



Institute for Energy Economics
and Financial Analysis

Green iron exports: Australia must look beyond China

As key buyer's demand declines, diversification opportunity
becomes economic necessity

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Contents

Key Findings.....	4
Executive summary	5
Introduction	8
Beyond peak iron ore	8
Australia's iron ore headwinds in China.....	11
China's steel exports may start to fall.....	12
Simandou mines ramping up faster than expected.....	14
Growing pressure from China Minerals Resources Group.....	15
Further geopolitical risk	16
Scrap steel a strategic resource for China	18
Green iron can add value to a commodity facing decline	19
Will China be an off-taker of Australian green iron?	22
China leading the world in green hydrogen, electrolyzers, renewables and batteries	24
Increased focus on key steel growth markets is needed	27
Southeast Asia	27
India's iron ore self-sufficiency is coming to an end	31
About IEEFA.....	35
About the Author	35

Figures and Tables

Figure 1: Australia's iron ore export volumes and values.....	9
Figure 2: Western Australian royalty income.....	10
Figure 3: China crude steel and pig iron production forecast.....	11
Figure 4: China's steel consumption by sector	12
Figure 5: Simandou will shift global seaborne iron ore market into oversupply	14
Figure 6: Australian iron ore export volumes heavily reliant on China	17
Figure 7: A declining proportion of China's steel will be made using iron ore (million tonnes).....	19
Figure 8: Asia-Pacific green iron demand estimated to exceed supply in the near term	20
Figure 9: Green hydrogen production cost using hybrid solar PV and onshore wind, and from offshore wind, in IEA Stated Policies Scenario, 2030	25
Figure 10: Southeast Asia is home to significant EAF capacity	28
Figure 11: Key scrap steel importers and exporters, 2024	30
Figure 12: India's need for iron ore imports is forecast to grow	32
Figure 13: The Australian government is consistently revising down its met coal export forecasts...	33
Table 1: Selected recent steel trade actions	13

Key Findings

With China's steel demand in structural decline, the outlook for Australia's iron ore exports is one of decreasing volumes and values, with significant revenue implications for the federal and Western Australian governments.

The processing of iron ore into green iron has been identified as an opportunity for Australia to add value to a declining export. This is starting to look more like an economic necessity than an opportunity.

China's global green hydrogen dominance and its strategic imperative to reduce reliance on imports from Australia may limit green iron trade between the two countries. Australia's biggest customer for iron ore may not become its biggest green iron export destination.

Australia must prioritise alternative markets. In addition to established customers Japan and South Korea, Australia is well located to supply the two key drivers of global steel demand growth, both of which are located in the Asia-Pacific – India and Southeast Asia.



Executive summary

With China's steel boom over, the outlook for Australia's iron ore exports is one of declining volumes and values, with significant revenue implications for the federal and Western Australian (WA) governments. Additional downside risks may further erode demand for Australia's biggest export.

The production of green iron has been identified as an opportunity for Australia to add value to a declining export. Now this is starting to look more like an economic necessity than an opportunity. However, China's global green hydrogen dominance and its strategic imperative to reduce reliance on imports from Australia may limit green iron trade between the two countries.

Given the risk that China's future green iron imports from Australia may disappoint, alternative markets need to be prioritised. In addition to Japan and South Korea, both of which are established iron ore customers, Australia is well located to supply the two key drivers of global steel demand growth, both of which are located in the Asia-Pacific – India and Southeast Asia.

- **Around 80%-85% of Australian ore is shipped to China. However, China's crude steel production peaked in 2020 and is in structural decline.** Australia's federal government now forecasts that iron ore export volumes will peak in the next two years before going into decline throughout the rest of the decade. China's steel exports are likely to fall as nations revert to protectionism to defend their steel industries, further impacting its iron ore demand.
- **Australia's iron ore export earnings are forecast to drop AUD44 billion** from AUD123 billion in 2025-26 to AUD79 billion in 2030-31 (real terms, base 2026-27) on lower prices and volumes. According to the Australian government's 2025-26 Mid-Year Economic and Fiscal Outlook, a decrease in the iron ore price of USD10 per tonne (t) decreases nominal GDP by AUD4.8 billion in 2025-26, rising to AUD9.9 billion in 2028-29.
- **In WA, royalty income from iron ore is estimated at AUD8.8 billion for 2025-26 and forecast to account for 81% of the total royalty income for that year.** A USD1/t decrease in the iron ore price is estimated to lead to a AUD93m drop in state revenue, according to the 2026-27 state budget. The WA government forecasts that state iron ore royalty income will decline by AUD1.7 billion (-19%) in 2026-27, then by a further AUD1.2 billion in 2027-28 on the back of falling iron ore prices.
- **Numerous downside risks could see China's iron ore demand fall even quicker than forecast.** The ramp-up of the Simandou iron ore mines in Guinea is now happening faster than previously expected. All output is likely to be shipped to China, and S&P Global forecasts that the seaborne iron ore market will be pushed into oversupply until the mid-2030s. As China's iron ore demand falls, a greater proportion of its remaining demand looks likely to be met by supply from outside Australia.
- **New supply from Simandou has emboldened China Minerals Resources Group (CMRG)** to use stronger tactics in negotiations with major Australian iron ore miners, including BHP

and Fortescue. Given the importance of minerals security and China's huge reliance on iron ore imports, CMRG's longer-term motivation may be as much geopolitical as financial. China's mitigation approach in response to the strategic vulnerability of being highly dependent on Australian iron ore can be expected to continue.

- **Scrap steel recycling in China is set for sustained growth due to its strategic importance and the significantly higher volumes of scrap steel that will become available.** Domestic scrap steel is already a bigger source of iron for China than any of the iron ore mining majors. Growing scrap steel consumption will see China's iron ore demand decline faster than its steel demand.
- **Amid the outlook of declining volumes and value of its iron ore shipments, green iron production gives Australia the prospect of adding value to its biggest export.** Studies have calculated that processing iron ore into green iron for export could add between AUD133 billion and AUD269 billion to the value of Australia's exports. Given its reliance on, and the declining outlook for, its iron ore exports, Australia faces an economic imperative that ought to act as a catalyst for green iron development.
- **Fortescue has in the past voiced a target to reach 100 million tonnes per annum (Mtpa) of green iron exports to China.** As Australia's biggest iron ore customer, China is a logical destination for future green iron exports. Fortescue has been open about its strategy of purchasing Chinese energy and mining equipment to maintain good relations with China. However, this did not stop CMRG blacklisting some of Fortescue's iron ore in July 2026. Fortescue has responded by stating that it is continuing to look into new sources of demand, specifically naming Southeast Asia and India.
- **China is positioning itself well to make green iron domestically.** China is leading the world in green hydrogen project development, assisted by its dominance in renewable energy, battery and electrolyser technologies. The need for China to rely on green hydrogen produced in Australia to reduce iron ore is questionable, though regional differences in the cost of green hydrogen production within China may provide Australia with some green iron export opportunities. China remains highly dependent on Australian iron ore for coal-based steelmaking but, given its strategic concerns and its global lead in green hydrogen, Australia's biggest iron ore customer may not necessarily become its biggest green iron export destination.
- **Given the risk that China may not be as big a green iron customer as hoped, Australia needs to increase focus on alternative opportunities.** The two key locations driving global steel demand growth are both within the Asia-Pacific – India and Southeast Asia.
- **Thailand could soon be an importer of iron made using 15% green hydrogen.** Meranti Green Steel plans to build a 2.5Mtpa direct reduced iron (DRI) plant in Oman, which will run on 15% green hydrogen before progressively ramping up the proportion thereafter. Some of

the iron produced in Oman will be shipped to Thailand to be processed into steel via an electric arc furnace (EAF), along with scrap steel. The green iron import model looks set to be demonstrated in practice in Southeast Asia.

- **India's iron ore self-sufficiency has made it seem a less likely green iron export destination, but this is about to end.** The Australian government forecasts that India's iron ore imports will rise from virtually nothing to 50 million tonnes by 2031. India's Jindal Steel recently stated that it plans to import DRI/HBI [hot briquetted iron], given a shortage of available metallics such as scrap steel. Exploring green iron exports to India would give Australian a value-added opportunity to tap into the world's biggest steel demand growth market.

Introduction

Iron ore is Australia's biggest export. Australia is the largest iron ore exporter by far, responsible for more than 50% of global shipments. The boom of China's steel industry over the first two decades of this century was matched by a surge in the significance of iron ore exports to the Australian economy. Over this period, Australian iron ore production increased from about 157 million tonnes (Mt) in 2000 to more than 923Mt in 2025.¹ Around 80%-85% of Australian ore is shipped to China.

The value of Australia's iron ore exports is forecast to have totalled AUD123 billion in 2025-26.² In Western Australia (WA), royalty income from iron ore is estimated at AUD8.8 billion for 2025-26 and forecast to account for 81% of the state's royalty income for that year.³ Direct full-time equivalent (FTE) employment in iron ore mining in WA reached a record high of 65,496 in 2024-25, making up around half of all jobs in the state's minerals mining industry.⁴

Beyond this, the impact of WA's iron ore exports runs even deeper. Iron ore influences WA's population – changes in iron ore prices result in closely matched shifts in interstate and overseas migration in and out of the state. As a February 2026 report from the Bankwest Curtin Economics Centre stated, "If one indicator captures the pulse of population movements to and from Western Australia more than any other, it must be the iron ore price. The relationship is striking."⁵

Migration into WA during periods of higher iron ore prices has a significant on an Australian national obsession – house prices. When it became clear in April 2025 that the giant Simandou iron ore projects in Guinea, West Africa, were finally going to be opened up, there was noteworthy coverage in the financial press. But it was also covered in the property website Domain, in a story that highlighted the possible impacts of oversupply in the global iron ore market on Perth house prices.⁶

The significance of iron ore to WA and Australia means that long-term planning is required to position the nation's biggest export for a future that will be marked by slowing demand in China and accelerating steel technology change.

Beyond peak iron ore

China's crude steel production peaked in 2020.⁷ The Australian government now forecasts that iron ore export volumes will peak in the next two years before going into decline throughout the rest of the decade. The value of Australia's iron ore exports will continue to decline more steeply on lower

¹ Department of Industry, Science and Resources (DISR). [Resources and energy quarterly: September 2026](#). 2 October 2026.

² Ibid.

³ Government of Western Australia. [WA State Budget 2026-27: Budget Paper No. 3 – Economic and Fiscal Outlook](#).

⁴ Government of Western Australia. [Western Australia Iron Ore Profile](#). April 2026. Page 4.

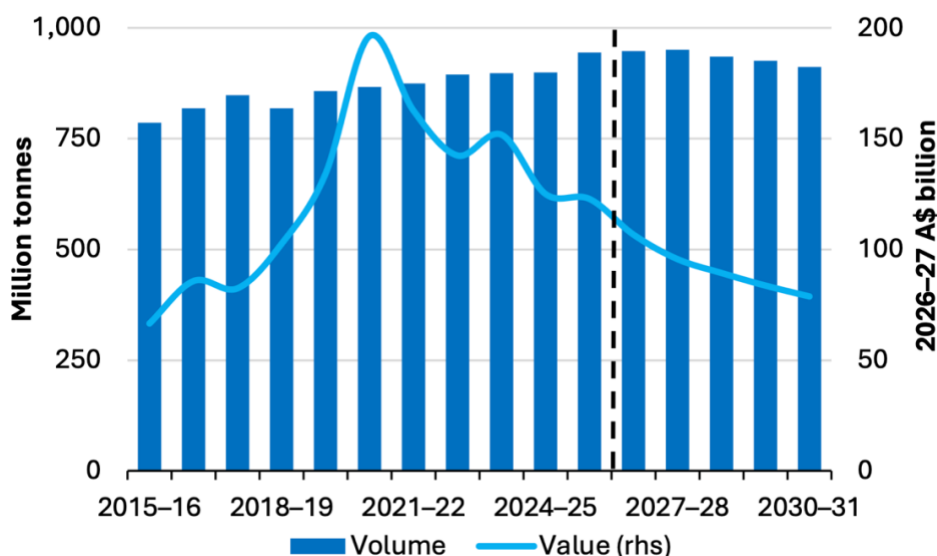
⁵ Bankwest Curtin Economics Centre. [Every Person Counts: Planning for Western Australia's future population](#). February 2026. Page 76.

