speed, plus risk-tolerance.

⁵⁰⁵ CEF, [Transition Tax Incentive: Reforming Fuel Tax Credits into a Decarbonisation Tailwind](#), 20 August 2025

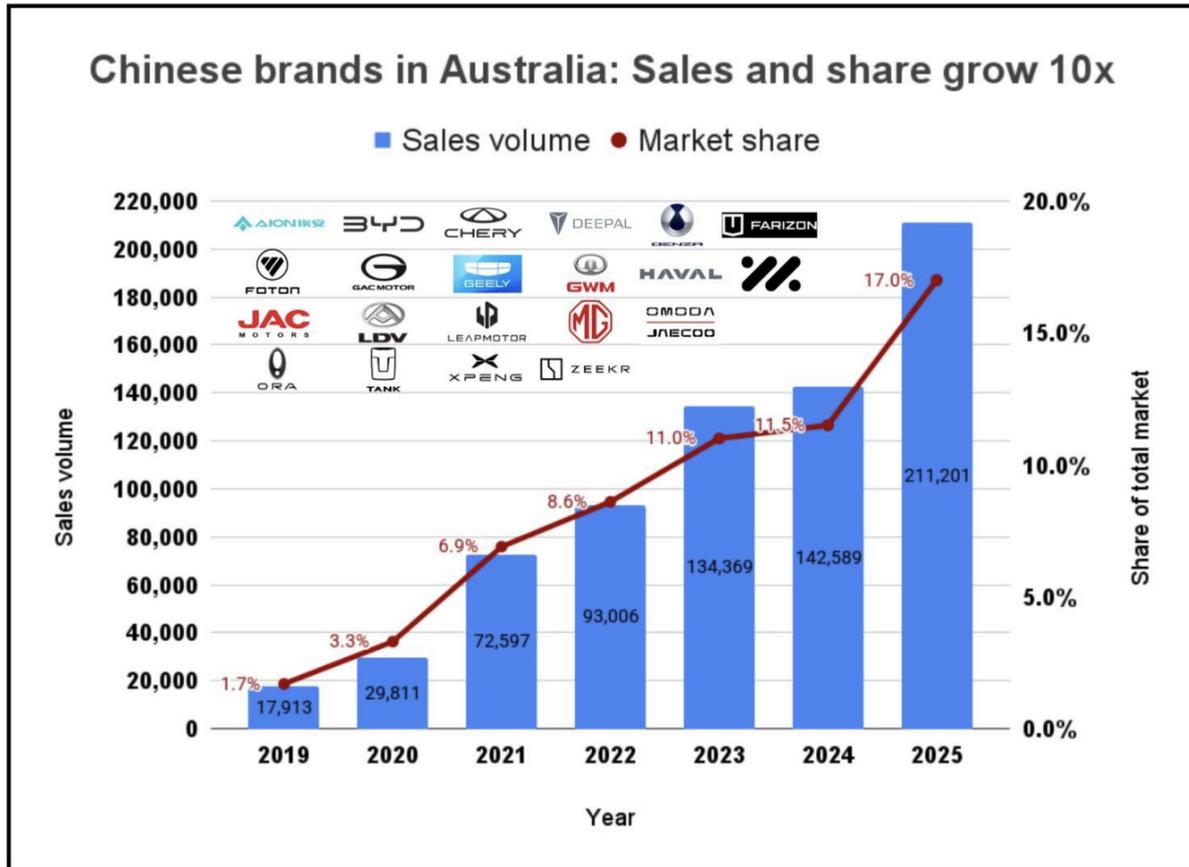
⁵⁰⁶ CEF, [A Price on Carbon: Building Towards an Asian CBAM](#), 5 June 2025

Section 13.1. Australia Embraces Chinese EVs

Australia passed 100,000 BEV sales in a calendar year for the first time in 2025, and 150,000 combined BEV and PHEV sales. That's around 13% of the total new vehicle market with a plug. Add 200,000 regular hybrid sales and just under 30% of cars sold were electrified. However once PHEVs are added to the equation, BYD became by some margin the largest seller of 'new energy vehicles' with 52,415 units, equal to around a third of the total market.⁵⁰⁷

The market share owned by Chinese brands in Australia has grown 10x since 2019. Annual sales have exploded from less than 18,000 to well over 200,000 by CY2025 – Figure 13.11.

