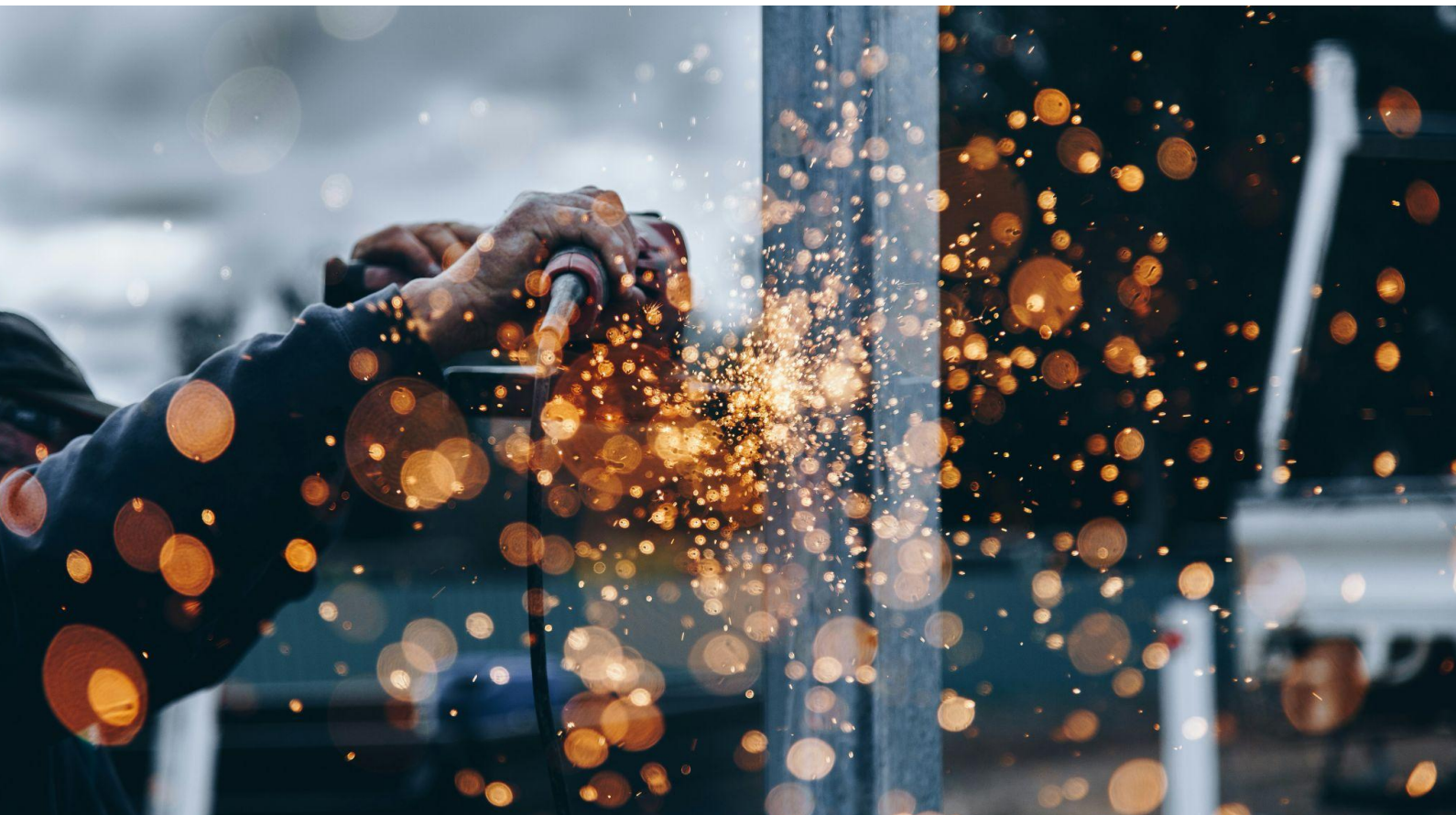


# Arc of Ambition: Decarbonising and Safeguarding Australia's Steel Industry

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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

**Professor Elizabeth Thurbon, UNSW**

Australia faces a nation-defining moment. Climate change, energy insecurity, technological transformation and geopolitical competition are reshaping the economic and strategic landscape. They can no longer be understood — or governed — in isolation. They demand a more strategic approach: one that aligns public institutions and private investment to build the industries that will underpin future prosperity and national resilience.

This report is a timely contribution to that challenge. Few industries better illustrate both the scale of the challenge — and the opportunity — than iron and steel. As a foundation industry, steel underpins Australia's construction, energy, transport and defence capabilities. Its successful decarbonisation therefore offers far more than emissions reduction. It has the potential to unlock billions of dollars in investment, create new employment opportunities across regional Australia, stimulate new renewable energy development, and strengthen Australia's sovereign industrial capability. Realising that opportunity, however, demands more than isolated policy interventions. It requires strategic coordination between the public and private sectors. In short, it calls for a Green Energy Statecraft approach.

Green Energy Statecraft starts from a simple proposition: the decarbonisation of strategic industries like iron and steel — and the creation of the green industries that will follow — is not simply a climate imperative. It is an opportunity to strengthen economic, energy, environmental, social and geostrategic security simultaneously. The countries that prosper will not necessarily be those with the greatest natural resources or the deepest fiscal pockets, but those with the governance capabilities to translate comparative advantages into enduring national strength.

Australia is exceptionally well placed to succeed. Abundant renewable resources, world-class mineral endowments, outstanding research capability and trusted relationships with key Indo-Pacific partners provide a formidable starting position. Yet, as this report makes clear, these advantages will not translate automatically into industrial leadership or national resilience.

The objective is not to shelter industries that cannot compete. It is to use Australia's structural advantages — particularly its exceptional potential for low-cost renewable energy and its mineral resources — to build industries that can become globally competitive in a decarbonising world. Government's role is to help overcome the early barriers to commercialisation, not to provide permanent support.

Pricing carbon remains an essential part of the policy toolkit. It helps ensure markets better reflect the true costs of emissions and encourages cleaner production and consumption. But no country has ever taxed its way to techno-industrial transformation.

Building entirely new industries depends on governments making strategic projects bankable. In practice, this means coordinating investment, infrastructure, finance, procurement, regulation and skills around a shared long-term national ambition. The central question for policymakers is therefore not simply: Which policy instrument should we use? It is: Which strategic capability are we trying to create — and what combination of public and private action will bring it into being?

The great strength of this report is that it connects Australia's resource and renewable-energy endowments with a practical pathway for industrial renewal. It demonstrates how strategic investment in low-emissions steel can revitalise regional communities, crowd in private capital, stimulate renewable energy development and strengthen sovereign manufacturing capability. More importantly, it shows how the right governance, financing and institutional arrangements can turn that opportunity into bankable projects.

Australia's opportunity lies not simply in decarbonising existing industries, but in using the transition to build entirely new sources of national capability, resilience and prosperity. The report that follows shows what that looks like in practice. It reminds us that the energy transition is not simply an environmental imperative. If governed strategically, it can become one of Australia's greatest national security multipliers — strengthening our prosperity, resilience and sovereign capability for decades to come.

**Elizabeth Thurbon is Professor of International Political Economy in the School of Social Sciences at UNSW Sydney. She is also Director of the Green Energy Statecraft Project, a collaborative initiative between UNSW Sydney, University of Melbourne, University of Sydney, ANU, UTS and international, industry and philanthropic partners.**

## Report on a Page

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Steel production is one of the world's largest sources of emissions. In 2024, the global iron and steel sector generated ~9.4% of global CO <sub>2</sub> emissions, ranking behind only China and the US's carbon footprint. Decarbonising global iron and steel supply chains is the world's largest emissions-reduction opportunity outside the electricity sector.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|    | The global industry is now entering an irreversible, although uneven and halting, transition away from fossil-fuel-based production. This will fundamentally reshape iron and steel supply chains, with dramatic economic and strategic implications for Australia. Australia and China are by far the two largest steel supply chain participants.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|    | Australia supplies half the world's exports of iron ore and coking coal used to make steel. As our North Asian partners, including China, decarbonise their steel industries, Australia's globally dominant exports of higher impurity, lower grade Pilbara iron ore – less readily suited to steel decarbonisation pathways – are at existential risk, with damaging economic consequences to our #1 export industry valued at over \$120bn pa.                                                                                                                                                                                                                                                                                                                                                                                                 |
|   | Australia cannot simply keep digging and shipping rocks, but must pivot to onshore clean energy-powered value-adding and manufacturing to secure its economic resilience and long term prosperity, as articulated in the Federal Government's Future Made in Australia (FMIA). It is well placed to position itself in decarbonising global steel supply chains if it acts now.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|  | A key opportunity detailed in this report is to build renewables powered, scrap-steel fed Electric Arc Furnaces (EAFs) that use electricity to melt scrap steel and/or direct-reduced iron (DRI), producing steel at a fraction of the emissions of coal-fired blast furnaces while creating potential demand for future Australian green iron production.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|  | There are opportunities for regional Australia in EAFs. <b>Australia has the scope to construct EAFs in Collie, WA, Whyalla, SA (scrap and DRI fed), and greater Brisbane, QLD in the next year.</b> This would unlock billions in investment, create offtake agreements for large-scale new firm renewable energy and bring new employment opportunities aligned with FMIA. (The initial phase of an early stage green steel proposal for Newcastle, NSW does not include an EAF).                                                                                                                                                                                                                                                                                                                                                              |
|  | FMIA needs project proposals to get to a final investment decision (FID). Achieving this requires an ambitious, government-led market-forming ' <b>Green Energy Statecraft</b> ' industrial policy architecture, embodied in a <b>National Iron and Steel Decarbonisation Strategy</b> , and a <b>Carbon Border Adjustment Mechanism</b> targeted to trade exposed, emissions intensive industries as part of the <b>Safeguard Mechanism</b> . These measures would address the structural barriers to the current economic viability of green and low-carbon steel for proponents; drive the sector's decarbonisation by putting a price on carbon; enable Australia to expand its onshore green metals manufacturing capacity; and strengthen its competitive and strategic positioning at a critical juncture in the race to global net zero. |

## Executive Summary

As emphasised in Climate Energy Finance's (CEF) [Green Metal Statecraft](#) report in April 2026, there are discrete points of decarbonisation advancing across the iron and steel value chain. However, in aggregate, the global sector is advancing unevenly, haltingly and at a pace that remains misaligned with the rate of decarbonisation of the sector required to meet global obligations.