⁶ Domain. ['Pilbara killer': Will this mega African iron ore mine sink Perth house prices?](#) 15 April 2025.

⁷ IEEFA. [More than half of current global steel production may have already reached peak carbon emissions](#). 16 November 2021.

prices, amid declining Chinese demand for iron ore and increasing global supply. According to the Department of Industry, Science and Resources (DISR), Australia's iron ore export earnings are forecast to drop from AUD123 billion in 2025-26 to AUD79 billion in 2030-31 (real terms, base 2026-27), a AUD44 billion decline (Figure 1).⁸

Figure 1: Australia's iron ore export volumes and values



Source: ABS (2026); DISR (2026).⁹

Sensitivity analysis for iron ore prices was not included in the 2026-27 federal budget. But according to the 2025-26 Mid-Year Economic and Fiscal Outlook, a decrease in the iron ore price of USD10 per tonne (t) decreases nominal GDP by AUD4.8 billion in 2025-26, rising to AUD9.9 billion in 2028-29. A USD10/t price decrease lowers tax receipts by AUD0.3 billion in 2025-26, rising to AUD1.9 billion in 2028-29.¹⁰

For WA, a USD1/t decrease in the iron ore price is estimated to lead to a AUD93m drop in state revenue, according to the 2026-27 state budget, which notes: "Movements in the iron ore price is also a large risk to general government revenue. The iron ore market is highly concentrated, with China accounting for around 75% of global imports, making the market susceptible to changes in its economic conditions and policies."¹¹ The WA government forecasts that state iron ore royalty income will decline by AUD1.7 billion (-19%) in 2026-27 then by a further AUD1.2 billion in 2027-28 on the back of falling iron ore prices (Figure 2). Prices are assumed to drop from USD104.7/t in 2025-26 to USD85.2/t in 2026-27 and USD72/t in 2027-28.¹²

⁸ DISR. [Resources and energy quarterly: September 2026](#). 2 October 2026.

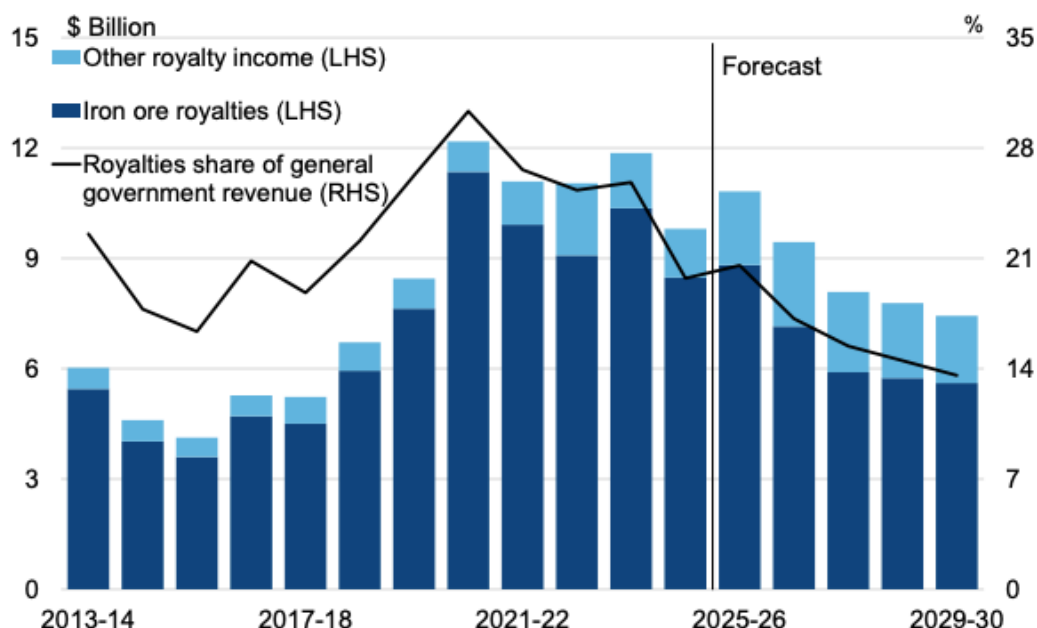
⁹ DISR. [Resources and energy quarterly: September 2026](#). 2 October 2026. Page 36.

¹⁰ Australian Government. [Mid-Year Economic and Fiscal Outlook 2025-26 – Part 5: Sensitivity Analysis](#). December 2025. Page 97.

¹¹ Government of Western Australia. [WA State Budget 2026-27 – Budget Paper No. 3: Economic and Fiscal Outlook](#). Page 62.

¹² Ibid. Page 82.

Figure 2: Western Australian royalty income



Source: Government of WA.¹³

A sustained drop in the iron price would also impact WA's population, with a price drop to USD86/t forecast to lead to 25,000 fewer people living in the state by 2033.¹⁴

Iron ore mining continues to be very profitable for the major miners that enjoy low unit costs. This means that their profits are also highly sensitive to price fluctuations. BHP estimates that a USD1/t decline in the iron ore price reduces its operating earnings (EBITDA) by USD230m.¹⁵ After a two-decade iron ore boom, BHP hit a major landmark in late 2025. Its financial results for the half year ended 31 December showed the company's biggest earnings driver was copper, not iron ore.¹⁶

This characterises the industry trend of major miners increasingly targeting future-facing commodities in search of growth as China's iron ore demand wanes. For Rio Tinto, copper and aluminium combined now contribute more to its earnings than iron ore.¹⁷ From contributing 83% of Rio's earnings in 2020, iron ore is forecast to drop to a 46% contribution this year.¹⁸ Unlike BHP and Rio Tinto, Fortescue remains a pure-play iron ore miner, at least for now. In July 2026, Goldman Sachs downgraded Fortescue stock to a "Sell" rating.¹⁹

¹³ Government of Western Australia. [WA State Budget 2026-27 – Budget Paper No. 3: Economic and Fiscal Outlook](#). Page 81.

¹⁴ Australian Financial Review (AFR). [This chart shows WA's 'striking' dependence on iron ore](#). 25 February 2026.

¹⁵ BHP. [Results presentation full year ended 30 June 2026](#). 19 August 2025. Page 48.

¹⁶ BHP. [Results presentation half year ended 31 December 2025](#). 17 February 2026. Page 30.

¹⁷ Rio Tinto. [Half Year Results 2026](#). 29 July 2026. Page 15.

¹⁸ Rio Tinto. [Bank of America Global Metals, Mining and Steel Conference](#). 12 May 2026. Page 6.

¹⁹ AFR. [Fortescue's China strategy clouded by iron ore ban reports](#). 3 July 2026.

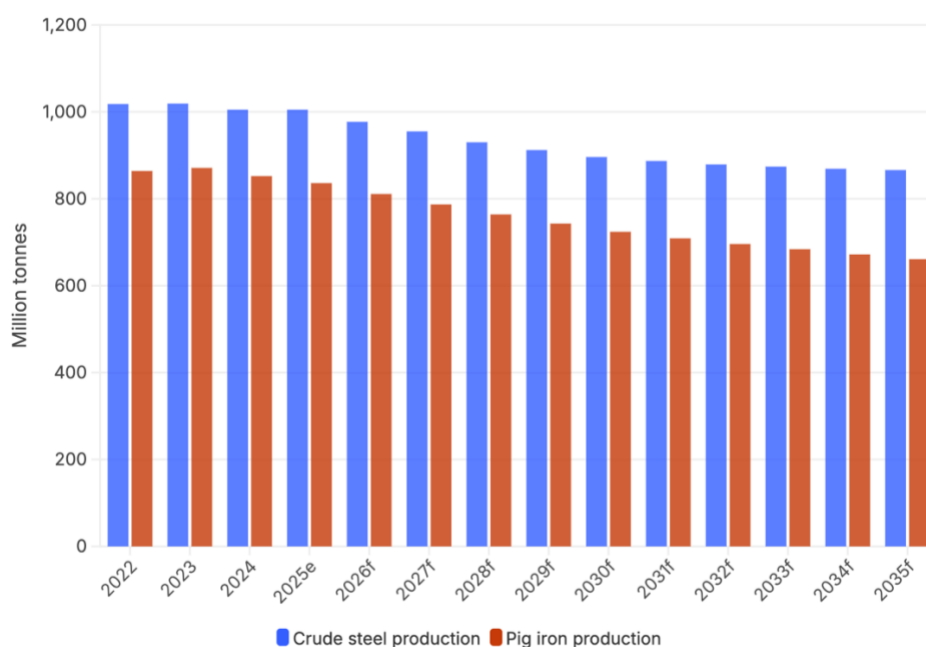
Iron ore mining investment in WA is far from drying up, though it is now more focused on maintaining production levels and addressing falling iron content than on growth. Outside Australia, Rio Tinto and Fortescue have been focused on developing higher grades of iron ore needed to support the decarbonisation targets of the world's major steelmakers. This focus has largely been in Africa, via Rio's involvement in the Simandou projects in Guinea, and Fortescue's Belinga development project in Gabon, both with much higher iron content than Pilbara iron ore.

The iron ore majors' shift towards copper and higher-grade iron ore is increasingly shifting their focus away from WA. BHP and Rio's copper focus drags their attention towards the Americas and, in Rio's case, Mongolia. Further increases in iron ore output from Africa will be in direct competition with Australian volumes. The huge Simandou mine projects that are now ramping up look likely to send most, if not all, of their iron ore to China.

Australia's iron ore headwinds in China

Having peaked in 2020, China's crude steel production is forecast to continue to fall (Figure 3). This is a structural trend – China's economy is maturing and its steel-intensive construction boom is over. For the first six months of 2026, crude steel production was 500Mt, down 3% on the same period in the prior year, according to China's National Bureau of Statistics.²⁰

Figure 3: China crude steel and pig iron production forecast

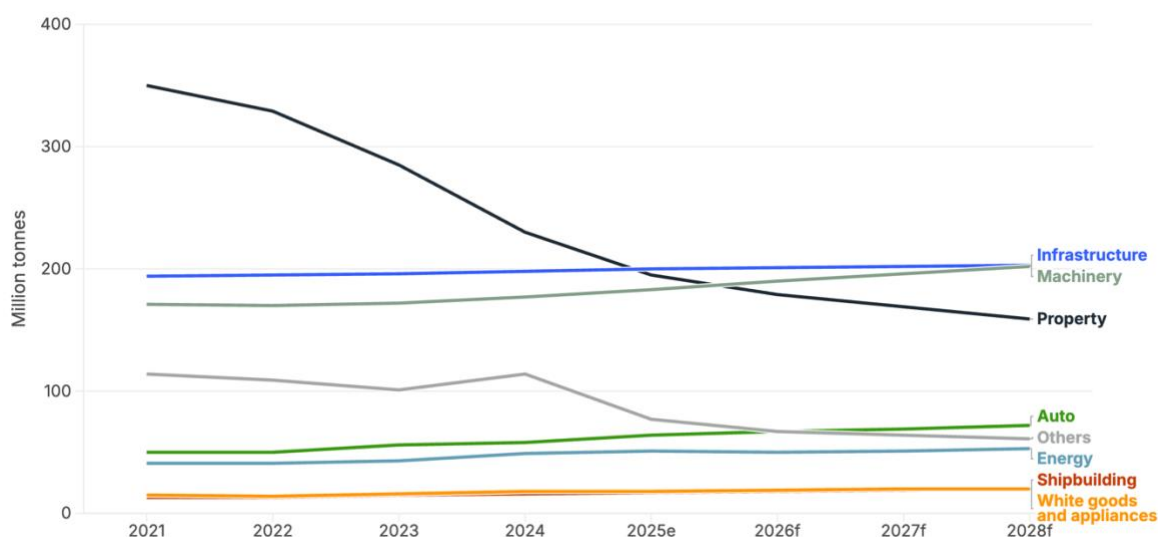


Source: S&P Global.