Figure 13.11: Chinese EV brands in Australia (2019-2025)



Source: [Mike Costello](#), Cox Automotive Manheim.

⁵⁰⁷ AFR, [BYD builds its cars for Australia in just 52 seconds. Next, the world](#), 9 January 2026

Appendix A. Silver

The price of silver, like gold, has skyrocketed over 2025, hitting a record high of US\$83.62 per ounce at the end of December 2025, triple the average price of silver in 2024 of \$28.27 an ounce,⁵⁰⁸ only to spike higher in January 2026 as the US financial instability worsened and debased dollar assets – Figure X.⁵⁰⁹ Geopolitical and economic issues over 2025 saw a rush to hard assets and precious metals, from gold to silver.

October 2025 saw the US Geological Survey's 2025 draft list propose classifying silver as a critical mineral for the first time. This designation would place silver alongside strategic materials like lithium, rare earths, and cobalt as resources essential to economic and national security. Industrial applications now account for more than half of annual silver consumption.⁵¹⁰

December 2025 saw the Ministry of Commerce announce it will implement from 1 January 2026 a two-year special government licence for exports of silver, along with tungsten and antimony.⁵¹¹ While China is a net importer – primarily of silver ore – it is also a major refiner and exporter of refined silver, and a major consumer of silver, including for the manufacture of solar modules.

January 2026 saw Longi begin substituting base metals like copper for silver in its solar cells to mitigate the surging cost of the precious metal. This follows similar moves in December 2025 by Jinko Solar and Shanghai Aiko Solar Energy Co.⁵¹² The shift is driven by record prices of silver.

Figure A1: Chinese EV brands in Australia (2019-2025)



Source: LSEG via [Financial Times](#)

⁵⁰⁸ PV Magazine, [Silver hits record high of \\$83.62 an ounce](#), 29 December 2025

⁵⁰⁹ FT, [Gold hits record high and dollar weakens on Fed independence worries](#), 12 January 2026

⁵¹⁰ Discovery Alert, [US to Classify Silver as Critical Mineral in 2025](#), 1 October 2025

⁵¹¹ SCMP, China's [January 1 silver curbs to deepen global crunch, analysts warn amid volatility](#), 31 December 2025

⁵¹² Bloomberg, [Longi Joins China Solar Push to Cut Costs by Reducing Silver](#), 5 January 2026

Appendix B. Gold

China has been busy divesting much of its US Treasury holdings, and very little has returned to China, according to currency reports – refer Section 4.3. CEF understands China has been diversifying into foreign assets, operations, renewable energy infrastructure, mines and refineries but also precious metals, both physical and the means of producing them i.e. gold mines. 2025 alone saw over US\$4bn of gold company M&A by Chinese entities (probably a lot more, but gold is outside CEF's focus on the energy transformation). Official records put China's gold holdings at 2,305t (US\$400bn at current prices), but this could be only a fraction of their holdings.

February 2026 saw the gold price hit an all time record high of US\$5,400/ounce, thanks to Trump's destabilisation of world trade and western inflation pressures. The timing of China's investments is fortuitous, or more likely, a reflection of strong strategic planning by the state.