There remains a clear bankability gap for near-zero carbon routes for iron production given high capital cost intensities; exposure to higher operating costs in electricity and renewable hydrogen supply; no price on carbon in Asian trade; and stacked project-on-project risks as a result of uncertainties on technology and market risks for clean commodities. This has forced a recalibration of the global investment pipeline away from speculative ambition toward a phased, evolutionary approach centred on incremental electrification through electric arc furnace (EAF) steelmaking.

Steelmakers across Asia-Pacific are experiencing low returns on capital, continued margin compression as a result of overcapacity, and insufficient demand-pull from lack of consumer willingness to pay clean commodity premiums. There is a clear long-term path toward near-zero carbon iron production, but the continuation and expansion of capital flows into decarbonisation across the iron and steel value chain must be supported by strategic government policies that facilitate lower-hurdle opportunities of emissions reduction and electrification in the near-term to enable technologies to progress up the commercialisation curve.

The deadlock of Australia's investment pipeline of direct reduced iron proposals demonstrates Australia is not immune to global pressures. Australia has an opportunity to accelerate its ambition to position itself in emerging low- and zero-emissions steel value chains; safeguard and scale sovereign capability of national security-critical manufacturing; and build a foundation of a market-forming state that is central to the Future Made in Australia (FMIA). EAFs provide a proven, viable pathway for Australia's FMIA ambition to get runs on the board this decade, and potentially support the advancement of Australian green iron by providing domestic demand for early movers.

While most international steelmaking counterparts' industrial policy packages have largely involved the erection of trade barriers and the provision of domestic production subsidies, we argue that Australia should take a different approach.

An effective **Green Energy Statecraft** policy architecture starting domestically can create government initiatives and channels of strategic public capital deployment that de-risk key aspects of project development through coordinated planning; enabling infrastructure; and efficient allocation and alleviation of project development risks, addressing structural challenges to the economic viability of decarbonised value-add.

The FMIA's National Interest Framework lays out the prudent basis for targeted public investment that can strengthen the alignment of economic incentives with Australia's national interests and crowd-in private investment at scale to develop priority industries. The Federal Government recognises that in many instances, businesses and investors possess the skills, market information, risk-taking frameworks, agility and flexibility to make the necessary long-term investments. However, government intervention can be a catalyst for private investment when it addresses circumstances where economic incentives are not aligned with broader national interest objectives.

Steelmaking in Australia does not have a comparative advantage under current international settings. However, maintaining domestic steelmaking is necessary to Australia's economic resilience and security. Coordinated government intervention will be a vital pillar to ensuring that Australia maintains domestic capabilities whilst enabling decarbonisation of the sector and encouraging investment from new entrants.

Australia's key north Asian trade and investment partners have clearly demonstrated that entrepreneurial state capabilities cannot be fully designed before the event. Before aiming to catalyse a highly capital-intensive, technologically complex, and globally competitive green iron industry, Australia now has an opportunity to learn-by-doing in developing institutional capabilities in smaller, more manageable sectors – including low-emissions steel production.

## **RECOMMENDATIONS**

**CEF recommends the development of a National Iron and Steel Decarbonisation Strategy framework informed by Green Energy Statecraft within FMIA that:**

- Lays the sociopolitical and financial foundations for strategic market interventions through targeted debt, minority equity, grant, and contracting facilities that de-risk development with competitive and low-emissions performance benchmarks.
- Coordinates planning, energy and environmental approvals.
- Harmonises domestic policy, foreign policy and international engagement, facilitating clean commodity trading corridors and cross-border transition finance flows.
- Strengthens domestic carbon emissions reduction policy frameworks to incentivise accelerated decarbonisation of iron and steel chains.

This can be a critical institutional development ground for intragovernmental coordination through special investment vehicles, deploying public capital up to the point of minimum viable concessionality, and connecting strategic public investment to performance against clearly defined targets in production, environmental standards, domestic value-add, and technological upgrading.

**CEF recommends the Federal Government introduce an Australian Carbon Border Adjustment Mechanism (CBAM) to the Safeguard Mechanism.**

The Federal Government's Net Zero Industry Plan positions the Safeguard Mechanism as the principal policy driver for steel decarbonisation, emphasising that it is the most direct signal to reduce emissions in line with Australia's climate targets, supporting long-term investment certainty and encouraging investment in commercially viable abatement technologies and alternative inputs.

However, the Trade-Exposed Baseline Adjustment (TEBA) concessions provided to industry, including Australia's two primary steelmakers, materially undermine the Safeguard Mechanism's efficacy by limiting the sector's exposure to an effective carbon price. A CBAM applying to targeted import-sensitive, emissions-intensive sectors where carbon leakage risk is material, such as steel, would provide a robust underpinning of the Safeguard Mechanism, efficiently supporting the emergence of low-emissions steel production.

Importantly, a CBAM creates the regulatory framework to expose imports to an equivalent carbon price to domestic producers, enabling the removal of TEBA concessions. An Australian CBAM — vital to address the market failure of the unpriced negative externalities of carbon pollution — would:

1. Level the playing field for low-emissions producers competing in commodity markets with emissions-intensive producers. This long-term regulatory certainty underwrites investment in new decarbonised capacity, and incentivises the decarbonisation of existing manufacturers.
2. Safeguard domestic industry from carbon leakage, protecting producers of lower-emissions commodities from imported, high-emissions steel products.

**We urge the government to act on these measures now. Failure to move promptly to position Australia in the burgeoning market for green iron and steel will carry a considerable opportunity cost that will be compounded over time as steel decarbonisation accelerates, exposing Australia to risks such as a major loss of export income, industrial capability and strategic relevance, just as the global steel industry begins a transformative and irreversible shift away from fossil-fuel based production and processing.**

# Introduction

The global energy transformation is driving a major techno-economic paradigm shift for global political and economic systems. Western capitalism needs to grow to better encourage longer term strategic national interests, leveraging patient public capital to derisk and crowd-in private capital. This current shift of global electrification and decarbonisation transformation of energy likewise requires the creation of new clean industries, and the progressive destruction of fossil fuel incumbencies.<sup>1</sup> This represents a monumental challenge of environmental policy, energy policy, and techno-industrial policy to catalyse new industry formation and the adjustment and dismantling of legacy industry.

## Industrial policy is back

The enthusiastic embrace of the energy transition in Northeast Asia, and in particular China, has been catalysed by policymakers' growing realisation that traditional fossil-fuelled models of development are unsustainable economically, environmentally, and politically – posing rapidly increasing national security, economic resiliency and geopolitical risks from their exposures to fossil fuel supply chain disruptions.

Developmentally-minded policymakers in Northeast Asia view local manufacturing capacity, technological autonomy, energy independence and export competitiveness as the essential foundations of domestic political legitimacy, national security, and international status – embracing the central role of government in advancing these objectives through strategic interventions in markets.<sup>2</sup> Industrial policies have been instrumental in supporting these economies' — notably China, Japan, South Korea, and Taiwan — development, successfully supporting the scaling and competitiveness of key sectors with state-directed investments in technologies and capabilities, complemented by government-led export strategies. Western capital markets have struggled to respond, given the speed of technology development, and the lack of an effective price signal to value embodied decarbonisation, outside of Europe.

The effective implementation of such industrial policies has not been isolated to Northeast Asia, with many of the world's largest industrial and diversified economies — including the US, European Union (EU), and the United Kingdom (UK), adopting similar interventionist and market-forming policies throughout their development in response to geopolitical and economic conditions.<sup>3</sup>

Similarly, here in Australia, the Hawke-Keating era of economic reform through its Accord with the trade union movement was not just about economic liberalisation through mechanisms such as floating the dollar and tariff reductions, but equally the utilisation of targeted industry plans, structural adjustment measures and workplace best practice programs.<sup>4</sup>

A successful energy transformation is not just a challenge of de-growth in fossil fuel industries, but of growth in emerging industries enabled by renewable energy. Northeast Asian policymakers have demonstrated their acute awareness – through the implementation and iteration of long-sighted industrial policy – of the economic, energy and environmental security benefits associated with the energy transformation.

As Thurbon et al have put forth to policymakers to manage the current polycrisis of energy, economic, environmental and military security challenges; nations must adopt a coherent,

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<sup>1</sup> Dr Elizabeth Thurbon et al, [Developmental Environmentalism: State Ambition and Creative Destruction in East Asia's Green Energy Transition](#), 02 May 2023

<sup>2</sup> Dr Elizabeth Thurbon et al, [Developmental Environmentalism: State Ambition and Creative Destruction in East Asia's Green Energy Transition](#), 02 May 2023

<sup>3</sup> Dr Marina Zhang, Prof. Roy Green, Prof. Mark Dodgson, [Promises and Perils of the Future Made in Australia Act](#), 25 November 2024

<sup>4</sup> Prof. Roy Green, [Economic Reform Must Include Industrial Transformation](#), 25 July 2025

comprehensive approach to governance with active public participation and market formation. Framed as **Green Energy Statecraft**, the approach involves national governments adopting ambitious and strategic roles in guiding, shaping, and accelerating the energy transformation to advance a comprehensive national and economic security-enhancing agenda.<sup>5</sup> Alongside the decarbonisation and growth of electricity systems, governments have the capacity and increasing need to play a vital market-forming role in accelerating the development of industrial decarbonisation and crowding-in, at speed, the critical scale of private capital across the spectrum of technological commercialisation.

### **Australia's missing market**

Australia's open market economy has long-been export-oriented, positioned upstream of long, complex supply chains. The increasing concentration and reliance on resources and services has resulted in an industrially eroded and undiversified economic environment. As a result, the stacking of blunt production subsidies, concessional finance and grant funding, which has largely characterised the mechanisms of the strongly aspirational Future Made in Australia (FMIA) thus far, have not crowded in the scale of private capital required for a system that lacks coordinated planning, enabling infrastructure, anchored industrial demand and a clear allocation of long-term risks for clean commodities. An enhanced carbon price would certainly help level the playing field, as CEF strongly advocates for a deepening of the Safeguard Mechanism, along with a carbon price floor that ratchets up in real terms over time.<sup>6</sup>

The importation of policy frameworks into Australia, such as those adopted in the US and Europe in the Inflation Reduction Act and European Green Deal, will not likely catalyse the same market and investment formations as seen in these economies. The EU and US clean industrialisation packages are designed to build upon a large, diversified industrial economy with extensive domestic markets and complex and deep manufacturing bases across value chains. In contrast, Australia's economy is heavily export-oriented to Asia.

Missing pieces of Australia's FMIA package, tailored to the economic nature of its economy, are both the absence of coordinated policy capable of bringing energy supply, industrial demand and infrastructure development together at the scale and speed required; and international engagement and foreign policy structured around market development across the Asia-Pacific to integrate pricing and demand signals to develop new clean commodity value chains into its resource trade corridors. Industrialised economies with high degrees of economic complexity and diversification have established institutional coordinating capacity, including Vinnova in Sweden, InnovateUK in the UK, TNO in the Netherlands, METI in Japan, and MOTIE in South Korea.