²⁰ National Bureau of Statistics of China. [Industrial Production Operation in June 2026](#). 16 July 2026.

Much of the decline in demand comes from the real estate sector which remains weak (Figure 4). The floor space of new building projects started in the first half of 2026 was down 23.4% year on year.²¹ This is a faster rate of decline than in 2025, when floor space of new buildings started was down 20.4%.²² S&P Global was already warning that China's property slump would be worse than expected in 2026 as early as February.²³ In May 2026, an S&P update noted that the unrelenting fall in new home construction starts was continuing to impact steel demand.²⁴

Figure 4: China's steel consumption by sector



Source: S&P Global.

With major government stimulus for the housing market considered unlikely, the weakness in the sector is expected to persist through the second half of 2026 at least, continuing the five-year slump.²⁵ A recovery in China's real estate market is not yet on the horizon.

In addition, there are numerous downside risks that could see China's iron ore demand fall even quicker than forecast.

China's steel exports may start to fall

The impact of the China's property development slump on its steel production would be even worse if it wasn't being held up by high steel exports. With domestic demand falling consistently, China's steelmakers have sought to prop up sales by targeting overseas markets. Since steel demand

²¹ National Bureau of Statistics of China. [Investment in Real Estate Development from January to June 2026](#). 16 July 2026.

²² National Bureau of Statistics of China. [Investment in Real Estate Development for 2025](#). 20 January 2026.

²³ S&P Global. [China Property Watch: Supply Glut To Impede Recovery](#). 8 February 2026.

²⁴ S&P Global. [INFOGRAPHIC: China's property slowdown continues to drag down rebar market](#). 22 May 2026.

²⁵ Reuters. [China new home prices fall at slower pace, but recovery doubtful](#). 15 July 2026.

peaked in 2020, exports have been rising, reaching a record 119Mt in 2025 and helping to prop up China's iron ore imports.²⁶

However, nations around the world are now putting up trade barriers in an attempt to protect their steel industries from imports amid China's steelmaking overcapacity (Table 1). These increased trade barriers may be already having an impact. According to the China Iron and Steel Association, exports for the first half of 2026 were 54.87Mt, a drop of 5.6%.²⁷

Table 1: Selected recent steel trade actions

Country/region	Action	Implemented
US	Increased steel tariffs from 25% to 50%. ²⁸	June 2025
Canada	Tariff rate quota levels significantly reduced with over-quota volumes continuing to face 50% tariff. 25% global tariff on steel derivative products introduced. ²⁹	December 2025
EU	Tariff-free import quotas cut by 47%, volumes above quota face 50% tariff, up from 25%. ³⁰	July 2026
UK	51% reduction in imports allowed under tariff-free quotas, volumes above quota now face a 50% tariff. ³¹	July 2026
Vietnam	Tariff of up to 27.8% on hot-rolled coil products from China. ³²	July 2026
Japan	Launched an anti-dumping probe into imports of key steel products from China, South Korea and Taiwan. ³³	June 2026
India	Three-year import tariff of 11%-12% on some steel products. ³⁴	December 2025

Australia has also recently placed tariffs on steel imports from China, despite the risk of retaliatory implications for its iron ore exports. In February 2026, the DISR imposed a tariff on ceiling steel framing imported from China, following an Anti-Dumping Commissions investigation.³⁵ In May 2026, tariffs of up to 82% were placed on imports of hot-rolled coil steel from China following another anti-

²⁶ Reuters. [China's steel exports, iron ore imports hit record highs](#). 14 January 2026.

²⁷ China Iron and Steel Association. [Flash Report on Imports and Exports of Major Metallurgical Products for June 2026](#).

²⁸ ABC. [Donald Trump's 50 per cent steel and aluminium tariffs have come into effect](#). 5 June 2025.

²⁹ Prime Minister of Canada. [Prime Minister announces new measures to protect and transform Canada's steel and lumber industries](#). 26 November 2025.

³⁰ Reuters. [EU unveils new steel import quotas to protect its industry from overcapacity](#). 30 June 2026.

³¹ UK Government. [UK's steel trade measure from 1 July 2026](#). 2 April 2026.

³² Reuters. [Vietnam imposes anti-dumping tariff on hot-rolled steel from China](#). 7 July 2026.

³³ Bloomberg. [Japan Adds to Steel Scrutiny With Probes on China, Taiwan, Korea](#). 1 June 2026.

³⁴ Reuters. [India imposes three-year tariff on some steel products to curb cheap imports](#). 31 December 2025.

³⁵ DISR. [Anti-Dumping Notice \(ADN\) 2026/008](#). 3 February 2026.

dumping investigation.³⁶ This followed tariffs on steel reinforcing bar and complaints from China Baowu – China’s largest steelmaker and one of the biggest customers for Australian iron ore.³⁷

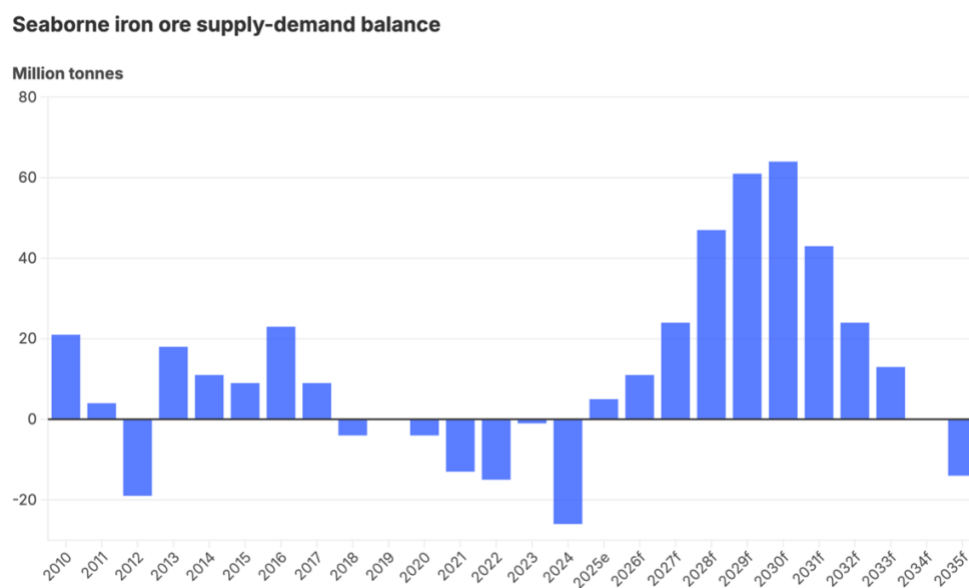
As nations revert to protectionism to defend their strategically important steel industries from overcapacity, China’s exports may start to fall significantly. This risks slowing China’s crude steel production even further, with subsequent, long-term impacts on its demand for iron ore imports.

Simandou mines ramping up faster than expected

The large Simandou iron ore mines in Guinea, West Africa, have often been dubbed “the Pilbara killer”. While this is an overstatement, rising production from these mines as China’s steel demand continues to drop will have an impact on Australian iron ore.

The Simandou mine projects are ramping up output towards a capacity of 120Mt faster than previously expected, at a competitive cash cost per tonne.^{38,39} Achieving that volume would make Guinea the third largest iron ore exporter in the world after Australia and Brazil. S&P Global forecasts that rising exports from Guinea will push the global seaborne iron ore market into oversupply (Figure 5). This oversupply is expected to last into the mid-2030s when depletion at existing mines helps bring the market back into balance.

Figure 5: Simandou will shift global seaborne iron ore market into oversupply



Source: S&P Global.

³⁶ DISR. [Anti-Dumping Notice \(ADN\) 2026/043](#). 4 May 2026.

³⁷ AFR. [China's Baowu blasts Australian rival's 'self-serving' tariff bid](#). 9 February 2026.

³⁸ S&P Global. [Guinea's Simandou ramp-up boosts iron ore exports, surpassing forecasts](#). 17 June 2026.

³⁹ S&P Global. [Simandou's iron ore shipments signal major industry shift](#). 30 April 2026.

Not only is this oversupply expected to be responsible for the forecast fall in iron ore prices in the coming years, but it also risks displacing some Australian iron ore exports to its biggest customer. Most, if not all, of the production from the Simandou mines is expected to be shipped to China. Rio Tinto, part of the Simfer consortium that operates one of the Simandou mine projects, makes clear in its second quarter 2026 production results that all ore produced is being shipped to China.⁴⁰ A clear part of the rationale for China's investment in Simandou – led by state-owned steelmaking giant China Baowu – is to reduce its dependence on Australian iron ore. As China's iron ore demand falls, a greater proportion of that demand looks likely to be met by supply from outside Australia.

In addition to new low-cost volumes entering the market, Simandou has another advantage over the majority of Australian output. Simandou's production is much higher quality, with significantly higher iron content than Pilbara ore. The iron content of Rio Tinto's second quarter 2026 sales of Simandou iron ore to China averaged 65.8%, compared to a benchmark of around 61% for the Pilbara.⁴¹

Higher-grade iron ore offers steelmakers an opportunity to reduce the heavy emissions from blast furnaces. In addition, steelmakers globally – including in China – are planning and investing in direct reduced iron (DRI)-based steelmaking, which offers the potential for significant emissions reductions. China already has several commercial-scale DRI plants operating. The benchmark iron content for ore suitable for DRI (DR-grade) is 66%-67%; with a small upgrade, Simandou iron ore could become a supplier to further DRI plants in China. After decades in development, the ramp-up of Simandou coincides with a global steel technology shift away from coal-consuming blast furnaces towards DRI.⁴²

Growing pressure from China Minerals Resources Group

A further impact of the Simandou mines ramp-up, along with high stockpiles of iron ore at Chinese ports, is that it has emboldened China to pressure Australian iron ore miners into more favourable trade terms. China Minerals Resources Group (CMRG), established by the Chinese government to act as a central, state-owned buying agency to consolidate its steel industry's purchasing power, has started to use stronger tactics in negotiations with the major Australian iron ore miners, with the aim of implementing new price-setting mechanisms and lowering costs.

CMRG first focused on BHP, implementing a halt on the purchasing of the company's Jimblebar Blend Fines product in the second half of 2025. In April 2026, BHP stated that iron ore sales contract negotiations with CMRG had concluded.⁴³ The company had reportedly agreed to price more of its iron ore in yuan instead of US dollar-based indexes.⁴⁴

⁴⁰ Rio Tinto. [Rio Tinto releases second quarter 2026 production results](#). 15 July 2026.

⁴¹ Ibid.

⁴² Wood Mackenzie. [Guinea's Simandou to become largest driver of seaborne iron ore supply growth, Wood Mackenzie says](#). 1 April 2026.

⁴³ BHP. [Operational review for the nine months ended 31 March 2026](#). 22 April 2026.

⁴⁴ Bloomberg. [China Succeeds in Adding Yuan Pricing to BHP Iron Ore Contracts](#). 29 April 2026.

In mid-2026, CMRG turned its attention to Fortescue, reportedly banning Chinese steel mills from taking delivery of certain Fortescue iron ore products after 15 July.⁴⁵ This comes after both Fortescue and Rio Tinto reportedly made concessions to CMRG, including trialling the sale of some iron ore via an index provided by FastMarkets rather than S&P Platts. In addition, Fortescue has been open about its strategy of purchasing Chinese energy and mining equipment to maintain good relations with China.⁴⁶ It appears this has not been enough to stop stronger tactics on price negotiations from CMRG. In October 2026, Fortescue disclosed that its third-quarter iron ore sales had been negatively impacted by ongoing negotiations with CMRG.⁴⁷

Part of CMRG's rationale maybe to relieve financial pressure on China's steelmakers amid industry overcapacity by shifting some of the burden onto Australia's highly profitable major iron ore miners. However, given the importance of minerals security and China's huge reliance on iron ore imports, the longer-term motivation may be as much geopolitical as financial.⁴⁸

Either way, the outlook for Australia is a continued shift of control to the buyer as volumes and values go into decline, creating further implications for mining royalty and corporation tax receipts.⁴⁹

Further geopolitical risk

The creation and actions of the CMRG, along with the investment in the Simandou iron ore mines, can be seen as a response by China to its heavy reliance on Australian iron ore. Australia remains an ally of the US, and is now tied militarily closer by the AUKUS trilateral security partnership.⁵⁰ In this context, China's reliance on Australian iron ore is a significant strategic vulnerability.