March 2020 saw Zijin Mining Group complete the acquisition of Canadian miner Continental Gold for US\$1bn (C\$1.4bn) to give Zijin control of the high-grade Buriticá gold project in Colombia, one of the world's largest and highest-grade gold projects.⁵¹³

October 2022 saw China's Zijin Mining invest US\$372m to acquire 95% of the Rosebel Gold Mines in Suriname South America from Canadian listed IAMGOLD Corp.⁵¹⁴

April 2024 saw Zhaojin Mining Industry Company Limited complete its acquisition of ASX-listed Tietto Minerals for A\$768m (US\$478m). While Australian listed, Tietto's flagship asset is the Abujar Gold Mine in Côte d'Ivoire, which achieved commercial production in July 2023.⁵¹⁵

April 2025 saw CMOC's acquisition of Canada's Lumina Gold Corp. for US\$419m, with its main prospect being the Cangrejos deposit, a major primary gold-copper project in Ecuador.⁵¹⁶

June 2025 saw China's Zijin Mining invest US\$1.2bn to acquire the Raygorodok Gold Mine in Kazakhstan. Zijin notes Central Asia is a key hub for the Belt and Road Initiative and one of the world's most resource-rich regions. Zijin now owns and operates the Raygorodok Gold Mine, together with the Jilau and Taror gold mines in Tajikistan and the Taldybulak Levoberezhny Gold Mine in Kyrgyzstan.⁵¹⁷

August 2025 saw Ghana's Parliament ratify Zijin Mining's 2024 US\$1bn acquisition of the Akyem Gold Mine from Newmont.⁵¹⁸

December 2025 saw CMOC agreeing to purchase all of Canada's Equinox Gold Corp.'s Brazilian gold assets (the Aurizona Mine, RDM Mine and Bahia Complex) for US\$1.02bn.⁵¹⁹

December 2025 saw Jiangxi Copper agree to acquire SolGold for US\$1.17bn. SolGold's key asset is its Cascabel copper-gold project in Ecuador's Imbabura province.⁵²⁰

January 2026 saw Zijin Mining Group offer to acquire Canada's Allied Gold for C\$5.5bn (US\$4.0bn), adding three large-scale, open-pit gold mines in Africa to China's global total.⁵²¹

⁵¹³ Mining.com, [Zijin Mining buys Canada's Continental Gold in \\$1 billion deal](#), 2 December 2019

⁵¹⁴ Zijin press release, [Zijin Mining to acquire world-class producing gold mine in Suriname](#), 20 October 2022

⁵¹⁵ Mining Weekly, [Tietto Minerals at 1-year high on Zhaojin's sweetened \\$733m bid](#), 15 April 2024

⁵¹⁶ CMOC press release, [CMOC Announces Acquisition of Lumina Gold for C\\$581M](#), 23 April 2025

⁵¹⁷ Zijin press release, [Zijin Mining to Acquire Gold Mine in Kazakhstan for US\\$1.2 Billion](#), 2 July 2025

⁵¹⁸ Zijin press release, [Ghana's Parliament Ratifies Leases of Zijin's Akyem Gold Mine](#), 11 August 2025

⁵¹⁹ CMOC press release, [CMOC announced the purchase of gold assets in Brazil for \\$1.015bn, growing its resources base in South America](#), 15 December 2025

⁵²⁰ Reuters, [SolGold agrees to \\$1.2 billion takeover by top investor Jiangxi Copper](#), 24 December 2025

⁵²¹ Zijin Mining press release, [Zijin Gold International to Acquire Allied Gold for C\\$5.5 Billion, Adding Three Large Open-Pit Gold Mines in Africa](#), 28 January 2026

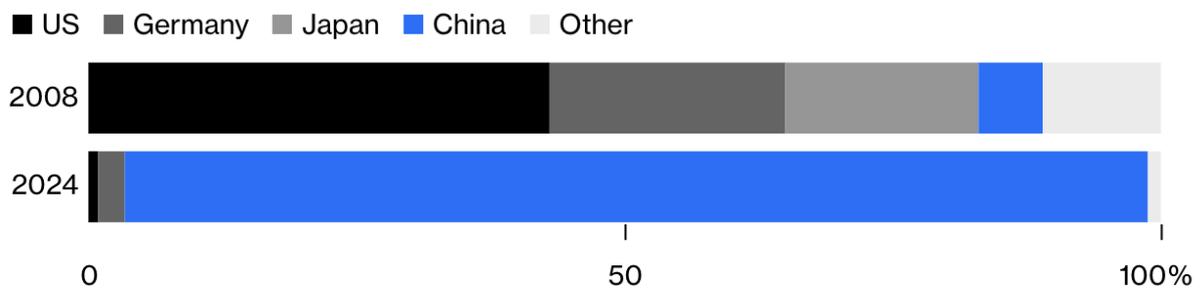
Appendix C. Polysilicon

Using electricity to melt and purify sand (silicon dioxide) produces polysilicon, a key input for the manufacture of solar wafers, cells and hence modules.