Governments are often the most efficient bearers of the transition's hardest risks: long-dated offtake, early-mover industrial exposure, and system-coordination risk. In the absence of a clear market price signal and high risks in deploying first-of-a-kind (FOAK) technologies in the domestic context, the result is a higher cost of capital and slowing investment, absent the government bridging the funding gap for the 'public good'.

Production subsidies alone cannot overcome the underlying structural challenges of industrial formation. What can work is a coordinated approach from governments: anchoring demand through credible long-term offtake, sequencing infrastructure with industrial build-out, and allocating system-level risk to the party best able to bear it.

### **Green steel as the test case**

Steel is an integral component of new energy technologies, buildings and infrastructure. As more industries reorient towards reductions in embedded emissions intensity in products, the decarbonisation of steel becomes of increasing importance. Beyond the electrification of transport

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<sup>5</sup> Dr Elizabeth Thurbon et al, [Green Energy Statecraft for Comprehensive National Security](#), December 2024

<sup>6</sup> The Energy, [Future Made in Australia Needs a Home-grown Recipe](#), 23 June 2026

and displacement of oil, the decarbonisation of steel is the second largest decarbonisation opportunity in the world, and in which Australia and China play a critical role in the commercialisation and deployment of low-emissions technologies across the iron and steel value chain.

While there are some highlights of decarbonisation advancing across the iron and steel value chain, in aggregate, the global sector is advancing unevenly, haltingly, sporadically and at a pace that remains deeply misaligned with the speed and breadth demanded by the climate science. For every step forward on an individual project or market-level, the broader investment pipeline showcases an equal case study of project delay, cancellation, and restructure in the face of unresolved structural headwinds, with the US policy backsliding undermining global capital momentum.

The economic realities of rising infrastructure costs, slower-than-anticipated deflation of electrolyser cost curves (at least as is evident outside of China), incoherent and unstable enabling policy architecture, sustained volatile and high fossil fuel prices globally and rising geopolitical tensions have necessitated a more considered approach to investment.

The largest steel producing and consuming markets have implemented a myriad of public policy support measures to accelerate investment into the decarbonisation of iron and steel. Policies have been designed to support demand-pull mechanisms and supply-side production incentives and subsidies. However, the absence of global or now more likely regional collaboration and engagement across critical industries has resulted in this kaleidoscopic array of support without a clear, long-term policy pathway across domestic and export markets, or sufficient financial sector leadership to encourage a wider corporate buy-in.

Coordinating multilateral and plurilateral engagement and collaboration across market-based support mechanisms will play a critical role in market formation by bridging the price gap between producers and offtakers, distributing cost premiums across multiple markets and underwriting the high upfront capital investment needed for FOAK lighthouse projects, such as Stegra in Sweden.

The global acceleration of green iron and steel investment, including enhanced scrap steel recycling and the upstream firming renewable energy infrastructure deployments needed, will depend on the ability of policymakers to synchronise technological, fiscal, and diplomatic levers across markets and borders to shift decarbonisation from a perceived cost into a central pillar of sovereign industrial strategy, a key lesson in 2026 given the US war against Iran.

### **The case for coordinated capitalism**

As outlined in the Federal Government's Net Zero Industry Sector Plan, Australia's industrial sector is vital to the nation's economic strength and resilience, and central to its FMIA plan is the securing and strengthening of existing industrial capability and seizing emerging opportunities in the clean economy.

The existing foundation of manufacturing and value-adding industries provides immense value to the Australian economy. Across the 9 subsectors of industry identified in the Industry Net Zero Plan,<sup>7</sup> 120,000 businesses generate \$206bn in gross value-added (GVA), equivalent to 7.7% of national gross domestic product (GDP).

Across Australia's 9 industrial subsectors in 2024, 62MtCO<sub>2</sub>-e in Scope 1 greenhouse gases were emitted, accounting for 14% of the nation's net emissions. Electricity generation represented 25.5% of Australia's manufacturing and industrial sector's final energy consumption in 2023-24.<sup>8</sup> This is equivalent to ~53TWh of electricity demand, or 25% of the National Electricity Market's (NEM) net

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<sup>7</sup> Alumina and aluminium; waste and resource recovery; iron and steel; chemicals and plastics; cement and concrete; food and beverages; manufacturing and additional industry; pulp, paper and paperboard; other metals refining and smelting.

<sup>8</sup> DCCEEW, [Australian Energy Update 2025](#), 22 August 2025

demand. At the average emissions intensity of the NEM in 2023-24, Australia's industrial sector would have also enabled 30.9MtCO<sub>2</sub>-e of Scope 2 emissions.

Combined, Australia's existing manufacturing sector emits 93MtCO<sub>2</sub>-e in operational emissions annually. The decarbonisation of the existing industrial base, let alone the facilitation of new clean energy industry growth, represents a mammoth challenge for industry, government, consumers, and the environment.

To achieve the Federal Government's objective to revitalise Australia's industrial base and ensure it remains globally competitive; while directing industry to meaningfully reduce emissions and deliver a just and equitable transition for the more than 1 million employed in Australia's industrial sector; active participation of policymakers and patient, strategic public capital will be vital.

Australia must recognise the value demonstrated by its key trading and economic partners of the industry-forming and coordinating role of government to address structural challenges to the continued viability of existing manufacturing, and enable the creation of new clean economy industries. Bilateral collaboration and co-investment will be key, as it was in financing and building out other industries where Australia then developed into a world leader e.g. liquid natural gas (LNG) and coal mining.

## Section 1. The Decarbonisation of Iron and Steel Value Chains

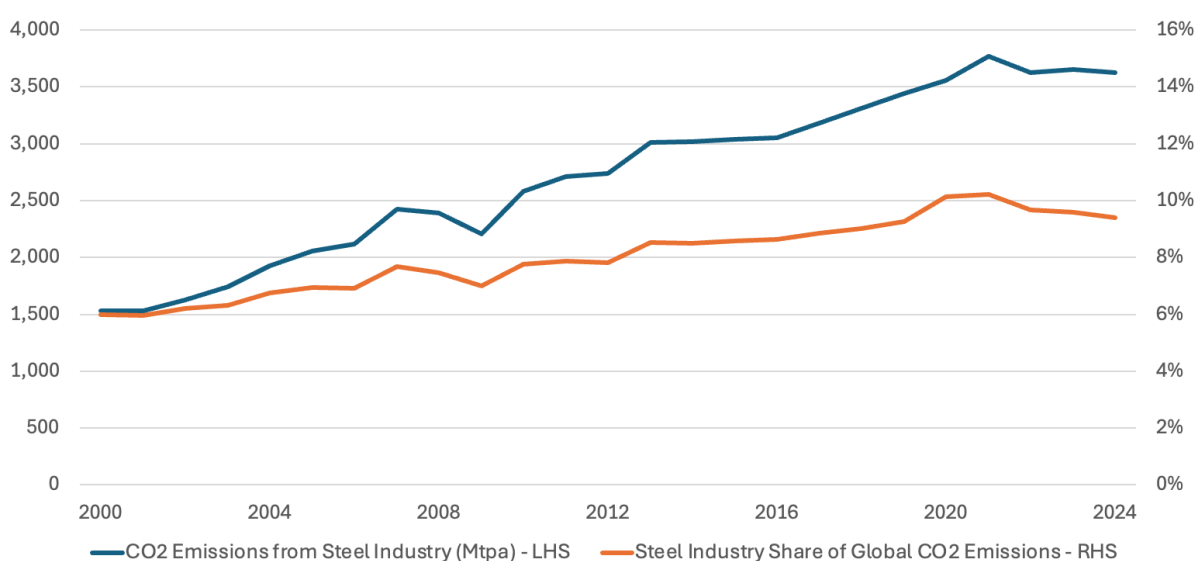
Beyond the electricity sector, the global steel supply chain is the single largest decarbonisation opportunity ahead for the world. Australia and China play an outsized role in its value chain with China producing and consuming half of the world's steel, and Australia supplying half the world's iron ore and coking coal exports. As Australia's north Asian trade partners deliver on their decarbonisation pledges under the Paris Agreement, overcoming the technical and economic challenges to decarbonising lower-grade iron ores is a national interest imperative.

The global iron and steel industry has seen tremendous growth in recent years, driven primarily by the rapid industrialisation and urbanisation of China. The surge of iron and steel demand has also driven one of the largest sources of industrial emissions growth in recent decades, as development in markets such as China, India, Vietnam, and smaller markets across the global south deploy fossil fuel-intensive manufacturing processes. While China's steel consumption peaked in 2020 and production has incrementally fallen since — driven by a property and infrastructure investment pullback — the impacts to global steel output and therefore greenhouse gas emissions have been softened by the burgeoning markets of India and Vietnam, as well as growing exports from China.

In 2024, the global iron and steel sector emitted an estimated 3.6 billion tonnes of CO<sub>2</sub> emissions, accounting for 9.4% of global CO<sub>2</sub> emissions. If the global iron and steel industry were a country, its annual CO<sub>2</sub> emissions profile would be behind only that of China (33.1%) and the United States (11.7%). From 2000 to 2024, global steel production grew at a compound annual growth rate (CAGR) of 3.4%, from 849Mtpa to 1,887Mtpa. The growth of emissions have outpaced production, rising at a 3.7% CAGR since the start of the century, plateauing since 2021. As a result, the steel industry's share of global CO<sub>2</sub> emissions have risen from 6% in 2000 to 9.4% in 2024 — see Figure 1.1.