Disputes between China and Australia have disrupted trade between the two countries in the recent past. In 2020, China started banning the import of a number of Australian products including coal after the Australian government called for an inquiry into the origin of the COVID-19 virus. Volumes of Australian coal shipped to China collapsed to almost nothing for several years. This included metallurgical (met) coal, of which Australia is by far the largest exporter. Since the ban was lifted, Australian met coal volumes to China have never recovered. China was able to do this because of its domestic met coal production and rising imports from its neighbour Mongolia, which is now its largest met coal import source.

It would not be possible for China do to something similar for Australian iron ore. Australia's dominance as a source of seaborne iron ore volumes is even larger than for met coal, but opening up the Simandou reserves is an attempt to at least give China some more flexibility in the market.

⁴⁵ AFR. [Fortescue's China strategy clouded by iron ore ban reports](#). 3 July 2026.

⁴⁶ AFR. [Buy 'Made in China', says Fortescue, to ease Beijing iron ore spat](#). 22 January 2026.

⁴⁷ Fortescue. [September 2026 quarterly performance update](#). 8 October 2026

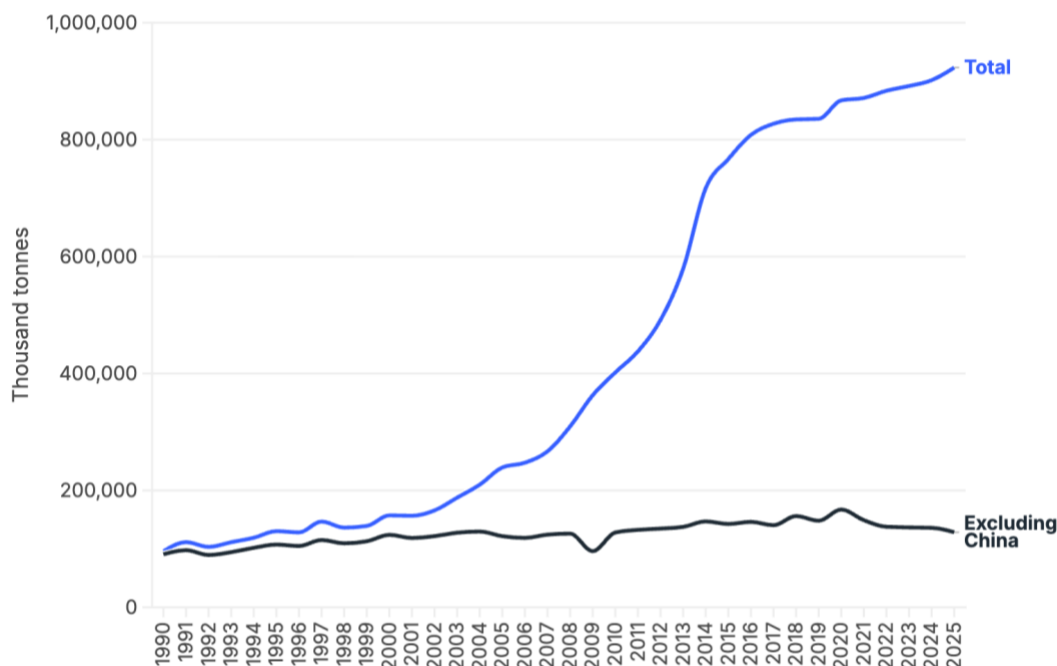
⁴⁸ Bloomberg. [China Is Taking On Mining Giants to Reorder a \\$190 Billion Market](#). 2 April 2026.

⁴⁹ AFR. [Australia built its wealth on iron ore. Now China holds the cards](#). 9 March 2026.

⁵⁰ AFR. [Is Australia acting like America's 51st state in Asia?](#) 11 May 2026.

Furthermore, with globalisation now in reverse, no established trading relationships can be assumed to remain unchallenged.

Figure 6: Australian iron ore export volumes heavily reliant on China



Source: DISR (2026)

A Commonwealth Bank of Australia (CBA) research insight published in February 2026 noted that China's recent interventions in the iron ore market signal its "willingness to weaponise trade" to address its largest trade vulnerability.⁵¹ CBA highlighted that China's vulnerability is exacerbated by Australia being a key strategic ally of the US, and that the latter has a history of pressuring its allies to reduce their economic dependency on China. In China's favour is the fact that Australia is at least as vulnerable to a disruption in iron ore trade between the two countries.

China's buyer power – which stems from being by far the world's largest iron ore importer – has been offset by its vulnerability to disruption in trade flows. Its moves in Guinea and via the CMRG are an attempt to tip the balance in its favour.

CBA concluded that geopolitics means there may be more downside to come for Australian iron ore, stating: "Vulnerability to Australian iron ore will remain a concern for the Chinese government, even as political relations improve. Meanwhile, Australia will be unable to fully allay these concerns, as its

⁵¹ CBA. [Geo-economic views: Is decoupling coming for the iron ore market?](#) 4 February 2026. Page 2.

commitment to the alliance with the United States remains ironclad. Therefore, we expect China's mitigation strategy to continue and perhaps intensify."⁵²

Scrap steel a strategic resource for China

In its February 2026 iron ore note, CBA noted that scrap steel recycling was one China's key response options to its strategic iron ore vulnerability.⁵³ Scrap steel is a strategic resource for China – recycling more scrap steel lessens its reliance on iron ore and met coal imports.

Other countries produce a much greater proportion of their steel by recycling scrap. In the US, 71% of steel is produced in electric arc furnaces (EAFs) that recycle scrap (supplemented by some primary iron); in the EU it is 46%. China only produces 11% of its steel in EAFs, with nearly 90% coming from blast furnace-based steelmaking that consumes iron ore and met coal.⁵⁴ A target to reach 15% EAF-based production by 2025 was missed.

Despite this, scrap steel recycling in China is set for sustained growth due to its strategic importance and the significantly higher volumes of scrap steel that will become available. Domestic scrap steel is already a bigger source of iron for China than any of the iron ore mining majors.⁵⁵ Scrap steel consumption in China is expected to rise from 225Mt in 2022 to over 300Mt by 2030 and continue growing into the long term. Steel production in China began accelerating in the early 2000s and the relatively short average lifespan of steel products in China (25 years) means significant amounts of scrap steel will now start to become available.⁵⁶

EAF-based steelmaking hasn't grown as fast as forecast, as most scrap steel in China is consumed in the dominant blast furnace-basic oxygen furnace (BF-BOF) steelmaking pathway. This reduces the consumption of iron ore and met coal in the blast furnace-based process. Most scrap steel will likely continue to be used in the BF-BOF process in China until scrap ratios reach the ceiling of around 25%-30%.⁵⁷ Beyond this, additional available scrap will be diverted to the EAF route, which will then start to see growing capacity.

Global Efficiency Intelligence has forecast that scrap steel consumption in China may grow 400-490 million tonnes per annum (Mtpa) by 2050.⁵⁸ In 2024, the state-owned China Resources Recycling Group was established to accelerate the collection, sorting and recycling of scrap steel, among other recyclables.⁵⁹

⁵² Ibid. Page 6.

⁵³ CBA. [Geo-economic views: Is decoupling coming for the iron ore market?](#) 4 February 2026.

⁵⁴ World Steel Association. [World Steel In Figures 2026](#).

⁵⁵ Bloomberg. [China's 'Scrapitalism' Pushes Back on Mining Giants](#). 31 October 2025.

⁵⁶ Global Efficiency Intelligence. [China's Steel Transformation: From Blast Furnaces to Electric Arc Furnaces](#). March 2025. Page 13.

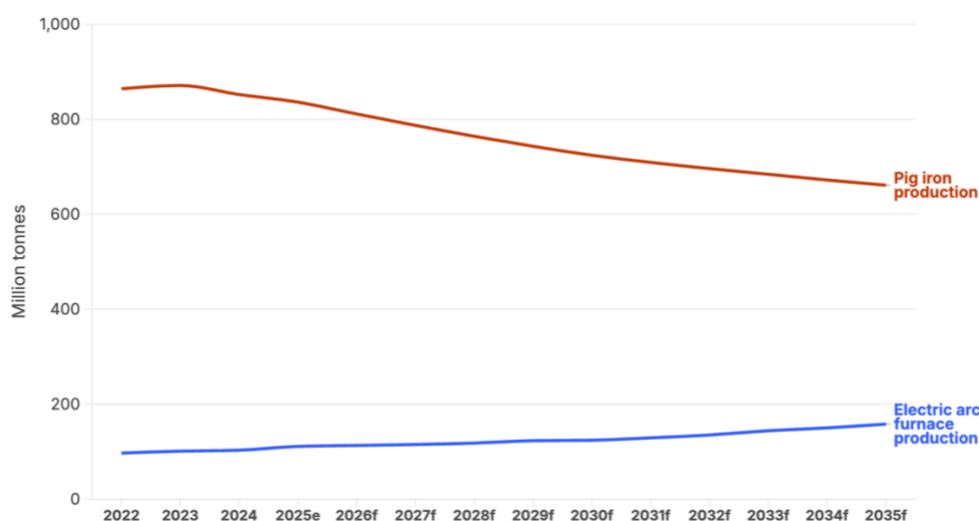
⁵⁷ Global Efficiency Intelligence. [Why in China, Melting Scrap in BOFs Cuts More CO₂ than in EAFs](#). 21 August 2025.

⁵⁸ Global Efficiency Intelligence. [China's Steel Transformation: From Blast Furnaces to Electric Arc Furnaces](#). March 2025.

⁵⁹ Recycling Today. [China's government establishes state-owned recycling company](#). 20 October 2024.

A switch from blast furnace to EAF may be supported by China's new steel capacity swap rules. Since 2014, rules have been in place that require the closure of old steel plants before new capacity can be built. The new rules confirmed in 2026 require 1.5t of existing steel capacity to be retired for every 1t of new capacity (up from 1.25t previously). In addition, capacity replacement between different companies is to be phased out. The new rules are less stringent for EAFs as well as hydrogen-based primary steelmaking and may boost their uptake.⁶⁰

Figure 7: A declining proportion of China's steel will be made using iron ore (million tonnes)



Source: S&P Global.

Regardless of whether scrap steel is recycled in EAF or BF-BOF process, it enables China to produce steel without the need for imported iron ore. Going forward, more and more scrap steel will be recycled in China. As a result, China's iron ore demand is set to decline faster than its steel demand.

Green iron can add value to a commodity facing decline

Amid the outlook of declining volumes and value of its iron ore shipments, green iron production gives Australia the prospect of adding value to its biggest export. As it stands, the leading way of producing green iron is via the reduction of iron ore using green hydrogen in a DRI shaft furnace. The value-adding opportunity of green iron is recognised by both the Australian federal government⁶¹ and the government of WA⁶².

⁶⁰ Reuters. [China releases tougher steel capacity swap plan to curb overcapacity](#). 18 May 2026.