In 2008 the US's Hemlock Semiconductor Corp. (majority owned by a JV between Dow Chemical Co. and Corning Inc., with a minority 19.5% share held by Japan's Shin-Etsu Chemical Co.) was by far the largest global producer of polysilicon, with Germany's Wacker Chemie second and Japan third. Fast forward to 2024 and China holds a global market share of >90% as China's GCL Technology, Tongwei Co., China Silicon (a subsidiary of China Minmetals Corp.), Daqo New Energy, Asia Silicon (a subsidiary of Aikosolar) and Xinte (a subsidiary of TBEA Co.) have expanded their manufacturing capacities 3-5x each in the last decade – Figure C1.⁵²²

This modernisation and drive for economies of scale saw polysilicon prices collapse almost 90% over the last decade to US\$6-7/kg, for Chinese customers – Figure C2.

Figure C1: Global Polysilicon Production of Top 3 Producers (2008 vs 2024, %)

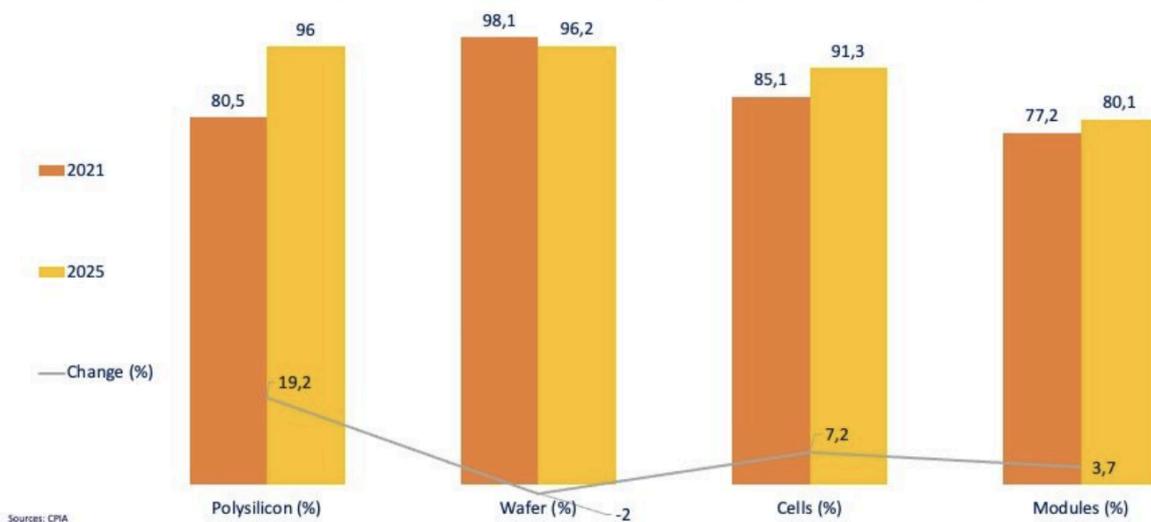


Source: BloombergNEF, NREL, David Fickling

China has continued to build more solar manufacturing capacity, growing global share even in the face of Made in America, Make in India and EU localisation policies - Figure C2.