Including other GHG emissions across Scope 1 and 2, and including the steel value chain's Scope 3 emissions, the steel industry emitted 4.1 billion tonnes of CO<sub>2</sub>-e in 2024, representing 7-8% of global anthropogenic GHG emissions.<sup>9</sup>

**Figure 1.1: Global Absolute and Share of CO<sub>2</sub> Emissions from Iron and Steel Industry**



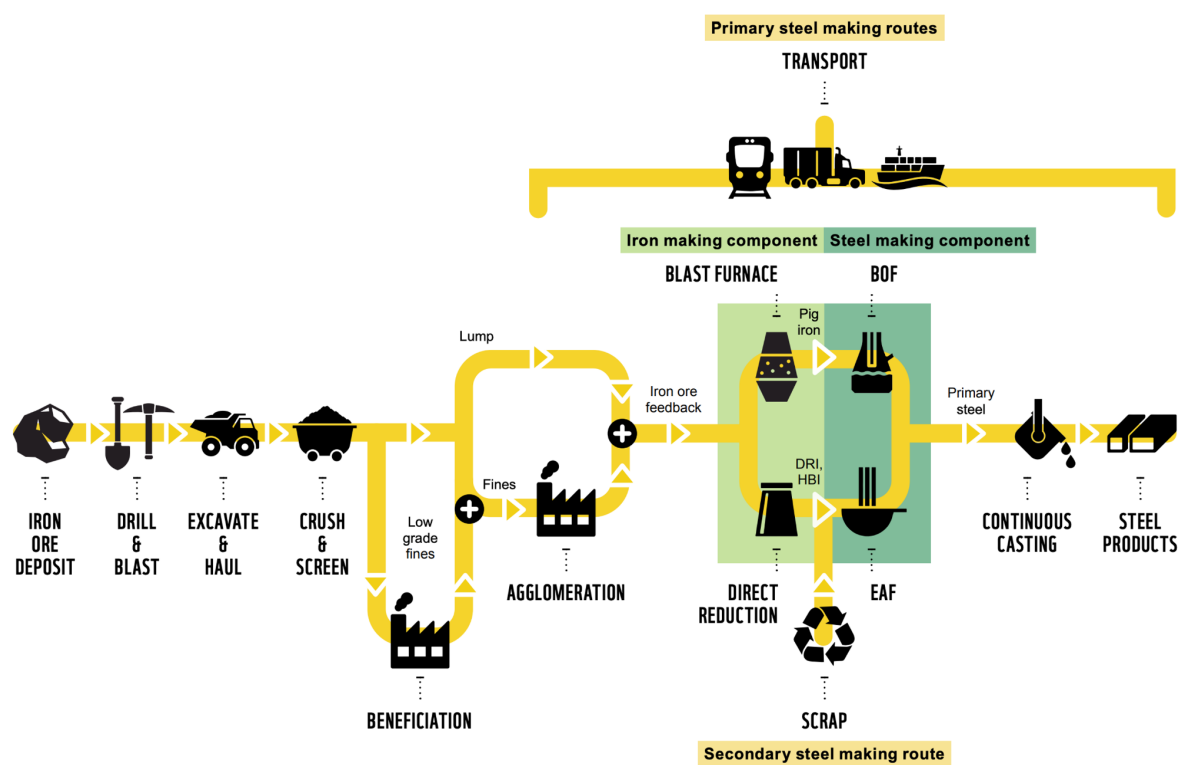
Source: WorldSteel Association, Our World in Data, CEF Calculations

<sup>9</sup> Worldsteel, [Climate Change and the Production of Iron and Steel](#)

The decarbonisation of virgin steel production and increased circularity across the steel value chain is the single largest opportunity to reduce industrial emissions globally. Historically, ironmaking and steelmaking have been integrated in a continuous, single-site process, often utilising imported iron ore and metallurgical coal. The dominant process in global production is the blast furnace (BF) and basic oxygen furnace (BOF) integrated pathway (BF-BOF), reducing and smelting iron ore with coke — a refined hard carbon fuel created from metallurgical coal. The processing of coke and reaction of coke with iron ore generates significant CO<sub>2</sub> emissions. As a result, the vast majority of emissions across the iron and steel value chain occur in the smelting of iron ore in the blast furnace. The steelmaking facilities of Whyalla and Port Kembla in Australia both employ BF-BOF methods.

The decarbonisation of the global steel value chain will likely necessitate a drastic re-orientation of supply chains. This would see the decoupling of ironmaking from steelmaking, shifting iron production to regions with close proximity to iron ore supply and/or high-quality and abundant renewable energy resources with lower opportunity costs for the utilisation of clean energy. Final stage steelmaking, refining and downstream processing capacity will likely remain in regions with existing large manufacturing bases and high steel consumption to increase circularity of scrap steel into steel mills. This will require the coordination of some of the world's largest investors and companies, low-emission technologies, public capital and strategic government subsidies and budget support, and most critically, regions with abundant and low-cost renewable energy.

**Figure 1.2: Iron and Steel Value Chain**



Source: WWF Australia <sup>10</sup>

As shown in Figure 1.2, the most commercialised pathway for low-emissions steel production is the use of an electric arc furnace (EAF) — heating scrap steel and high-grade reduced iron by means of a continuous, high-current electrical discharge. The emissions, therefore, are primarily derived from the embedded emissions within the electricity supply, with a secondary source of emissions generated from the degradation of carbon anodes and carbon additives that refine the composition of the final steel output. The most commercialised pathway for producing low-emissions iron is direct

<sup>10</sup> WWF, [Australia's Green Iron Key](#), 01 August 2024

reduced iron (DRI), which processes iron ore into iron without smelting. In current DRI facilities, iron is reduced in the solid state, i.e. without melting as occurs in a blast furnace, meaning the reducing agent directly removes oxygen from the iron ore. Reductants in the DRI process are carbon monoxide (CO) and hydrogen (H<sub>2</sub>), with current CO and H<sub>2</sub> almost entirely produced from methane gas or recovered from metallurgical off-gases (in particular from coke ovens).

The decarbonisation of ironmaking is the largest opportunity to reduce emissions from the steelmaking value chain. Transitioning to electrified or green-hydrogen (GH<sub>2</sub>) based ironmaking technologies, even with a predominantly methane gas mix in the reduction of iron ore, can have significant emissions reduction potential. However, the technical and economic challenges associated with the decarbonisation of iron production have demonstrated themselves as significant barriers to investments that support the decarbonisation of iron and steel at the necessary speed and scale.

### **Box 1: Technical and Economic Challenges to Green Iron in Australia**

A significant challenge to the deployment of existing DRI technologies is that conventional shaft-furnace DRI plants require iron ore pellets with an iron content of a minimum 67%, with lower concentrations of impurities and acid gangue (silica, alumina and phosphorus) — well above the average grade found in the Australian Pilbara's mammoth iron ore mining industry. Only a small proportion of global iron ore production meets conventional grade specifications.

Higher-grade iron ore feedstocks significantly improve the operating conditions of DRI plants, and allow the resulting product to be charged into an EAF. Increasing impurities create material penalties in slag volume, flux consumption, electricity demand, refractory wear, iron yield and productivity. The issue is therefore not that EAFs cannot handle slag, but that EAF economics and operability deteriorate as gangue rises.

Investigations and R&D efforts are underway globally to commercialise other forms of DRI technologies, including fines-based processes that eliminate the need for pelletisation. Fluidised-beds, calciner-based furnaces, electrochemical and plasma processes are in various stages of technological development and commercialisation to reduce iron ore, and employing electric smelting furnaces (ESF) as a further technology for smelting, impurity-removal and potential final stage reduction for lower-grade ores that have undergone initial reduction.

The ESF separates most of the gangue into slag and produces a high-metallic-value hot metal, typically with iron in the mid-to-high 90% range and the balance principally comprising carbon and controlled residual elements. Hot metal can then be granulated, cast into pigs or ingots, or transferred molten for subsequent steel refining and casting. ESFs for ironmaking are based on existing, proven technologies in other industrial processes, including ferroalloy production. This is the focus of Australia's NeoSmelt joint venture involving BlueScope, Rio Tinto, BHP, Woodside, and Mitsui <sup>11</sup>; as well as Fortescue's Christmas Creek green iron project. <sup>12</sup>

The solution for enabling Pilbara iron ores in a decarbonised steelmaking value chain is likely to not be a single technology pathway. Technology selection will necessarily be context-specific: depending on ore mineralogy and physical characteristics, energy availability and cost, water requirements, permitting and social licence, climate, logistics and infrastructure, integration with adjacent industries, target product and intended market.

Potential decarbonisation pathways — including fines-based reduction, fluidised-bed reduction, electrochemical processes, agglomeration alternatives, and reduction followed by ESF gangue rejection — reinforce the need for a portfolio of technology development and demonstration.

<sup>11</sup> ARENA, [Project NeoSmelt](#), May 2025

<sup>12</sup> Fortescue, [Fortescue starts works on Green Metal Project](#), 15 August 2024

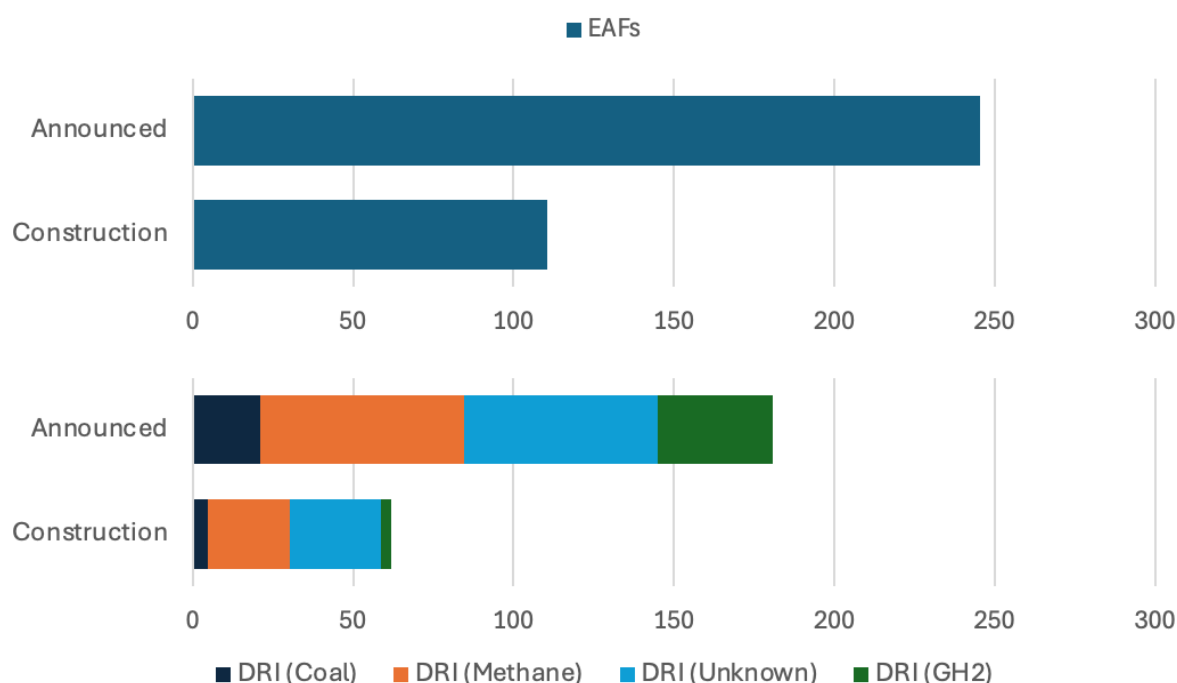
## Section 1.1. Investment Trends in Steel Decarbonisation

While there are select points of decarbonisation advancing across the iron and steel value chain, in aggregate the global sector is advancing unevenly, haltingly, sporadically and at a pace that remains deeply misaligned with the speed and breadth of decarbonisation of the sector demanded by the climate science. For every step forward on an individual project or market-level, the broader investment pipeline showcases an equivalent case study of project delay, cancellation, and restructure in the face of unresolved structural headwinds and international policy backsliding undermining global capital momentum.