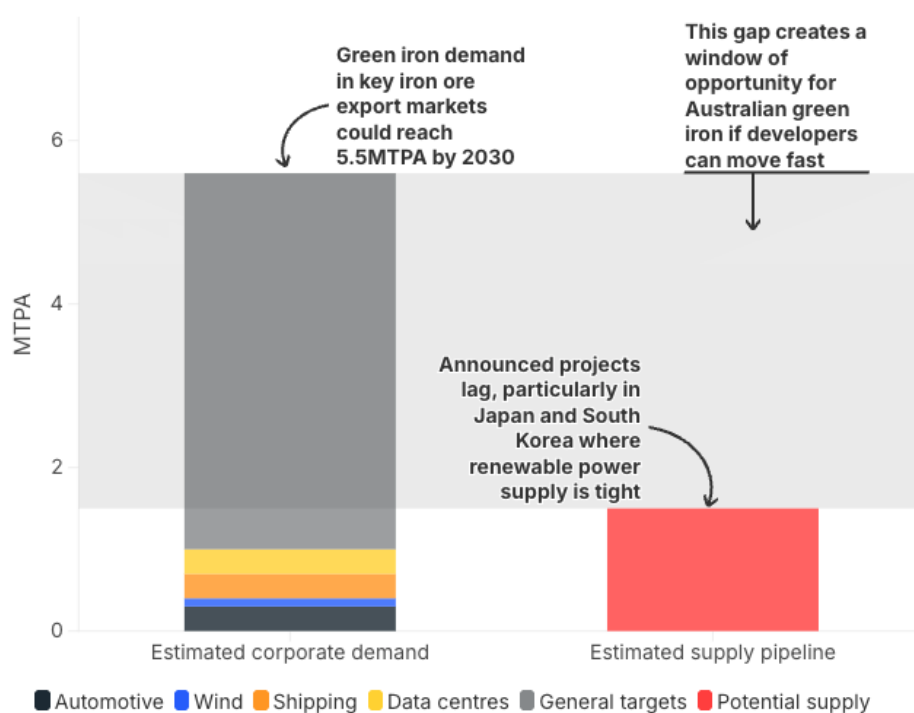
⁶¹ Australian Trade and Investment Commission. [Forging ahead: Australia's green iron opportunity](#). 18 May 2026.

⁶² Government of Western Australia. [Government projects to be built with green steel that's Made in WA](#). 9 November 2025.

Climate Energy Finance has calculated that adding value to 40% of Australia's iron ore by processing it into green iron could double Australia's iron ore current export revenues to AUD250 billion.⁶³ The Superpower Institute has calculated that full replacement of iron ore shipments with green iron exports could generate AUD386 billion per annum by 2060⁶⁴, compared to forecast 2025-26 iron ore export revenues of AUD116.6 billion.

In the near term, Australia has the potential to meet early demand for green iron in the Asia-Pacific region. In fact, there is the potential for a significant demand-supply gap that could be filled by Australian green iron projects if they can be developed fast enough. This supply gap is driven in part by the lower renewable energy resources available for green iron production in Japan and South Korea (Figure 8).⁶⁵

Figure 8: Asia-Pacific green iron demand estimated to exceed supply in the near term



Source: IEEFA estimates based on company reports, LeadIT and Net-Zero Tracker.

Early demand for green iron is likely to be driven by steel end-use sectors rather than steelmakers. IEEFA has identified several steel-consuming sectors that are likely to drive early demand in the Asia-Pacific region – automotive, shipbuilding, wind turbines and data centres.⁶⁶

⁶³ Climate Energy Finance. [Green Metal Statecraft: Forging Australia's Green Iron Industry](#). 15 November 2024. Page 77.

⁶⁴ The Superpower Institute. [A Green Iron Plan for Australia](#). May 2025.

⁶⁵ IEEFA. [Green iron demand set to exceed supply](#). 2 April 2026.

⁶⁶ IEEFA. [Any takers for Australia's green iron?](#) March 2026.

The DRI technology that would be used to make green iron is fully mature. DRI based on methane gas is already used at commercial scale globally, but it is questionable how competitive Australia can be in gas-based DRI exports given that this technology is already well established and expanding in the Middle East where gas prices are significantly cheaper than in Australia.⁶⁷ In addition, gas-based DRI would not add as much value to Australian iron ore as processing it with green hydrogen. In Sweden, Stegra has been able to sign long-term offtake contracts for future steel production from its under-construction, green hydrogen-DRI-based steel plant at a premium of 20%-30%.⁶⁸ Stegra's steel off-takers are prepared to pay this premium for truly green steel – such a premium would be unavailable if the plant were to be based on gas.

Although green hydrogen development momentum has slowed in many sectors, its role in the iron and steel sector is firming. Day one green hydrogen use in DRI projects has become the global benchmark for low-carbon iron and steelmaking.

In addition to Stegra continuing the construction of its new DRI-based steel plant that will run on 100% green hydrogen⁶⁹, German steelmaker Salzgitter will use some green hydrogen in the reduction mix at its DRI project from day one, with the green hydrogen being sourced both internally and externally.⁷⁰ French steel start-up GravitHy recommitted to hydrogen in February 2026 stating: “Our strategy is to start with hydrogen from day one.”⁷¹ In Oman, Meranti Green Steel intends to use 15% green hydrogen from day one at its planned DRI plant in the Duqm Special Economic Zone.⁷²

DRI currently requires a high grade of iron ore (DR-grade) available from places such as Brazil or Canada, and potentially Simandou. The vast majority of Pilbara production is well below DR-grade but Australia's big three iron ore miners are all developing technology that allows the use of Pilbara-grade ore in DRI-based steelmaking.

Rio Tinto and BHP are both part of a consortium of companies developing the NeoSmelt project, which will test the combination of DRI with an electric smelting furnace (ESF) to deal with the higher levels of impurities contained in the majority of iron ore produced in the Pilbara. A final investment decision is planned for the second half of 2026, with operations to begin in 2029.⁷³ Rio is also working with Calix to build a demonstration plant of the latter's Zero Emissions Steel Technology (Zesty) that will reduce Rio's iron ore using hydrogen.⁷⁴ Fortescue is developing its own DRI-ESF technology at its Christmas Creek Green Metal Project, which produced its first hot metal in August 2026.⁷⁵

⁶⁷ IEEFA. [Why gas is the wrong choice for Whyalla steel](#). 21 April 2026.

⁶⁸ Hydrogen Insight. [Sweden's flagship green hydrogen-based steel plant receives first €100m of state aid](#). 19 September 2024.

⁶⁹ Stegra. [Our Boden Plant](#).

⁷⁰ Salzgitter. [Salzgitter AG and EWE finalize contract for the supply of green hydrogen](#). 9 June 2026.

⁷¹ Argus Media. [Q&A: GravitHy expects policy clarity to shape economics](#). 7 February 2026.

⁷² Meranti Green Steel. [Meranti Green Steel Announces Full Offtake Coverage for Duqm Green HBI Plant](#). 28 January 2026.

⁷³ [NeoSmelt](#).

⁷⁴ Rio Tinto. [Rio Tinto partners with Calix to test low-emissions steel making in Western Australia, pauses Biolron](#). 17 November 2025.

⁷⁵ Fortescue. [Fortescue produces first hot metal in milestone towards Australian green iron](#). 19 August 2026.

Australian DRI-ESF projects are important for de-risking the future of Pilbara iron ore as the global steel industry transitions away from blast furnaces towards DRI and EAF technology. However, this should not discount the potential for Australia to produce more DR-grade ore, suitable for immediate use in DRI, from its significant magnetite iron ore reserves.^{76,77} Australia has the potential to produce DR-grade iron ore from magnetite reserves in both WA⁷⁸ and South Australia⁷⁹.

With DR-grade iron ore reserves and strong renewable energy resources for making green hydrogen, Australia is well placed to moving into the production and export of green iron. Given its reliance on, and the declining outlook of, its iron ore exports, Australia also has the economic imperative that ought to act as a catalyst for development. All three of its iron ore mining giants are developing technology that could future-proof Pilbara iron ore for a global iron ore industry shifting away from coal.

However, there's no need to wait for that technology to be developed – Australia can start its shift now based on existing, commercial-scale technology. The key is to lock in long-term demand for Australian green iron overseas.

Will China be an off-taker of Australian green iron?

As Australia's biggest iron ore customer, China is a logical destination for future green iron exports, along with Japan and South Korea. Major steelmaking nations already dependent on iron ore imports from Australia that have sectors likely to be early end-use consumers of green steel, such as carmakers, are likely future off-takers of Australian green iron.

In July 2025, Australian Prime Minister Anthony Albanese was joined by senior representatives of the nation's largest iron ore miners to meet Chinese steelmakers in Shanghai. At a press conference after the meeting, the Prime Minister noted that Australia and China were in agreement over both the need and the potential for the two countries to work together to decarbonise the steel value chain.

Albanese said: "And one of the things that struck me today from the discussion with the Chinese steelmakers as well as the Australian iron ore exporters is the common interest which is there – common discussion about changing the nature of furnaces, decarbonisation, the use of hydrogen, the use of research as well, and collaboration between Australia and China."⁸⁰

At no point during the press conference did Albanese or the senior executives from BHP, Rio Tinto or Hancock use the phrase "green iron". It was only used by Andrew Forrest, Executive Chairman of Fortescue.

⁷⁶ IEEFA. [DRI smelters: Promise, progress and barriers](#). 16 June 2026.

⁷⁷ IEEFA. [Australia Green Iron Tracker](#).

⁷⁸ S&P Global. [IRON ORE SERIES: Yogi project to spur Western Australia magnetite investment: MD](#). 24 February 2026.

⁷⁹ Government of South Australia. [Magnetite South Australia](#).

⁸⁰ Prime Minister of Australia. [Press conference – Shanghai](#). 14 July 2025.

Fortescue has in the past openly stated that it intends to shift from being an iron ore exporter to a green iron exporter. China is overwhelmingly Fortescue's biggest iron ore export destination, so its future green iron plans are focused on China too. In 2024, Fortescue was voicing a target to reach 100Mt of green iron exports to China each year.⁸¹ The company is also working on technology developments that would allow use of its Pilbara ore in green steelmaking processes with a subsidiary of China Baowu.⁸²

This focus on China has been backed up by purchases of Chinese mining and energy equipment and a renminbi-denominated term loan secured from international lenders including Bank of China and the Industrial and Commercial Bank of China (ICBC). In the company release announcing this loan, Fortescue stated: "This is the first RMB Syndicated Term Loan of its kind by an Australian corporate – a landmark transaction that reflects the depth of Fortescue's long-standing relationships in China."⁸³

However, this did not stop CMRG blacklisting some of Fortescue's iron ore in July 2026.⁸⁴ One of the iron ore products targeted – Super Special Fines – recently comprised 45% of Fortescue's exports.⁸⁵ Fortescue has responded by stating that it is continuing to look into new sources of demand, specifically naming Southeast Asia and India.⁸⁶

In addition to Fortescue, Rio Tinto and BHP have also been working on technology projects with Chinese steelmakers that could allow the use of Pilbara-grades of iron ore in DRI-based processes that could potentially use green hydrogen.

BHP has been testing its iron ore in DRI-based processes with HBIS⁸⁷ and China Baowu⁸⁸. In the latter case, BHP iron ore has already successfully tested in DRI at commercial scale at Baowu's Zhanjiang plant using 70% hydrogen in the reducing gas, with the resultant DRI also tested with an ESF. Rio Tinto has also tested its iron ore in China Baowu's Zhanjiang DRI plant.⁸⁹

However, unlike Fortescue, Rio Tinto and BHP do not show any sign of wanting to become green iron producers and exporters. The projects with China Baowu and HBIS are about ensuring their blast furnace-grade Pilbara iron ore still has customers as global steelmakers progressively shift away from blast furnace technology. Similarly, the NeoSmelt project is an attempt to demonstrate technology for their steelmaking customers to use, rather than Rio and BHP themselves.

⁸¹ Fortescue. [Fortescue welcomes Chinese Premier Li Qiang in Perth](#). 17 June 2024.

⁸² Fortescue. [Fortescue and TISCO join forces on green ironmaking technology trial](#). 4 December 2025.

⁸³ Fortescue. [FORTESCUE SECURES LANDMARK RMB 14.2 BILLION SYNDICATED TERM LOAN](#). 8 August 2025.

⁸⁴ Bloomberg. [China Turns Against an Australian Mining Giant It Helped Grow](#). 16 July 2026.

⁸⁵ AFR. [Fortescue's China strategy clouded by iron ore ban reports](#). 3 July 2026.