Figure C2: Global Solar Manufacturing Concentration, by Component (2020 vs 2025)

2021–2025 Global Share of Production Capacities Increased on Average 7%



Source: Frank Haugwitz via LinkedIn, 7 February 2026

⁵²² Bloomberg, David Fickling, [How the US Lost the Solar Power Race to China](#), 30 September 2024

Solar Industry Price Stabilisation in 2026

Bernreuter Research reports that Chinese polysilicon manufacturers seem to believe they can turn market laws upside down: raising prices when demand is low and inventories are rising. It is astonishing how far they have come with their strategy.⁵²³

July 2025 saw GCL Technology suggest leading players in the Chinese industry set up a Rmb50bn (US\$7bn) fund to buy up and shut down at least 1Mtpa of low-quality production capacity for polysilicon, a key raw material in solar panel manufacturing.⁵²⁴ January 2026 saw China's anti-trust regulator, State Administration for Market Regulation, halt this proposed industry self-regulation.⁵²⁵

December 2025 saw China's top wafer makers propose price increases even as production is being curbed, consistent with the Chinese government's demands the industry implement anti-involution measures aimed at curbing loss-making competition and accelerating capacity exits.⁵²⁶

January 2026 saw the State Administration for Market Regulation alleged that some firms were taking advantage of measures introduced to curb price wars to engage in potentially monopolistic behaviour, suggesting Beijing is wary of price collusion even as it wants to end involution.⁵²⁷

January 2026 saw most Chinese solar manufacturers flag full year losses over CY2025 totalling US\$5-6bn losses overall, with TCL flagging ~US\$1.2bn, JA Solar >US\$600m and Jinko Solar flagging a loss.⁵²⁸

CEF expects solar module price stabilisation, but massive excess production capacity only newly commissioned (and still coming online in India, Africa and the US) means sustained price increases are unlikely to be sustained absent either massive factory closures and/or further strong sustained global solar installation growth from already record high levels, neither of which is likely unless China's government instigates a massive domestic solar installation program to further accelerate its electrification and decarbonisation infrastructure buildout to stimulate domestic economic activity, reduce fossil fuel imports and avoid building still more idle new coal fired power plant capacity.

February 2026 saw the polysilicon price in China continue its most likely temporary rise, which started at the end of 2025, reaching US\$7/kg.

Bernreuter Research reports that China's GCL Technology Holdings has achieved massive ongoing cost reductions, achieving a record low US\$3.38/kg cash cost of production in 3QCY2025.⁵²⁹

February 2026 saw Infolink forecast that 2026 is shaping up to be the first year in a decade of global solar installs declining, led by China consolidating after a decade of way-above expectations growth.⁵³⁰

Figure C2 also highlights the price difference for polysilicon in China vs outside of China. This an example of two-tiered intermediate market pricing that makes competing with Chinese downstream exports really problematic, even with anti-dumping protection.

⁵²³ [Bernreuter Research](#), LinkedIn, 8 January 2026

⁵²⁴ Reuters, [China polysilicon firms plan \\$7 billion fund to shut a third of industry capacity](#), 1 August 2025

⁵²⁵ PV Magazine, [China's competition regulator halts \\$7bn plan to consolidate polysilicon industry](#), 9 January 2026

⁵²⁶ PV Magazine, [China wafer leaders lift quotes, 2026 module prices may hit CNY 1/W](#), 31 December 2025