There remains a clear bankability gap for near-zero carbon routes for iron and steel production. Low returns on capital, continued margin compression as a result of global overcapacity, insufficient demand pull from lack of consumer willingness to pay clean premiums – particularly from the automotive sector given it is likewise suffering extreme margin pressures at a time of massive capital reinvestment demands<sup>13</sup> – as well as insufficient investments through market intervention to surmount structural challenges in low-emissions energy and enabling infrastructure has meant the business case for low-emissions primary iron and steel remains insufficient to crowd-in capital.

The current investment pipeline into lower-emissions production pathways for steel demonstrates this shift. As of March 2026, an estimated 41.4Mtpa of new BOF steel capacity is under construction, adding to the 1,440Mtpa of operating BOF capacity. EAF capacity under construction in 2026 is estimated at 109Mtpa, adding to the 727Mtpa of operating EAF capacity globally. As a positive, the global EAF pipeline under construction is 164% that of BOFs in 2026.<sup>14</sup> The construction pipeline for EAFs is 79% larger than the construction pipeline of all DRI capacity, including coal, methane, other fossil gases and green hydrogen. Similarly, announced EAF proposals also outpace all DRI proposals by 36%, with China, India and Iran leading the combined developing capacity of EAFs globally.

**Figure 1.3: Development Pipeline of EAF and DRI Capacity Globally**



Source: Global Energy Monitor

<sup>13</sup> CREA, [Near-Zero Steel by Policy Design: China and the EU, with a focus on Germany](#), April 2026

<sup>14</sup> GEM, [Global Iron and Steel Tracker](#), March 2026

The decarbonisation and electrification of the global iron and steel industry is undergoing a structural recalibration, shifting from a period of speculative optimism on the now deflated hype regarding the rapid deployment of green hydrogen, and into a measured, phased, and evolutionary trajectory of decarbonisation. The hydrogen hype and deployment ambition has collided with the economic challenges and difficult reality of the buildout of the enabling hydrogen infrastructure to decarbonise iron production even as forecasts of electrolyser cost curve deflation have failed to materialise.

As a result, we have seen a realignment of capital flows that are defining a measured, phased, evolutionary trajectory to steel value chain decarbonisation. EAFs provide a proven, commercially-viable and increasingly cost-competitive pathway to achieve incremental decarbonisation. Supporting and enabling the scale-up and decarbonisation of Australia's EAF investment proposal pipeline provide a pathway for Australia to take action this decade on decarbonising and expanding its manufacturing base.

These significant technical, infrastructure, and capital investment challenges mean that deployment of large-scale, decarbonised ironmaking is still several years away. In the interim, Australia cannot afford to delay action on industrial decarbonisation while awaiting the maturation of these technologies. Continued support for green iron remains strategically important. FMIA policies and investments should also prioritise commercially viable emissions reduction opportunities available today. In particular, accelerating the investment pipeline for EAFs to produce steel from recycled scrap offers a practical and lower-risk pathway to reduce emissions, leveraging established technology and Australia's growing scrap steel resource while laying the foundations for a more competitive low-carbon steel industry.

Furthermore, the scaling of new EAFs have the potential to provide critical domestic offtake pathways to support the first-of-a-kind (FOAK) and early movers in green iron production, diversifying risk profiles through domestic and international demand. Australia's investment pipeline into EAFs have targeted long steel product markets initially, with lower-cost, higher-impurity scrap feedstock chemically and economically aligned with steel used in the construction and infrastructure sector, such as reinforcing bar and wire rod. The strongest prospective value proposition for high-purity green iron is in higher-value and more composition-sensitive steel applications, including selected flat and speciality steels. However, early movers in higher-purity green iron could leverage new, decarbonised steelmaking capacity to produce semi-finished steel products for use in higher-speciality applications, enabling the emerging EAF steelmaking industry to integrate further across the Australian domestic market.

## Section 1.2. Supporting the Decarbonisation of Existing and Emerging Steel in Australia

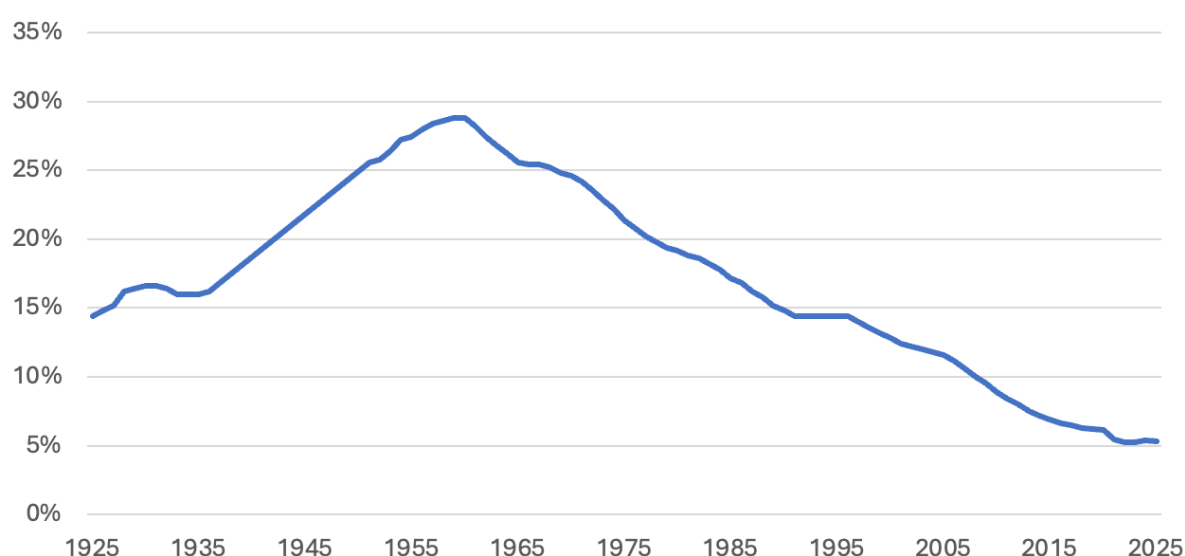
Australia's FMIA strategy is centred around reversing the decade's long decline in Australian manufacturing and resource value-add. Scrap-fueled EAFs, powered by firm renewables, are a commercialised, low technology risk investment opportunity that can enable the proposal pipeline of green metals to progress towards FID and construction in the near-term.

The economic realities of rising infrastructure costs, slower-than-anticipated deflation of electrolyser cost curves (at least as is evident outside of China), incoherent and unstable enabling policy architecture, sustained volatile and high fossil fuel prices globally and rising geopolitical tensions have necessitated a more considered approach to investment. The high capital intensity and energy requirements of 100% GH<sub>2</sub>-based reduction showcase the importance of flexibility and operational modularity for DRI projects, and the value of advancing iron and steel value chain decarbonisation through research, development and deployment (RD&D) to drive learning by doing in both hydrogen and non-hydrogen pathways for iron and scaling capacity of electrified secondary steelmaking.

Australian policymakers and economists have long demonstrated a dissonance between calling for increased productivity and diversification of the Australian economy, only to then oppose any government intervention or market-formation mechanisms that can promote innovation, research and development, let alone provide assistance to sustain our existing industrial assets.

As a result of Australia's abject failure to move up the global value chain, Australia has fallen to 74<sup>th</sup> on the Harvard Atlas of Economic Complexity HS2012 metric from 61<sup>st</sup> in 2012. Using the Harvard Atlas of Economic Complexity's historical benchmark HS1992, Australia has fallen from 33<sup>rd</sup> to 73<sup>rd</sup> from 1992 to 2024. In comparison to similarly-sized economies to Australia, South Korea ranks 4<sup>th</sup>, Spain 31<sup>st</sup>, Canada 35<sup>th</sup>, and Brazil 56<sup>th</sup>. Australia's manufacturing capacity has plummeted from a peak of nearly 30% of GDP in the 1960s to 5% in 2025 — see Figure 1.4. This positions Australia as having the lowest level of self-sufficiency in the OECD.<sup>15</sup> This has been accompanied by a decline in business investment into R&D to less than half the OECD average and the lowest productivity growth for 60 years.

**Figure 1.4: Manufacturing Value-add Share of Australian GDP**



Source: Productivity Commission, World Bank

<sup>15</sup> Prof. Roy Green, [Inaction on Tomago is a Price Australia Cannot Afford](#), 15 July 2026

The continued dismantling and erosion of Australia's base manufacturing capacity and capability has significant negative network effects that ripple across regional industrial hubs of Australia in the Hunter Valley, Illawarra, Central QLD and the Upper Spencer Gulf; from the loss of skilled, intergenerational livelihoods to the hollowing out of local engineering and service supply chains that rely on domestic primary manufacturing.<sup>16</sup> While Australia has 3 steelmaking firms in BlueScope, InfraBuild and OneSteel Manufacturing, the broader iron and steel value chain has 16,745 businesses across the country, much of which are small- to medium-enterprises (SME) that rely on the production of steel. Similarly, Australia's alumina and aluminium producers enable 1,699 SME businesses across the value chain domestically. Without such assets, we lose a springboard for investment in high-value, knowledge intensive manufacturing.

Australia currently has capabilities across the full iron and steel value chain; however Australia plays an outsized — and globally significant — role in raw material extraction for the global steel industry — see Figure 1.5. Australia's resource boom in iron ore, methane gas, and coal have massively turbo-charged the growth of the Australian economy. However, the resulting real currency appreciation has had significant adverse effects on import-competing industries — weakening the competitiveness of agriculture and manufacturing in an open economy.