⁸⁶ Fortescue. [June 2026 Quarterly Production Report - Investor and Analyst Call Transcript](#). 31 July 2026. Page 10.

⁸⁷ BHP. [BHP and HBIS Strengthen Partnership with New MOU to Advance Decarbonisation in Steel Value Chain](#). 4 December 2024.

⁸⁸ BHP. [BHP and China Baowu celebrated successful commercial-scale DRI trials using BHP's Pilbara iron ores](#). 11 May 2025.

⁸⁹ Rio Tinto. [China Baowu and Rio Tinto complete Pilbara Blend iron ore pelletisation and direct reduction trials](#). 12 June 2026.

China leading the world in green hydrogen, electrolyzers, renewables and batteries

The Zhanjiang DRI plant where iron ores from BHP and Rio Tinto have been tested is already running on a high percentage of hydrogen. Going forward, more of that hydrogen will be green, as China Baowu now has a USD1.5 billion green hydrogen project under development. Some of the green hydrogen produced is planned to be piped to Zhanjiang.⁹⁰

The use of hydrogen in China's domestic ironmaking may also receive a boost from its new steel capacity swap rules, which are less strict for steelmakers planning to add hydrogen-based steelmaking capacity.⁹¹

China is leading the world in green hydrogen project development, assisted by its dominance in renewable energy technology and the extraordinary rate at which it is installing wind and solar.⁹² China also dominates in battery technology, the roll-out of which could help lower the cost of green hydrogen production.⁹³ While the cost of green hydrogen electrolyzers hasn't fallen as fast as many predicted, the cost of battery storage has dropped two thirds since 2020. The resultant lower cost of firmed power allows green hydrogen production cost savings by maximising the utilisation rate of electrolyzers.⁹⁴

China is by far the largest market for green hydrogen electrolysis, accounting for around two thirds of global capacity at the end of 2025, according to the International Energy Agency (IEA).⁹⁵ Capacity in China is four times larger than the total in Europe, the second largest market. The IEA expects 2026 to be a record year for hydrogen electrolysis capacity installation with China and Europe responsible for 90%. Electrolyser manufacturing capacity reached 58GW per annum by the end of 2025 with 60% located in China and 20% in Europe. The cost of installed electrolyser capacity is also significantly lower in China than elsewhere, in part due to the learnings gained from its far more advanced large-scale deployment. In addition, while European electrolyzers have recently demonstrated better efficiency than those made in China, there is now some evidence that China is catching up.⁹⁶

While other countries have struggled with green hydrogen development, China exceeded its 2025 production capacity target.⁹⁷ It is now aiming for 2Mtpa of production capacity by 2030.⁹⁸ The IEA

⁹⁰ Hydrogen Insight. [Chinese developer launches \\$1.5bn offshore wind-to-green hydrogen project](#). 26 January 2026.

⁹¹ Centre for Research on Energy and Clean Air (CREA). [Can China's new steel capacity rules accelerate its green transition?](#) 17 June 2026.

⁹² ABC. [Why China is becoming the world's first electrostate](#). 13 August 2025.

⁹³ Financial Times. [Australians 'going gangbusters' on Chinese batteries in renewable energy shift](#). 13 July 2026.

⁹⁴ IEEFA. [Less is more – Efficient electrolyzers vital for competitive Australian green iron](#). 4 June 2026.

⁹⁵ IEA. [Global Hydrogen Review 2026](#). July 2026. Page 91.

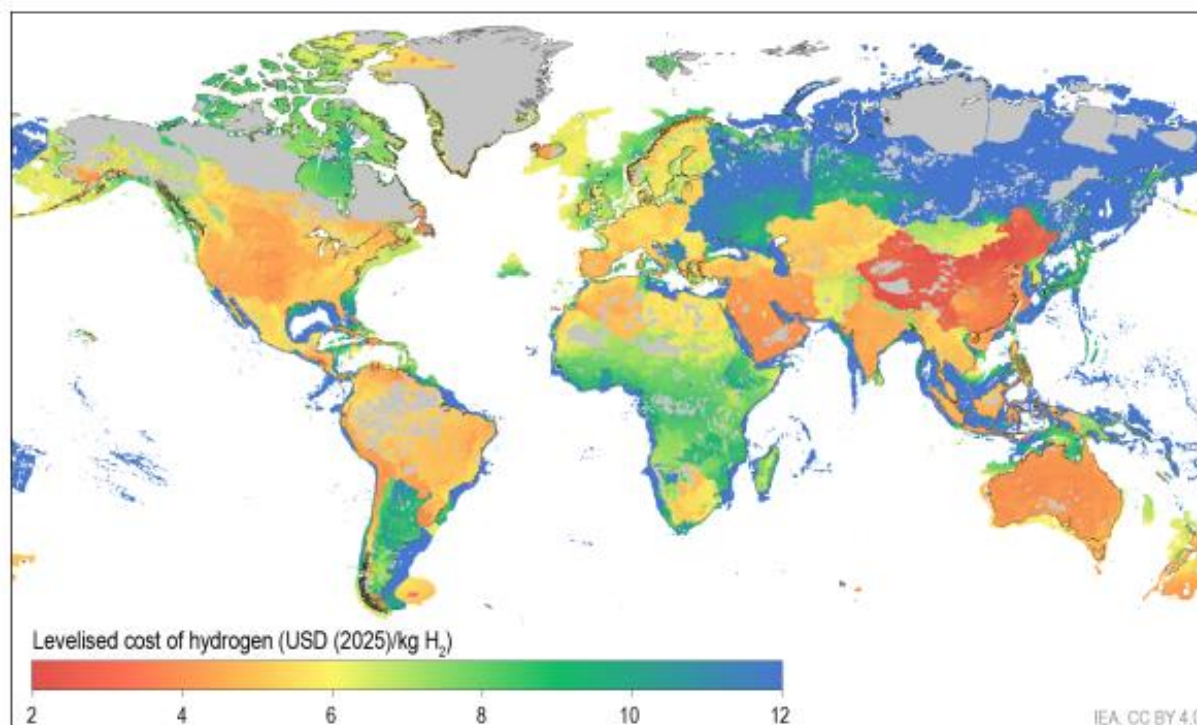
⁹⁶ Hydrogen Insight. [Electrolyser costs are falling in China and the West, but Chinese equipment has caught up on efficiency](#): BNEF. 23 June 2026.

⁹⁷ Hydrogen Insight. [China exceeds its 2025 target for green hydrogen production](#). 1 December 2025.

⁹⁸ ESG News. [China Sets Binding 2030 Renewable Power Target](#). 24 July 2026.

highlights that parts of China could be able to produce green hydrogen at a cost as low as USD2/kg by 2030, lower than could be achieved in Australia (Figure 9).⁹⁹ Most recently, a document released in August 2026, entitled *Industrial Green and Low-Carbon Development Plan for the 15th Five-Year Plan Period*, sets out priorities for green hydrogen use, including the steel sector for DRI.¹⁰⁰

Figure 9: Green hydrogen production cost using hybrid solar PV and onshore wind, and from offshore wind, in IEA Stated Policies Scenario, 2030



Source: IEA.¹⁰¹

Australian National University (ANU) analysis finds that, in a scenario where the cost of green hydrogen production in Australia is at parity or more expensive than the cost in China, green iron production would be located entirely in China. For green iron production to shift to Australia for export to China, Australia's green hydrogen production cost would have to be significantly lower than in China – a scenario not currently looking likely.¹⁰²

However, there are regional differences in the cost of green hydrogen production within China. Renewables-rich provinces like Inner Mongolia will lead on low-cost production, while green hydrogen in south-eastern provinces with high steel demand such as Guangdong will be higher. This

⁹⁹ IEA. [Global Hydrogen Review 2026](#). July 2026.

¹⁰⁰ Hydrogen Insight. [China unveils new industrial green hydrogen usage priorities in latest Five-Year Plan document](#). 3 August 2026

¹⁰¹ IEA. [Global Hydrogen Review 2026](#). July 2026. Page 113.

¹⁰² Centre for Climate and Energy Policy, Crawford School of Public Policy, ANU. [Decarbonising Australia-China steel making with reorganised value chains](#). September 2025.

may provide an opportunity for future green iron exports from Australia if it can compete in such provinces on green hydrogen cost.¹⁰³

The US war with Iran has likely only increased China's focus on green hydrogen. The war's impact on energy flows has helped shift the emphasis on green hydrogen from a decarbonisation tool to a "strategic lever" of energy security, according to China's National Energy Administration.¹⁰⁴

It's possible that China's dominance in solar, wind, batteries and electrolyzers give it an opportunity to boost domestic jobs by supplying future green hydrogen and green iron production facilities in Australia. Whether China judges that this opportunity outweighs the strategic risk of continuing to be highly reliant on Australian iron ore remains to be seen. Potentially, China could continue to seek to reduce reliance on Australian iron ore, not shifting towards import of green iron, but supplying equipment to Australian green iron producers exporting to other nations.

One technology where China doesn't dominate is DRI equipment. The commercial-scale DRI plants operated by China Baowu and HBIS use technology from Energiron – provided by Italian companies Tenova and Danieli. The other key DRI technology provider is US-based Midrex, which is ultimately owned by Kobe Steel of Japan. China's dominance in technologies including solar, batteries and electric vehicles (EVs) has been founded on a strategy of encouraging Western companies to share their technology in return for access to the Chinese market.¹⁰⁵ It seems unlikely that China would want to be dependent on Western technology in a scenario where it increasingly installs DRI, so it is not unthinkable that future DRI plants built in China will use domestic technology providers.¹⁰⁶

In fact, China is already developing its own DRI technology that will use hydrogen as a reductant. The China Iron and Steel Research Institute (CISRI)'s Linyi hydrogen-DRI demonstration project in Shandong province has a capacity of 50,000 tonnes per annum and is now informing the development of commercial-scale projects.¹⁰⁷ Chinese steelmaker Ansteel is also developing hydrogen-based DRI technology and has a pilot project at its Bayuquan plant.¹⁰⁸

China may already be securing the iron ore supply required for expanded domestic DRI-based iron and steelmaking. Whilst work continues on technology developments that allow the use of lower, blast furnace-grade iron ore in DRI processes, for now commercial-scale DRI requires higher-quality ore with an iron content of 66%-67% or more. Iron ore being shipped from Simandou to China is already close to that standard. Rio Tinto recently disclosed that its Q2 2026 sales from the Simfer

¹⁰³ Mission Possible Partnership and RMI. [Steel's transformation: China and Australia's next horizon of clean steel](#). 18 September 2026. Page 5.

¹⁰⁴ Fuel Cell Works. [China Fast-Tracks Hydrogen Strategy to 'Scale-Up' Phase in High-Stakes Energy Transition](#). 16 April 2026.

¹⁰⁵ Financial Times. [How China pulled off a great tech reversal](#). 27 January 2026.

¹⁰⁶ IEEFA. [Momentum shifts east in green steel transition](#). 2 February 2026.

¹⁰⁷ Mission Possible Partnership. [CISRI – Linyi](#). 7 June 2026.

¹⁰⁸ GMK Centre. [China's Ansteel completes pilot project for hydrogen-based DRI production](#). 7 September 2025.

Simandou mine achieved iron content of 65.8%.¹⁰⁹ It's possible that Simandou iron ore could be beneficiated up to DR-grade in the future.¹¹⁰

China will also have other sources of DR-grade iron ore. Australia exports very little high-grade ore, while Brazil is the world's largest exporter of DR-grade material.¹¹¹ China may also have access to new sources such as Kazakhstan in the future.¹¹²

China is putting itself in a good position to make green iron domestically in the future. For coal-based steelmaking, China remains highly dependent on Australian iron ore. However, given China's strategic concerns and its global lead in green hydrogen, Australia's biggest iron ore customer may not necessarily become its biggest green iron customer.