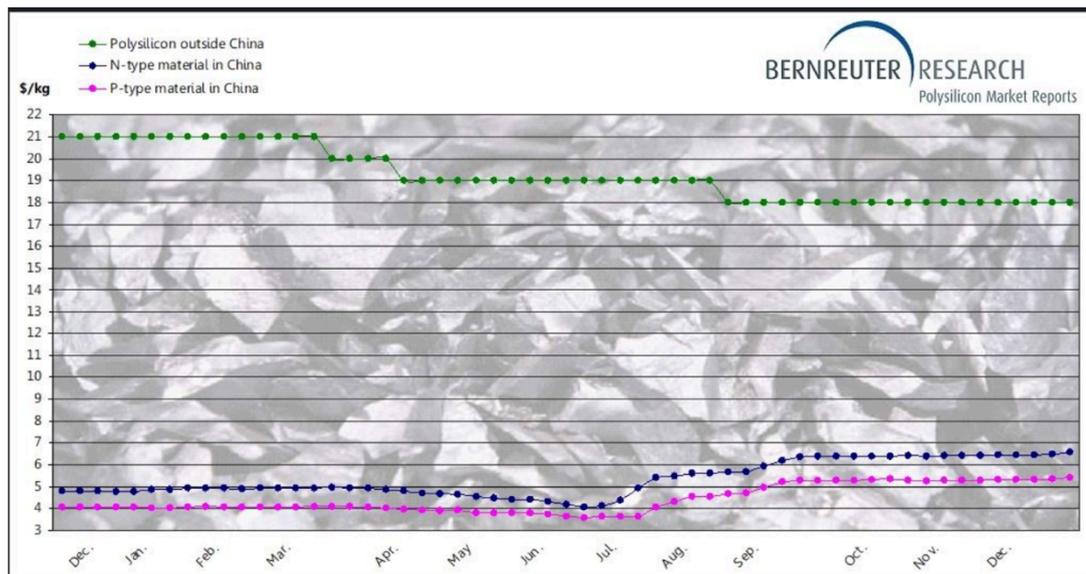
⁵²⁷ SCMP, [China's solar firms, once deemed too competitive, now face monopoly accusations](#), 12 January 2026

⁵²⁸ PV Magazine, [Major solar manufacturers report steep full-year losses](#), 16 January 2026

⁵²⁹ [Bernreuter Research](#), LinkedIn, 13 February 2026

⁵³⁰ Infolink, [Solar PV supply chain: 2026 marks the industry trough and the beginning of restructuring](#), 3 February 2026

Figure C3: Polysilicon Prices, US\$/kg, CY2025



China going global in polysilicon manufacturing

To work within the framework of increasing global tariffs against Chinese solar exports, since the start of 2023 China has announced plans to build over 60 solar manufacturing plants in wafers-cells-modules globally - as per the CEF OFDI tracker. This is also starting to happen in upstream polysilicon production.

September 2023 saw GCL Technology announce plans to build a 120ktpa polysilicon plant in Saudi Arabia as its first facility outside of China, but to-date nothing has come of this.⁵³¹

June 2024 saw GCL Technology exploring the UAE to establish a polysilicon production plant as part of the building a local integrated silicon ecosystem with Mubadala Investment Company, the state-owned investment vehicle of the Government of Abu Dhabi, the capital of the UAE.⁵³²

February 2026 saw United Solar Holding Inc. commence production at its US\$1.6bn 100ktpa polysilicon plant in the Sohar Port and Freezone in Oman, backed by a US\$250m loan and equity from the International Finance Corporation. United Solar Holding Inc. has equity links to China, partly through its founder, Zhang Longgen, reported as a U.S. citizen who was previously CEO of Chinese polysilicon maker Daqo New Energy Corp., as well as private equity investment from China's IDG Capital, alongside equity capital from Future Fund Oman, an investment arm of the Oman Investment Authority.^{533 534}

⁵³¹ Taiyang News, [Chinese Polysilicon Company Eyeing Middle East](#), 6 September 2023