**Figure 1.5: Iron and Steel Value Chain Taxonomy**

| Value Chain Stage                             | Purpose                                                                                                                                    | Emissions-Intensive Pathways                                                                                                            | Ability for Low- Emissions Pathways                                                                      |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Raw Material Extraction and Production</b> | Producing the primary feedstocks for ironmaking. E.g. iron ore, coking coal, hydrogen, scrap collection.                                   | Iron ore beneficiation and sintering, coking, and limestone and flux production.                                                        | Iron ore beneficiation and pelletisation with clean energy, clean hydrogen production, scrap management. |
| <b>Ironmaking</b>                             | Reduces iron oxides into metallic iron.                                                                                                    | Blast furnace (BF), coal-based direct reduced iron (DRI).                                                                               | Direct reduction, electric smelting, plasma and electrochemical reduction.                               |
| <b>Steelmaking</b>                            | Converts metallic iron into steel by removing impurities adjusting chemistry.                                                              | Basic Oxygen Furnace (BOF).                                                                                                             | Electric Arc Furnace (EAF), Induction Furnace (IF).                                                      |
| <b>Secondary Metallurgy</b>                   | Refining steel composition for specific use cases.                                                                                         | Ladle Furnace (LF), vacuum degassing (VD, VOD, RH), argon stirring, calcium treatment, alloy addition systems.                          |                                                                                                          |
| <b>Casting</b>                                | Casting liquid steel into solid, semi-finished products. E.g. billets, blooms, beams, slabs.                                               | Continuous casting, thin slab casting, bloom casting, billet casting, beam blank casting, ingot casting.                                |                                                                                                          |
| <b>Rolling and Finishing</b>                  | Converting semi-finished products into market-ready steel products. E.g. rebar, SBQ bars, merchant bars, coiled wire rod, hot rolled coil. | Hot rolling, cold rolling, plate mills, bar mills, wire rod mills, heat treatment, pickling, galvanising, coating, and finishing lines. |                                                                                                          |
|                                               |                                                                                                                                            | Methane gas-fired reheating furnaces.                                                                                                   | Electric/induction reheating furnaces.                                                                   |

Source: CEF analysis of broad industry information

<sup>16</sup> Prof. Roy Green, [Inaction on Tomago is a Price Australia Cannot Afford](#), 15 July 2026

Across the stages of the iron and steel value chain — as classified in Figure 1.5 — Australia’s comparative advantage in resource extraction and export has seen the rapid growth in raw material extraction of iron ore and metallurgical coal. However, If Australia is to have the skills sets required to underpin a move from dig-and-ship iron ore mining to value-add this into iron before export, CEF sees merit in first building up decarbonised value-add manufacturing in aspects of the value chain with low technology risks, established domestic markets and growing demand. Supporting low emissions, electricity powered and scrap steel-fed EAFs can .

Australia now has four low-emissions, electrified steel mill proposals across Western Australia and Queensland, as well as capacity expansions of existing EAFs in New South Wales (NSW) and Victoria. If realised, these facilities could expand Australia’s steelmaking and steel casting/rolling capacity by 2.28Mtpa — see Figure 1.6. Refer to Appendix A for impact of EAF pipeline on domestic steelmaking market dynamics.

**Figure 1.6: New EAF Steelmaking Capacity Proposed (ktpa)**

| Company           | Facility           | State | Process   | Capacity (ktpa) | Share       |
|-------------------|--------------------|-------|-----------|-----------------|-------------|
| Alter Steel       | Pinkenba           | QLD   | Scrap-EAF | 500             | 22%         |
| Generation Steel  | Collie             | WA    | Scrap-EAF | 450             | 20%         |
| InfraBuild        | Sydney Expansion   | NSW   | Scrap-EAF | 380             | 17%         |
| Future Forgeworks | Swanbank           | QLD   | Scrap-EAF | 350             | 15%         |
| GM Steel          | Toowoomba          | QLD   | Scrap-EAF | 350             | 15%         |
| InfraBuild        | Laverton Expansion | VIC   | Scrap-EAF | 250             | 11%         |
| <b>Total</b>      |                    |       |           | <b>2,280</b>    | <b>100%</b> |

Source: CEF analysis of broad industry information

Reversing the hollowing out of manufacturing in Australia is a monumental task, involving coordination of planning, the buildout of critical enabling infrastructure, targeted budgetary measures, and strategic interventions to alleviate key development risks that future-facing industries face.

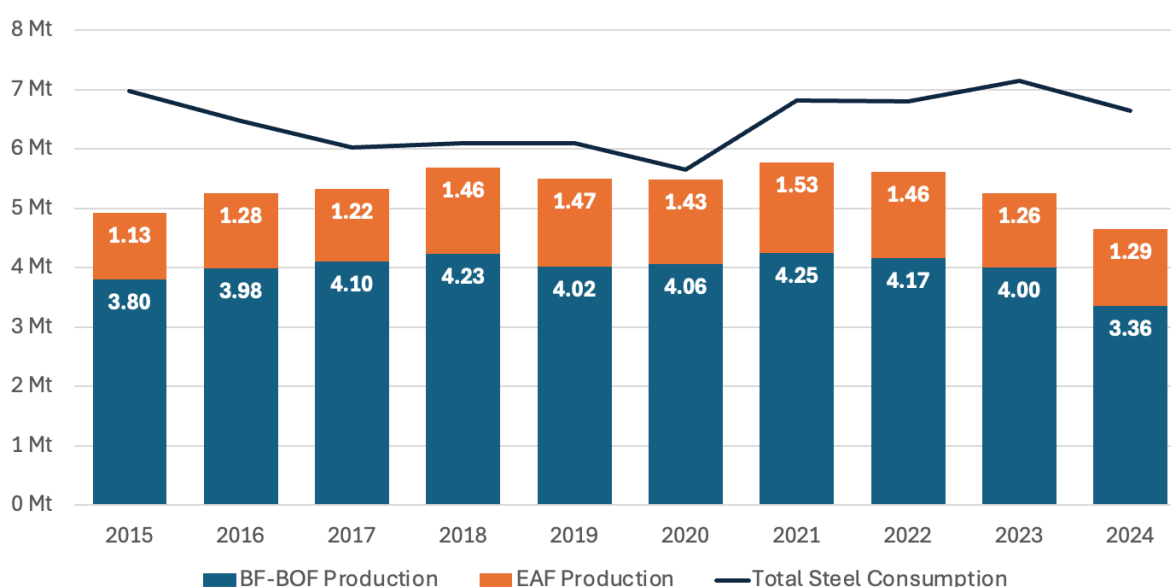
For public and private capital to effectively co-invest into the economic transformation at the speed and scale necessary to limit the globally devastating impacts of the climate crisis, Australia must be steadfast in its commitment to shift the trajectory of climate, energy and industrial policy. Domestically-oriented green energy statecraft is a precursor to outward-oriented statecraft. The FMIA is a landmark inflection point of the Albanese Government’s recognition of the role government can play in kickstarting new value-added opportunities in a decarbonising economy.

Australia has an opportunity to learn-by-doing in developing institutional capabilities in smaller, more manageable sectors before aiming to catalyse a highly capital-intensive, technologically complex, and globally competitive green iron industry. Absorbing lessons from Australia’s key north Asian trade and investment partners, it is clear entrepreneurial state capabilities cannot be fully designed ex ante. Rather, effective Statecraft emerges through iteration and close engagement with industry. Australia has a significant opportunity to mobilise private capital and progress the clean metals investment pipeline through EAFs, putting runs on the board for FMIA, securing sovereign capabilities in critical national security manufacturing, decarbonising a major pillar of value-added industry, and developing institutional capacity.

## Section 2. Australia's Steelmaking Landscape

Over the decade to 2024, Australia's production of crude steel has remained relatively steady, with an average production of 5.35Mtpa — Figure 2.1. BF-BOF steel production from Port Kembla and Whyalla account for ~75% of Australia's domestic steel production. The EAF capacity of Infrabuild — Australia's second largest steel producer — accounts for ~25% of Australia's steel production capacity.

**Figure 2.1: Australian Steel Production by Pathway and Total Domestic Consumption**



Source: Worldsteel

Australia's existing steel nameplate production capacity is 5.77Mtpa. Assuming the continuation of the Whyalla Steelworks, if the proposed investment pipeline of EAFs progressed through final investment decision (FID) and achieved their nameplate production capacity, Australia's steel production would rise to over 8Mtpa, with EAFs accounting for a 45% share — and expanding domestic steel production by 40%. Accounting for the expected closure of Whyalla, steelmaking capacity would rise 19% to 6.85Mtpa, with EAFs supplying 53% of market share. If the Whyalla Steelworks is transformed to a DRI-EAF operation, with DRI exports and a share of production being directed into an EAF that matched existing steelmaking capacity of Whyalla, EAFs could supply 60% of domestic crude steel production. An extended analysis is provided in Appendix A.

Iron and steel manufacturing is the third largest emitting subsector within Australia's industrial sector, generating over 9MtCO<sub>2</sub>-e in Scope 1 emissions annually, behind the manufacture of alumina and aluminium, and waste and resource recovery. The decarbonisation of Australia's steel industry, therefore, can significantly reduce the industrial emissions profile of manufacturing and value-add. However, any effective path to decarbonisation of Scope 1 emissions of the two integrated BF-BOF facilities, Port Kembla and Whyalla Steelworks, requires a complete transformation of the production process. Incremental decarbonisation measures cannot achieve the necessary abatement required to displace embedded emissions from the burning of coke in blast furnaces.

The Safeguard Mechanism, in its current form, is unable to provide a progressive price on carbon emissions sufficient enough to shift investment decisions for the transformation of existing steelmaking in Australia as a result of concessions provided through the Trade-Exposed Baseline Adjustment (TEBA) measures provided to import-sensitive producers — including Australia's steelmakers and aluminium and alumina producers.

## 2.1. Existing Steel Production

Australia has three operating steel manufacturers: ASX-listed BlueScope; and both GFG Alliance's financially distressed InfraBuild; and the beyond end-of-life, idle Whyalla Steelworks currently in administration. BlueScope's Port Kembla and GFG Alliance's Whyalla Steelworks are incredibly emissions intensive BF-BOF producers.

Australia has the critical need to recapitalise a significant market share of sovereign steelmaking, as well as to decarbonise what is now the third largest emitting sector of Australian industry.

### InfraBuild, VIC & NSW

InfraBuild is the second largest steel producer in Australia and is the largest manufacturer of reinforced steel products, currently owned by the bankers behind the distressed global empire of Sanjeev Gupta's GFG Alliance — the parent entity of OneSteel Manufacturing and the Whyalla Steelworks that was forced into administration in February 2025 and sister entity to the Liberty Bell Bay smelter that went into liquidation in July 2026.<sup>17</sup>

InfraBuild currently operates 2 EAFs in Australia, comprising a 750ktpa EAF in Laverton, Victoria, and a 620ktpa EAF in Rooty Hill, NSW. InfraBuild's EAFs are supplied in large part by 21 recycling facilities across Australia, feeding ~1.4Mtpa of ferrous scrap into the company's EAFs. The output of InfraBuild's EAFs supply 11 manufacturing sites across Victoria, NSW and Queensland; including rod and bar rolling mills, a tubular mill, as well as wire and mesh facilities.<sup>18</sup>

InfraBuild's asset portfolio has an extensive history of steelmaking in Australia. The Rooty Hill EAF was commissioned by BHP Steel in 1992. Following a series of acquisitions of downstream steel distributors, BHP spun out its Steel Long Products division to become OneSteel, then later spun out its Flats Products Division to form BlueScope Steel. InfraBuild's Laverton Steel Mill was commissioned by Smorgon Steel in 1984. In 2001, Smorgon and Metacorp merged in 2001, followed by an acquisition by OneSteel in 2007 in a \$2.5bn takeover. Following the collapse of Arrium in 2016, the administration process was completed with an acquisition by Sanjeev Gupta — forming InfraBuild.