Increased focus on key steel growth markets is needed

Given the risk that China may not be as big a green iron customer as hoped, Australia needs to increase focus on alternative opportunities. The two key locations for global steel demand growth are both within the Asia-Pacific – India and Southeast Asia. India is currently self-sufficient for iron ore, but this is set to change. Meanwhile, Southeast Asia is about to demonstrate the green iron import model in practice.

Southeast Asia

Unlike in China, steel demand in Southeast Asia is rising, albeit from a much lower level. From 76Mt in 2023 it is forecast to rise above 100Mt by 2030.¹¹³ The region's steel sector was historically dependent on EAF recycling scrap although, more recently, BF-BOF capacity has been constructed in some countries. However, EAFs still make up a significant proportion of both operating steel capacity and the project pipeline of new capacity in the region (Figure 10).

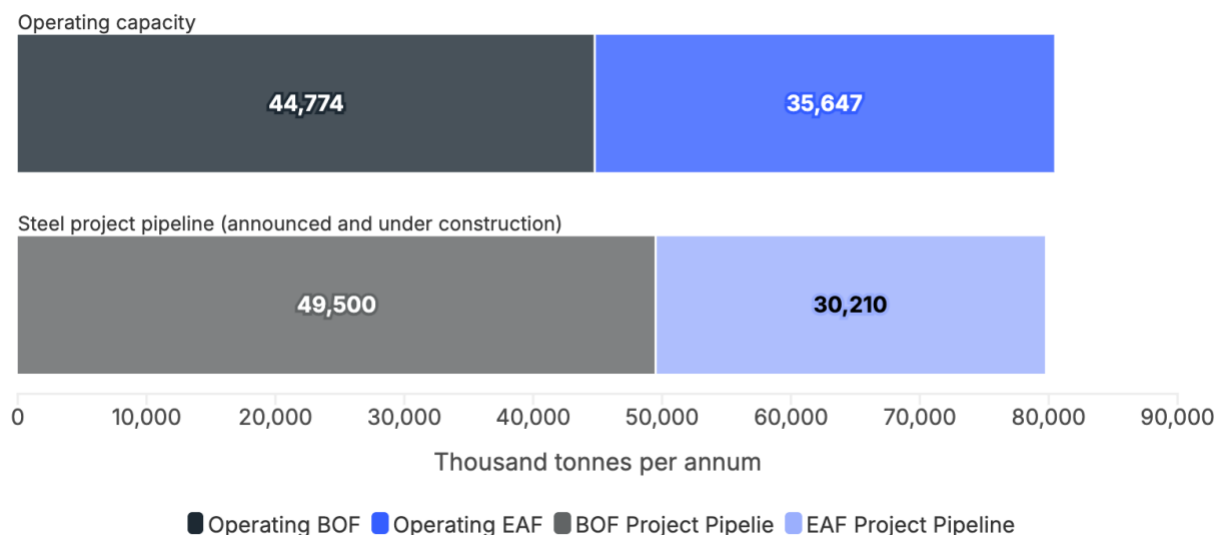
¹⁰⁹ Rio Tinto. [Rio Tinto releases second quarter 2026 production results](#). 15 July 2026.

¹¹⁰ Dialogue Earth. [Guinea iron ore project tests China's 'transition finance' credibility](#). 30 March 2026.

¹¹¹ Bloomberg. [China's CMOOC Makes Iron Ore Push With Brazil Mine Financing Deal](#). 30 July 2026.

¹¹² CREA. [China's greener steelmakers spread overseas](#). 14 October 2025.

¹¹³ Agora Industry and Agora Energiewende. [Decarbonising steel in Southeast Asia. Pathways, opportunities and enablers](#). 2025.

Figure 10: Southeast Asia is home to significant EAF capacity

Source: Global Energy Monitor.

The EAF capacity in Southeast Asia represents an opportunity for early Australian green iron exports as the availability of scrap steel in the region is looking increasingly questionable.

Currently, Southeast Asia imports scrap steel from developed nations in Europe and Japan, amongst others. However, as these nations increasingly turn towards more EAF-based steelmaking themselves, they will export less scrap to ensure it's available for domestic consumption. Boston Consulting Group forecasts that this increase in scrap demand in developing nations will turn a 9Mt scrap steel surplus into a 15Mt deficit by 2030.¹¹⁴ In Europe – the largest scrap-exporting region globally – projections suggest that demand for scrap will exceed supply by 2030, turning the region from a net exporter to a net importer of around 3Mt.¹¹⁵

With growing demand and relatively young infrastructure, the supply of scrap steel in Southeast Asia is limited. As the steel sector grows, the region's scrap demand is expected to increase by 4% each year, likely forcing it to rely more on imported scrap steel just as global competition for supplies is increasing.¹¹⁶ Scrap availability is already becoming constrained in countries like Vietnam.¹¹⁷

This will likely get worse as scrap exporters in the Asia-Pacific region increasingly turn to EAFs to replace coal-based steelmaking and keep more scrap steel for domestic consumption. Japan is a key exporter of scrap steel; its major 2026 export destinations include Vietnam and Thailand.¹¹⁸ Japan's

¹¹⁴ Boston Consulting Group. [Shortfalls in Scrap Will Challenge the Steel Industry](#). 12 March 2024.

¹¹⁵ Roland Berger. [The growing battle for scrap steel in green steel production](#). 15 July 2025.

¹¹⁶ Agora Industry and Agora Energiewende. [Decarbonising steel in Southeast Asia. Pathways, opportunities and enablers](#). 2025.

¹¹⁷ Transition Asia. [DECARBONISING VIETNAM'S STEEL INDUSTRY: CHALLENGES AND OPPORTUNITIES FOR A LOW-CARBON INDUSTRIAL FUTURE](#). July 2025.

¹¹⁸ Argus Media. [Japan's ferrous scrap exports drop further in May](#). 29 June 2026.

steelmakers have numerous new EAFs in development that will see it retain more scrap for domestic use. In May 2025, Japan's largest steelmaker Nippon Steel made a final investment decision (FID) on a USD6 billion investment in EAFs with a total capacity of 2.9Mtpa, including the construction of one new EAF, the expansion of another and the modification and restart of a third.¹¹⁹ This followed JFE Steel's announced decision to build its own 2Mtpa EAF at the Kurashiki facility of its West Japan Works.¹²⁰

Australia is itself a significant scrap steel exporter (Figure 11) but is likely to export significantly less into the Asia-Pacific region going forward. There are numerous plans for new scrap-based EAFs in Australia at varying stages of development that will likely see its scrap steel exports decline as more is retained for domestic use.¹²¹

Scrap steel imports by developing nations with growing steel demand will be made even harder by growing restrictions on scrap exports. Numerous countries have already imposed such restrictions and it can be expected that the number will increase going forward as scrap's value as a strategic resource continues to rise.¹²² The EU has amended waste shipment regulations that will see further restrictions, including for scrap steel, imposed from 2027.¹²³ The Bureau of International Recycling has warned of major disruptions to global recycling markets resulting from this, with countries including India, Malaysia and Thailand excluded from ferrous and non-ferrous waste import authorisations.¹²⁴ GMK Centre foresees decreasing availability of trade scrap leading to higher prices for steelmakers and that eventually scrap will cease to be a commonly traded commodity.¹²⁵

Major steelmakers in developed nations are readying themselves to secure scrap steel amid growing global competition. A key way to achieve this is via the acquisition of scrap metal collection and processing companies. In Europe, ArcelorMittal has acquired several recycling businesses including: John Lawrie in Scotland¹²⁶; Riwald in the Netherlands¹²⁷; and Alba International in Germany¹²⁸. Europe is at the heart of the global steel technology shift from coal-based steelmaking to EAFs. Countries such as the UK are likely to see a particularly fast transition, leading to lower scrap exports.¹²⁹

In the US, BlueScope acquired MetalX in 2021¹³⁰, and Cleveland Cliffs acquired Ferrous Processing and Trading in the same year¹³¹. The US steel industry is based largely on scrap-EAF production,

¹¹⁹ Nippon Steel. [Decision is Made to Invest in the Conversion from the Blast Furnace Steelmaking Process to the Electric Arc Furnace Steelmaking Process](#). 30 May 2025.

¹²⁰ JFE Steel. [JFE Steel to introduce advanced, high-efficiency, large-scale electric arc furnace in Japan](#). 10 April 2025.

¹²¹ Climate Energy Finance. [Arc of Ambition: Decarbonising and Safeguarding Australia's Steel Industry](#). 30 July 2026.

¹²² UK Steel. [Steel Scrap: A Strategic Raw Material for Net Zero Steel](#). December 2023.

¹²³ European Commissions. [Waste Shipments](#).

¹²⁴ Bureau of International Recycling. [Closing global markets will not strengthen European recycling, BIR warns](#). 23 September 2026.

¹²⁵ GMK Centre. [Global Scrap Exports Restrictions 2025](#).

¹²⁶ ArcelorMittal. [ArcelorMittal acquires steel recycling business](#). 2 March 2022.

¹²⁷ ArcelorMittal. [ArcelorMittal acquires Dutch scrap metal recycling business Riwald Recycling](#). 6 December 2022.

¹²⁸ ArcelorMittal. [ArcelorMittal acquires German steel scrap recycling businesses from Alba International Recycling](#). 11 May 2022

¹²⁹ IEEFA. [UK has an opportunity to create a truly 21st century steel industry](#). 16 April 2025.

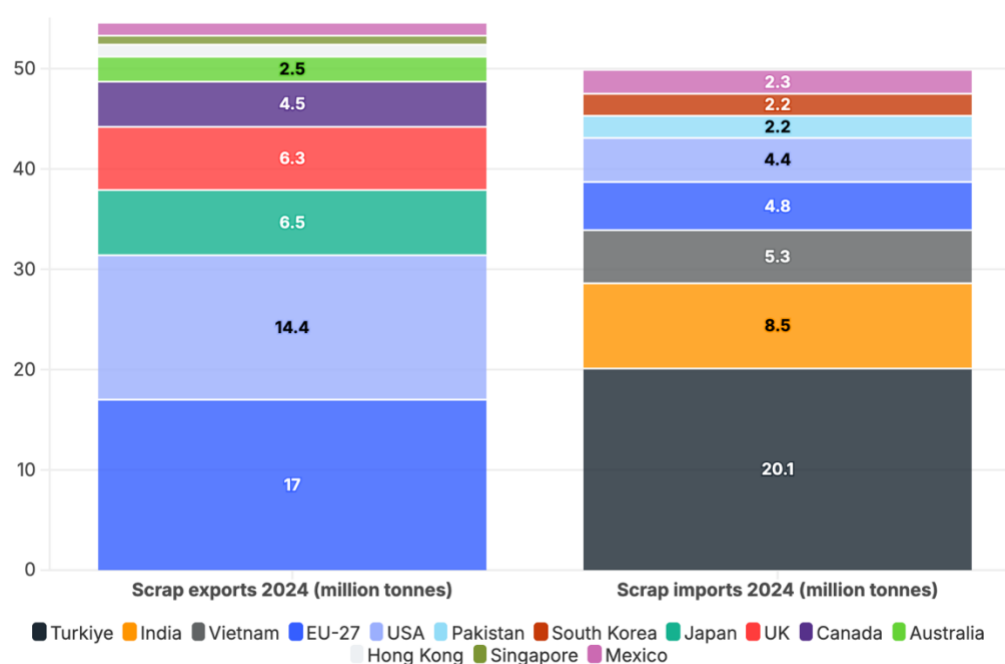
¹³⁰ BlueScope. [BlueScope acquires ferrous recycling business from MetalX](#). 19 December 2021.

¹³¹ Cleveland Cliffs. [Cleveland-Cliffs Completes Acquisition of Ferrous Processing and Trading Company](#). 18 November 2021.

supplemented by some DRI and pig iron. The structure of the US industry, where around 70% of steel is made via the EAF route, is an indicator of the direction other developed nation's steel sectors are heading.¹³²

The shift in the scrap steel trade balance in places like Europe and Japan will have significant implications for steelmaking globally, with some steelmakers and countries impacted more than others. Developed nations – moving already to secure supplies – are likely to fair better at the expense of developing nations.