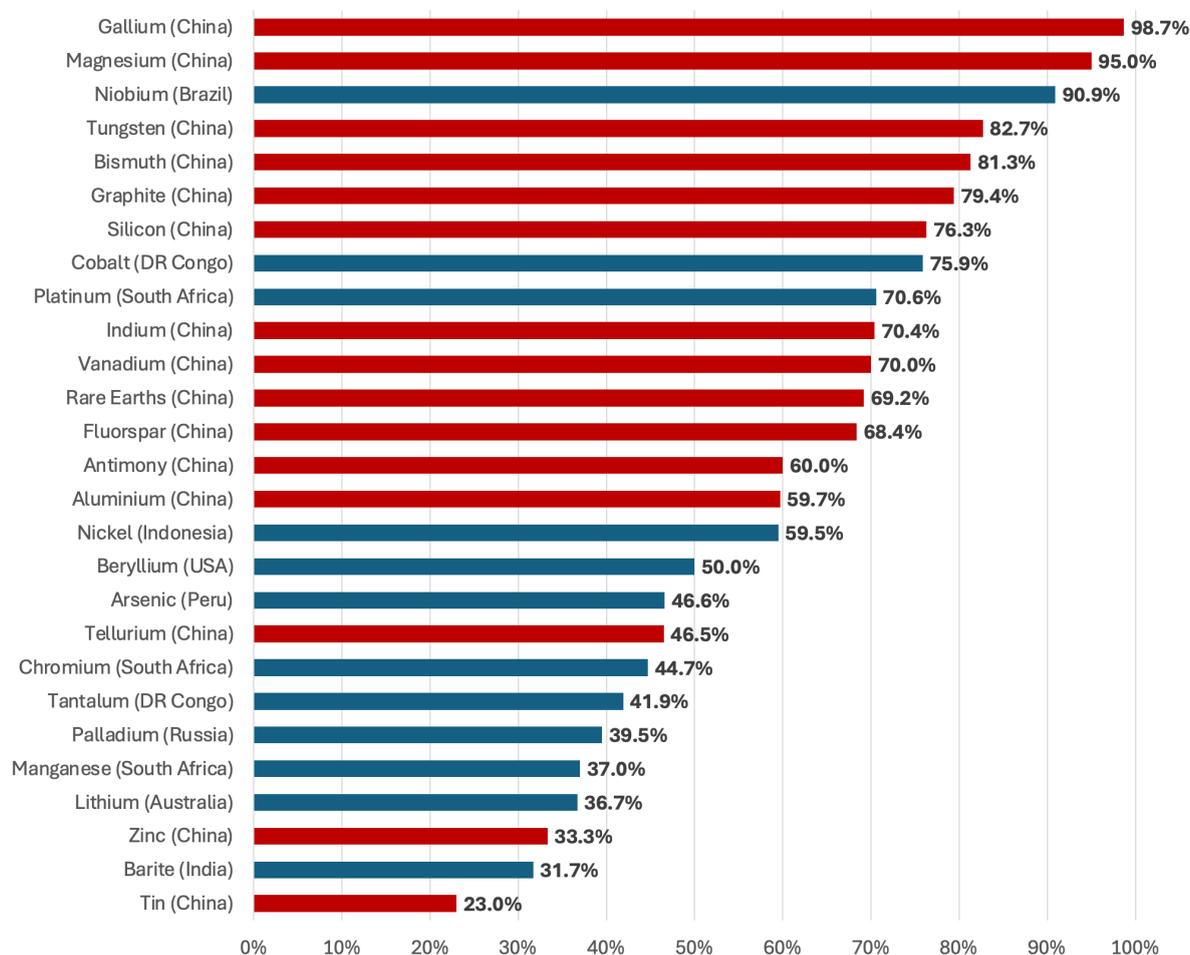
⁵³² Taiyang News, ['Largest' Polysilicon Production Plant Outside China](#), 5 June 2024

⁵³³ Reuters, [World Bank's IFC approves Oman polysilicon project loan over US objection](#), 10 August 2025

⁵³⁴ PV Magazine, [United Solar begins production at Omani polysilicon factory](#), 9 February 2026

Appendix D. China's Grip on Critical Minerals

Figure D1: Leading Producer of Critical Minerals and Strategic Metals, 2024



Source: White & Case LLP (2025)⁵³⁵

Note: Different countries have different and changing definitions and classifications of what constitutes a critical mineral. Copper and Silver were added to the final 2025 List of Critical Minerals by the Trump administration, through the U.S. Geological Survey (USGS) in November 2025.⁵³⁶

⁵³⁵ White & Case, [Shovel-ready? Building US Critical Mineral Resilience](#), 7 October 2025

⁵³⁶ Discovery Alert, [US Adds Copper, Silver and Potash to 2025 Critical Minerals List](#), 26 August 2025