Today, InfraBuild employs 4,600 people across their 130 sites within its Australian operations including its various steel distribution subsidiaries. InfraBuild's structure is detailed in Appendix C.

In May 2026, InfraBuild announced plans to increase capacity at its reinforcing steel and recycling centres in Hemmant and Eagle Farm, Brisbane, aiming to boost output by 50,000tpa to cater for construction demand ahead of the 2032 Olympics. Given financial distress, funding permitting, the expansion could create an additional 70 jobs in the region. In the future, InfraBuild has announced plans for a new distribution centre, bar processing facility, prefabrication hub and rolling mill in Brisbane supplied by the Rooty Hill EAF.<sup>19</sup>

In October 2025, InfraBuild announced plans to expand the capacity of the Laverton EAF to 1Mtpa, up from its existing 750ktpa capacity by 2028, and expand the Sydney EAF to 680ktpa with a planned further expansion to also scale to 1Mtpa by 2030.<sup>20</sup> InfraBuild had taken delivery of two new EAF bowls for Laverton in October 2025.

<sup>17</sup> ABC, [Liberty Bell Bay manganese smelter to close immediately after sale falls through](#), 19 July 2026

<sup>18</sup> InfraBuild, [FY23-FY25 ESG Report](#), March 2026

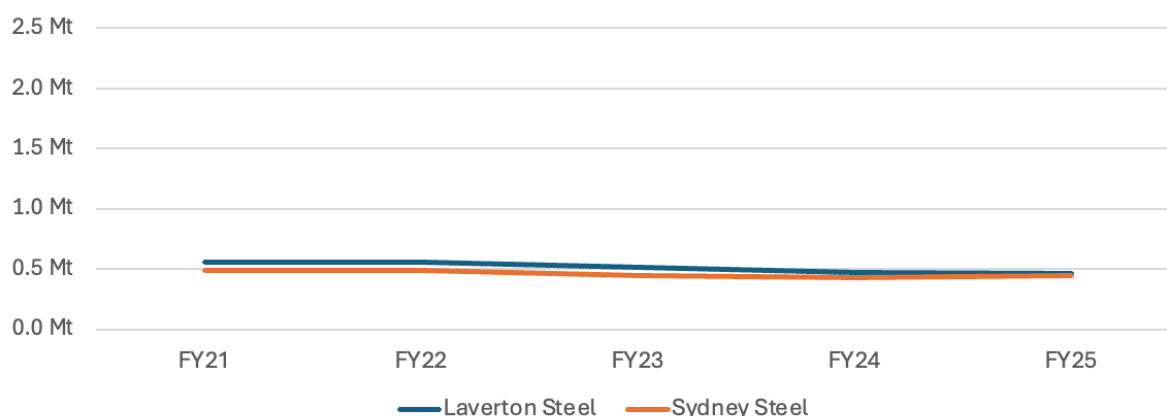
<sup>19</sup> The Australian, [InfraBuild Expands Brisbane Steel Plants to Fuel 2032 Games Construction Boom](#), 24 May 2026

<sup>20</sup> InfraBuild, [InfraBuild to Increase Capacity at its Melbourne Facility to 1Mtpa and Boost Capacity in Sydney to Deliver More Sustainable Steel](#), 01 October 2025

## InfraBuild's Operating Sustainability

InfraBuild's Laverton Steel Mill (LSM) and Sydney Steel Mill (SSM) are the lowest emissions intensity steel mills in Australia, emitting a fraction of the greenhouse gas (GHG) emissions from the BF-BOF profile of Port Kembla and Whyalla (if and when Whyalla is working). From FY2021 to FY2025, LSM and SSM have averaged 513 and 459kgCO<sub>2</sub>-e/t-cs respectively, with the latest data from FY2025 achieving 461 and 447kgCO<sub>2</sub>-e/t-cs respectively — see Figure 2.2.

**Figure 2.2: Emissions Intensity of InfraBuild EAFs for non-imported feedstock**



Source: Company Accounts <sup>21</sup>

Methane gas accounts for the majority of InfraBuild's Scope 1 emissions profile, with the largest gas consumption assets being InfraBuild's rolling mills and EAFs. Within InfraBuild's rolling mills, steel billets are re-heated in reheat furnaces, bringing billets up to optimal temperature to be rolled into finished steel products. Similarly, InfraBuild's EAF operations consume methane gas to initially heat scrap steel feedstock and gas is consumed in the refractory lined steel ladles to remain required operating temperatures.

InfraBuild can displace a portion of its methane gas consumption through warm charging of billet from the steelmaking process at 350°C, minimising heat loss during transfer and reducing re-heating requirements and thus reducing methane gas consumption and increasing process efficiencies.

While InfraBuild does not use metallurgical coal for primary steel production, carbon (in the form of coke) is used as a process reagent in the EAF to improve thermal efficiency, as well as trim/alloy steel to the required carbon content to meet steel grade specifications. InfraBuild have explored the utilisation of low-emissions or net-zero sources of carbon, including successfully trialling the substitution of coke with biochar from BioCarbon <sup>22</sup> – the high-carbon residue of the pyrolysis of organic matter such as timber waste – at the Sydney Steel Mill EAF. July 2026 saw Rio Tinto announce plans to undertake a similar approach in Gladstone, Queensland for its alumina refineries. <sup>23</sup>

InfraBuild entered into a PPA with EnergyAustralia for electricity supply from the Bodangora Wind Farm in NSW. The PPA commenced in January of 2025 and will provide ~25% of the electricity demand of InfraBuild's Sydney Steel Mill and Newcastle Rod Mill. From 01 April 2026, InfraBuild has activated a second wind PPA, providing electricity equivalent to more than 50% of the Laverton Steel Mill's electricity demand. <sup>24</sup>

<sup>21</sup> InfraBuild, [FY23-FY25 ESG Report](#), March 2026

<sup>22</sup> BioCarbon, [Biochar Production for Steelmaking](#)

<sup>23</sup> ABC, [\\$30m biochar facility proposed in central Queensland, with Rio Tinto a major buyer](#), 24 July 2026

<sup>24</sup> SMH, [Steel Mill Becomes Nation's First to Switch on Mostly Green Power](#), 18 May 2026

## InfraBuild's Financial Sustainability

Despite being long considered the best business within the eroding global empire of GFG Alliance, InfraBuild slumped to a loss of \$250m in FY2025 (Figure 2.3) as a result of higher energy prices, higher debts, distressed debt interest rates and downward pricing pressure from cheaper steel imports from Asia.

**Figure 2.3: Summary of InfraBuild Financial Performance**

| Financial Metric     | FY19      | FY20       | FY21       | FY22       | FY23       | FY24        | FY25        |
|----------------------|-----------|------------|------------|------------|------------|-------------|-------------|
| Steel Sales (kt)     | 2,238     | 2,245      | 2,427      | 2,394      | 2,304      | 2,102       | 1,971       |
| Scrap Sales (kt)     | 745       | 761        | 686        | 1,140      | 892        | 998         | 925         |
| Revenue (A\$m)       | 3,956     | 3,862      | 4,278      | 5,958      | 5,686      | 4,934       | 4,519       |
| EBITDA (A\$m)        | 184       | 218        | 330        | 665        | 651        | 403         | 226         |
| <i>EBITDA margin</i> | <i>8%</i> | <i>10%</i> | <i>14%</i> | <i>28%</i> | <i>28%</i> | <i>19%</i>  | <i>11%</i>  |
| EBIT (A\$m)          | 141       | 97         | 200        | 522        | 506        | 252         | 65          |
| <b>NPAT (A\$m)</b>   | <b>23</b> | <b>12</b>  | <b>106</b> | <b>284</b> | <b>240</b> | <b>-121</b> | <b>-250</b> |
| Capex (A\$m)         | 112       | 101        | 58         | 60         | 101        | 124         | 117         |

Source: Company Accounts, Climate Energy Finance calculations

In June 2026, media reports emerged that InfraBuild CEO Francisco Irazusta is a person of interest in an ongoing investigation into an emergency bailout loan made to Spanish Tubos Reunidos, in which Irazusta was chairman and CEO prior to joining the Australian steel division of GFG Alliance in 2023. Collapsing with debts of €263m in May 2026, Tubos is under investigation over allegations that an emergency €113m loan facility provided by government-fund SEPI was made under inappropriate political influence.<sup>25</sup>

<sup>25</sup> AFR, [InfraBuild CEO Faces Scrutiny in Spanish Corruption Probe](#), 19 June 2026

## BlueScope, NSW

ASX-listed BlueScope is Australia's largest steelmaker, operating a portfolio of primary steel production, casting and fabrication capacity and downstream steel distribution. BlueScope is also the largest producer of flat steel products in Australia. BlueScope's Australian operations comprise:

- **Port Kembla Steelworks** – a 3.2Mtpa integrated BF-BOF steelmill in Port Kembla, NSW. Port Kembla is the largest manufacturer and supplier of flat steel products in Australia, with an integrated rolling mill producing slab, hot rolled coil and plate products.
- **Metallic Coating Operations** – in which BlueScope operates the 825ktpa capacity facility at Springhill, NSW; and a 830ktpa capacity facility in Western Port, Victoria.
- **Steel Painting Operations** – in which BlueScope operates a 200ktpa capacity facility in Springhill, NSW; a 120ktpa capacity facility in Western Sydney, NSW; 330ktpa capacity facility in Western Port, Victoria; and a 95ktpa capacity facility in Acacia Ridge, QLD.