Figure 11: Key scrap steel importers and exporters, 2024



Source: Bureau of International Recycling.¹³³

The increasing scarcity of traded scrap steel could become an opportunity for future Australian green iron producers. Green iron imports could supplement scrap in Southeast Asian EAFs. Much scrap-EAF-based steelmaking is for lower-value output such as long steel products for the construction industry. As such, the replacement of scarce scrap with imported green iron could be an expensive solution not suitable for these products. However, in a world where scrap steel is increasingly scarce, scrap prices are likely to rise significantly. In addition, supplementing scrap with a relatively low proportion of green iron could help keep production costs down.

Adding a proportion of green iron to scrap for EAF-based steelmaking can also help increase the quality (and value) of steel products relative to a 100% scrap-based EAF. In the US, most steel is

¹³² World Steel Association. [World Steel In Figures 2026](#).

¹³³ Bureau of International Recycling. [World Steel Recycling in Figures 2020–2024](#). 2025.

produced via the EAF route, including the production of the very high grades of steel required by the car industry. US steelmakers like Nucor are able to produce advanced high-strength steel (AHSS) and ultra-high strength steel (UHSS) grades in EAFs by supplementing scrap with DRI.¹³⁴ Supplementing scrap with green iron would allow EAF-based steel producers in Southeast Asia to produce higher grades of steel.

A project in the Middle East is set to demonstrate this model and is a warning that Australia risks falling behind and failing to capitalise on this opportunity.

Meranti Green Steel plans to build a 2.5Mtpa DRI plant in Oman which will run on a mixture of 15% green hydrogen and methane gas before progressively ramping up the proportion of green hydrogen thereafter.¹³⁵ Oman's experience with DRI, renewable energy resources and policy support for green hydrogen development make it one of the leading locations in the world to produce and export green iron.¹³⁶ The iron produced by the DRI plant is to be exported as hot briquetted iron (HBI) to both Europe and Thailand. Meranti has signed offtake agreements for 100% of its future HBI production, including with Glencore and Thyssenkrupp Materials Trading.¹³⁷ The HBI shipped to Thailand will be processed into steel via an EAF, along with scrap steel.¹³⁸

Both the DRI plant in Oman and EAF plant in Thailand are scheduled to begin operations in 2029. At that point there will be an operational example of the green iron opportunity Australia has in Southeast Asia.

India's iron ore self-sufficiency is coming to an end

India is the biggest steel demand growth market in the world but has historically been self-sufficient for iron ore, making it a less likely destination for future green iron exports. However, that now looks set to change. The Australian government forecasts that India's iron ore imports will rise from virtually nothing to 50Mt by 2031 (Figure 12). Imports may soon become an economic option for steel plants close to ports in the west and south of India, further away from the country's domestic resources.¹³⁹

¹³⁴ Nucor. [Advanced EAF Steel Capabilities for Automotive Platforms](#).

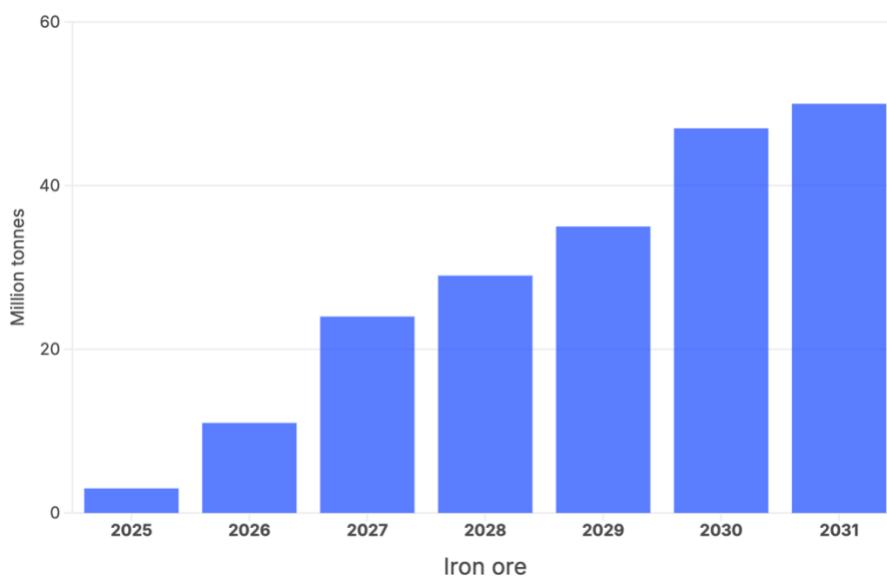
¹³⁵ Meranti Green Steel. [Meranti Green Steel Announces Strategic Green Iron Project in Oman](#). 11 August 2025.

¹³⁶ IEEFA. [Oman at the frontline of the green steel transition](#). November 2025.

¹³⁷ Meranti Green Steel. [Meranti Green Steel Announces Full Offtake Coverage for Duqm Green HBI Plant](#). 28 January 2026.

¹³⁸ Meranti Green Steel. [Kingspan joins forces with Meranti Green Steel to accelerate green steel adoption in APAC](#). 6 November 2025.

¹³⁹ IEEFA. [India's looming iron ore challenge](#). 12 August 2026.

Figure 12: India's need for iron ore imports is forecast to grow

Source: DISR (2026)

In Tata Steel's 4QFY26 earnings conference call, company CEO TV Narendran stated that imports will be part of the steelmaker's post-2030 iron ore strategy, noting the coastal location of some of the company's capacity and stating that targeting imports with low alumina would better blend with India's high-alumina domestic ores.¹⁴⁰

Australian iron ore from the Pilbara may not be the best source of imports for India. Although Pilbara ores are lower alumina than Indian ore, Australian production has the second highest levels globally.¹⁴¹ India could be better off importing low-alumina iron ore from the likes of Brazil for blending with domestic ores. However, Australia's magnetite ores have low alumina levels after beneficiation and could be a good fit for India.^{142,143} Australia has the opportunity to open up more magnetite iron ore reserves¹⁴⁴, such as the Middleback Ranges resource in South Australia.¹⁴⁵

An alternative to magnetite iron ore exports, that would add further value, would be to export green iron to India. India already has nearly 27Mt of EAF capacity operational and more than 40Mt in the project pipeline according to Global Energy Monitor.¹⁴⁶ Some of this capacity could potentially process green iron into steel to help meet India's fast-growing demand while providing some early demand for Australian green iron.

¹⁴⁰ Tata Steel. [Earnings conference call 4QFY26](#).

¹⁴¹ AFR. [India's looming iron ore challenge has Australian miners dreaming](#). 21 May 2026.

¹⁴² Ansteel Karara Mining. [High-Grade Fe Magnetite](#).

¹⁴³ Citic Pacific Mining. [Our Product – Cape Preston Concentrate](#).

¹⁴⁴ IEEFA. [Australia Green Iron Tracker](#).

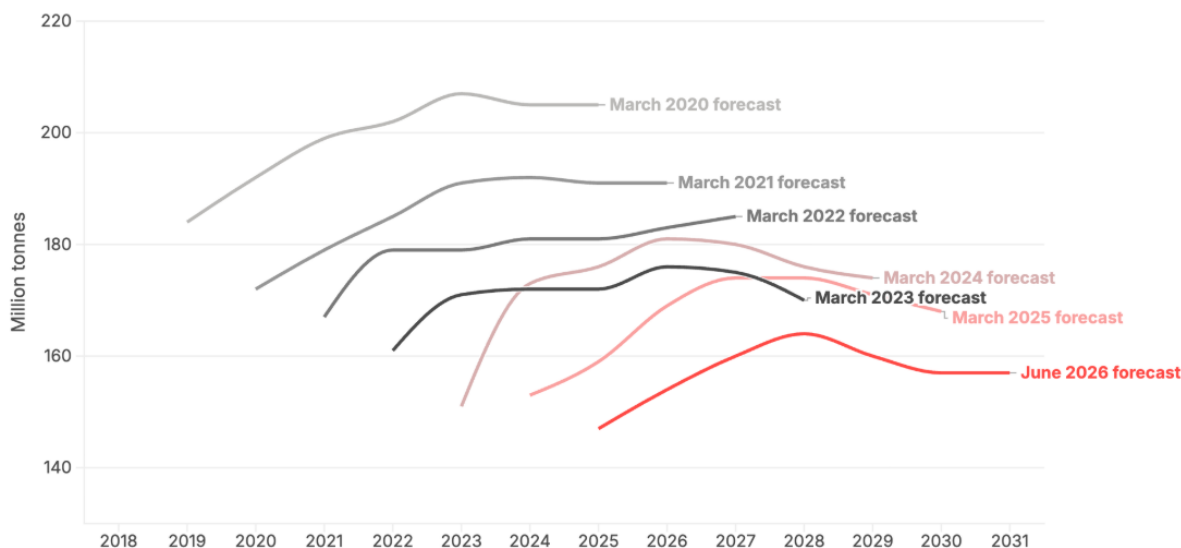
¹⁴⁵ AFR. [Coal billionaire takes private jet to Whyalla for steel talks](#). 24 May 2026.

¹⁴⁶ Global Energy Monitor. [Steel Capacity \(TTPA\) by Method and Development Status in Each Country/Area](#). June 2026.

India is well incentivised to find alternative steelmaking technology routes. The country has recently been accelerating blast furnace construction to meet its fast-growing steel demand. With limited domestic supply, India is forced to rely on imports for around 90% of the metallurgical coal needs of its steel sector.

However, there are growing doubts about the long-term supply of metallurgical coal in the seaborne market. The Australian government has had to consistently revise down its met coal export forecasts throughout this decade (Figure 13).¹⁴⁷ This could become an energy security and economic concern for India. Coal miners are already telling their investors to expect structurally higher met coal prices as supply fails to keep up with demand going forward.¹⁴⁸

Figure 13: The Australian government is consistently revising down its met coal export forecasts



Source: DISR.

Some reliance on Australian green iron would keep India's steel sector dependent on imports. However, the country is set to become more dependent on iron ore imports anyway. Furthermore, if India becomes dependent on imports of blast furnace-grade iron ore, it also risks locking in even higher dependence on metallurgical coal imports.

In the longer term, more scrap steel will be available for recycling in India. But with its steel demand surge more than two decades behind the start of China's boom, this is likely decades away. Jindal Steel stated in its Q1FY27 earnings conference call that it plans to import DRI/HBI given a shortage of available metalics, such as scrap steel.^{149,150} Jindal owns an operational DRI-based steel plant in

¹⁴⁷ The Economic Times. [India's steel ambitions face a coal reality check](#). 21 July 2026.

¹⁴⁸ IEEFA. [India's steel sector confronts growing coal risks](#). December 2025.

¹⁴⁹ Jindal Steel. [Q1FY27 Earnings Conference Call](#)

¹⁵⁰ Argus Media. [India's Jindal Steel to focus on value-added products](#). 28 July 2026

Oman and is constructing another.¹⁵¹ Oman is the likely source of any DRI/HBI imports by Jindal into India. However, the company is also one of the final two bidders for the Whyalla steel plant in South Australia, where a transition plan is intended to transition the site from coal-based blast furnaces to DRI-EAF.

If Jindal Steel were to begin importing HBI from Oman, the model for potential Australian green iron exports would once again be demonstrated, this time in an Indian context. Oman would look even more like it was leading the world in the emerging green iron trade, once again highlighting that Australia risks being left behind.

Japan and South Korea, as key iron ore customers with limited renewable energy resources, remain obvious future destinations for Australian green iron. China's heavy reliance on Australian iron ore may still see it become a green iron destination as well.

But China's strategic concerns and the changing structure of its iron and steel supply chain as demand falls bring downside risks that may see it disappoint Australian green iron producers in the future. Increased focus on the opportunities in key steel growth markets like Southeast Asia and India is needed to help Australia achieve the increasingly essential task of adding value to its iron ore exports.

¹⁵¹ Jindal Steel. [Forging Oman's Future with Low-Carbon Steel](#).

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