BlueScope's Port Kembla Steelworks is the most emissions-intensive producer of steel in Australia and the largest emitter of Scope 1 GHG emissions of any manufacturing or industrial facility within the Safeguard Mechanism, and third largest Scope 1 emitter in Australia behind only Gorgon and Ichthys offshore LNG processing facilities. In FY2025, Port Kembla Steelworks emitted over 6MtCO<sub>2</sub>-e in Scope 1 emissions. As a result of the massive concessionality of the Safeguard Mechanism's Trade-Exposed Baseline Adjustment (TEBA) measures,<sup>26</sup> the first two years of ratcheting baselines have been at 1% pa, well below the 4.9% benchmark annual baseline decline. As a result, BlueScope received over 289,000 Safeguard Mechanism Credits (SMCs) in 2024-25, building on the more than 230,000 credits it received in 2023-24 — see Figure 2.4. At average traded prices of SMCs over 2023-25, the combined half a million in credits would have generated **carbon emissions revenues of \$18.7m as a result of concessionality** within the SGM for making next-to-no cuts.

**Figure 2.4: Safeguard Mechanism Summary of Port Kembla Steelworks**

| SGM Summary                                            | 2019-20           | 2020-21           | 2021-22         | 2022-23         | 2023-24         | 2024-25         |
|--------------------------------------------------------|-------------------|-------------------|-----------------|-----------------|-----------------|-----------------|
| ERC                                                    | -                 | -                 | -               | -               | 0.99            | 0.98            |
| Baseline                                               | 11,040,213        | 11,040,213        | 6,920,344       | 6,875,761       | 6,176,914       | 6,350,820       |
| Covered Emissions                                      | 6,103,130         | 6,260,763         | 6,198,685       | 6,138,128       | 5,946,306       | 6,061,526       |
| ACCUs/SMCs Surrendered                                 | -                 | -                 | -               | -               | -               | -               |
| SMCs Issued                                            | -                 | -                 | -               | -               | 230,608         | 289,294         |
| <b>Excess Emissions</b>                                | <b>-4,937,083</b> | <b>-4,779,450</b> | <b>-721,659</b> | <b>-737,633</b> | <b>-230,608</b> | <b>-289,294</b> |
| <b>Carbon Price Exposure without TEBA Concessions:</b> |                   |                   |                 |                 |                 |                 |
| Updated ERC                                            |                   |                   |                 |                 | 0.951           | 0.902           |
| New Baseline                                           |                   |                   |                 |                 | 5,933,581       | 5,845,347       |
| <b>New Exceedance</b>                                  |                   |                   |                 |                 | <b>12,725</b>   | <b>216,179</b>  |

Source: Clean Energy Regulator, Climate Energy Finance calculations

<sup>26</sup> Safeguard Mechanism and TEBA concessions are discussed further in Section 4.

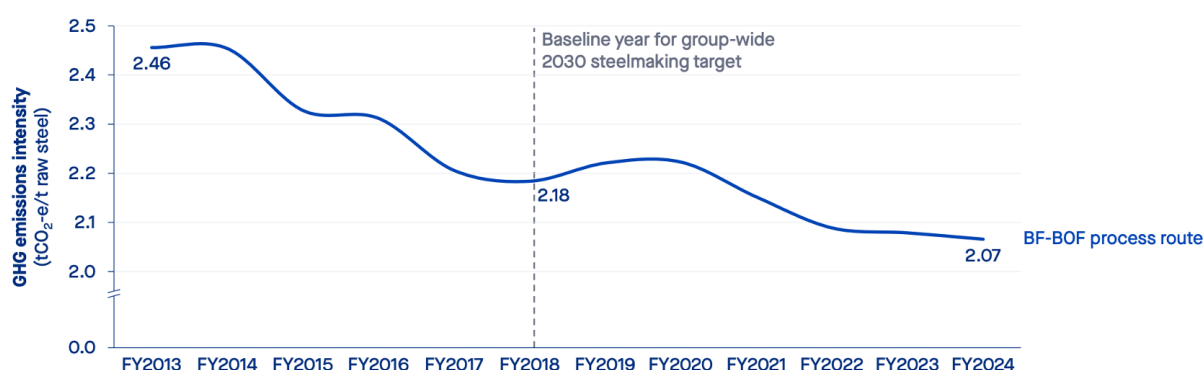
Conversely, if BlueScope was not provided with TEBA concessions within the SGM, facing ratcheting baselines in-line with benchmark values, BlueScope would have exceeded its baseline by more than 216,000tCO<sub>2</sub>-e in FY2025. At current traded compliance credit values, this would have generated a carbon price exposure of \$7.8m. If BlueScope maintained its production-adjusted emissions of 2024-25, BlueScope would not face a carbon penalty until FY2030 if its TEBA concessions continued.

The primary objective of the Safeguard Mechanism is to create a regulatory framework that exposes Australia's largest industrial emitters to a progressively rising carbon price that enables and underwrites investments into onsite abatement through the deployment of low-emissions technologies or the adoption of low-emissions production processes. The abatement of embedded fossil fuels by the industrial base of Australia that results in an equal contribution to achieving Australia's 2030 nationally determined contribution under the Paris Agreement was the intention behind the 2022-23 reforms of the mechanism.

However, the third largest emitter captured within the Safeguard Mechanism will not be exposed to any material carbon price pressure through 2030 as a result of the TEBA concessions provided to the Steelworks. Port Kembla Steelworks is the only facility in the top 7 largest Scope 1 GHG emitters in the Safeguard Mechanism — emitting a combined 39Mtpa CO<sub>2</sub>-e — to have baseline concessions.

While BlueScope has made incremental emissions-intensity reductions at its Port Kembla Steelworks — driven by improved process efficiencies, integration of production stages, and increased utilisation of scrap steel within the blast furnace — its BF-BOF emits 2.07tCO<sub>2</sub>-e/tonne of crude steel — see Figure 2.5, a table that flatters progress by truncating the Y-axis.

**Figure 2.5: BlueScope Port Kembla Emissions Intensity (BF-BOF)**



Source: BlueScope Climate Action Report (CAR, 2024)

BlueScope is expected to continue generating millions of GHG emissions from its Port Kembla over the coming decades, with a capital allocation framework that remains deeply misaligned with Australia's and BlueScope's net zero and interim emissions reduction targets.

August 2023 saw the BlueScope Board approve the \$1.15bn reline of Blast Furnace no.6 to replace the ageing BF no.5.<sup>27</sup> Incredibly, this massive lock-in of fossil fuel infrastructure was supported by the Federal Government's \$200m Powering the Regions Fund (PRF), providing \$136.8m in grant funding towards the project.<sup>28</sup> The decision to support BlueScope's reline emphasised that this long-term coal lock-in investment will 'reduce emissions and support pathways to producing even lower-emissions steel in the future'. None of this is true. Across BlueScope's global portfolio, its decarbonisation capital allocation framework demonstrates the economic and technical viability of low-emissions steelmaking that are entirely at direct odds with BlueScope's home strategy.

<sup>27</sup> BlueScope, [BlueScope Delivers Underlying EBIT of \\$1.61bn in FY23; Approves Blast Furnace Reline and Upgrade at Port Kembla Steelworks](#), 21 August 2023

<sup>28</sup> DISR, [\\$200m to Help Future-Proof Regional Steel Manufacturing](#), 31 January 2024

## BlueScope Decarbonisation Outside of Australia

BlueScope's Port Kembla BF-BOF facility is in the highest decile emissions intensity steelworks in the world. In contrast, BlueScope's US and NZ integrated steel manufacturing facilities are in the lowest decile emission profiles in the world, whilst also amongst the most profitable. Under the right regulatory frameworks, in combination with structural factors in lower-cost, decarbonised energy and domestic offtake markets, BlueScope has demonstrated the capability for it to be a world leader in the drive to zero emissions industries of the future.

However, Federal Government support for long-term fossil fuel lock-in at Port Kembla, as well as an ineffective price on carbon exposed to Australian industry through concessions within the Safeguard Mechanism, means BlueScope will not drive the decarbonisation of the Australian steel landscape.

### BlueScope's New Zealand Steel

One month after BlueScope's Board approved the \$1.15bn reline of its Port Kembla Steelworks, the Board in September 2023 approved a NZ\$300m investment to construct a 670,000tpa EAF supplied by Danieli at its NZ Steelworks in Glenbrook, New Zealand.<sup>29</sup> The EAF will replace two of the four existing DRI kilns of 326,000tpa combined capacity, one of the two melters and the oxygen steelmaking furnace.<sup>30</sup> The EAF is currently in commissioning phase with a target to commence operations in 2026, reducing NZ Steel's Scope 1-2 GHG emissions by more than 45% (or 800,000tpa CO<sub>2</sub>-e). The EAF investment was underpinned by an unconditional grant of NZ\$140m or 47% of the total capex cost by the Government of New Zealand's investment into the Government Investment in Decarbonising Industry Fund.

NZ Steel have emphasised that renewable energy and local scrap steel supply are core components to the economic viability of the Glenbrook EAF. In August 2025, NZ Steel expanded its partnership with Contact Energy with an 11-year, 50MW PPA to supply 263GWh pa into the EAF with long-term renewable energy. Supporting this, Contact Energy signed a 35-year option and lease agreement for land adjacent to its existing 100MW Glenbrook-Ohurua BESS to develop a proposed 200MW BESS that would support the expansion of electrified steelmaking at NZ Steel's Glenbrook works, displacing reliance on gas in peak periods.<sup>31</sup>

Sims Limited also signed a 5-year term (with a 5-year extension option) for the supply of +200,000tpa of local scrap steel to power the Glenbrook EAF. New Zealand currently produces ~850,000tpa of ferrous scrap.<sup>32</sup>

March 2026 saw new BlueScope Steel CEO Robin Davies state: ""In New Zealand, the new electric arc furnace is now in commissioning and will materially improve cost competitiveness and sustainability, with capability of producing some of the world's lowest carbon emissions steel."<sup>33</sup>

BlueScope's NZ Steel, in partnership with Quinbrook Investment Partners (QIP) and the Victoria University of Wellington are developing technologies for the decarbonization of NZ's steel industry. Researchers have developed a zero-CO<sub>2</sub> hydrogen-based steelmaking process designed to process magnetite ironsand using renewable electricity to produce water instead of CO<sub>2</sub>, but we note this is at an early pilot plant stage.<sup>34</sup>

<sup>29</sup> BlueScope, [NZ\\$300m EAF Project at NZ Steel Moves into Execution](#), 08 September 2023

<sup>30</sup> Global Energy Monitor, [BlueScope New Zealand Steel Glenbrook](#)

<sup>31</sup> NZX, [Contact Extends Partnership with NZ Steel](#), 18 August 2025

<sup>32</sup> Sims Limited, [New Zealand Investor Day](#), 26 November 2025

<sup>33</sup> BlueScope, [BlueScope appoints Robin Davies as Chief Executive of Australia and NZ businesses](#), 30 March 2026

<sup>34</sup> Paihau—Robinson Research Institute at Victoria University of Wellington, [Zero-CO<sub>2</sub> metals](#)

## BlueScope's North Star, North America

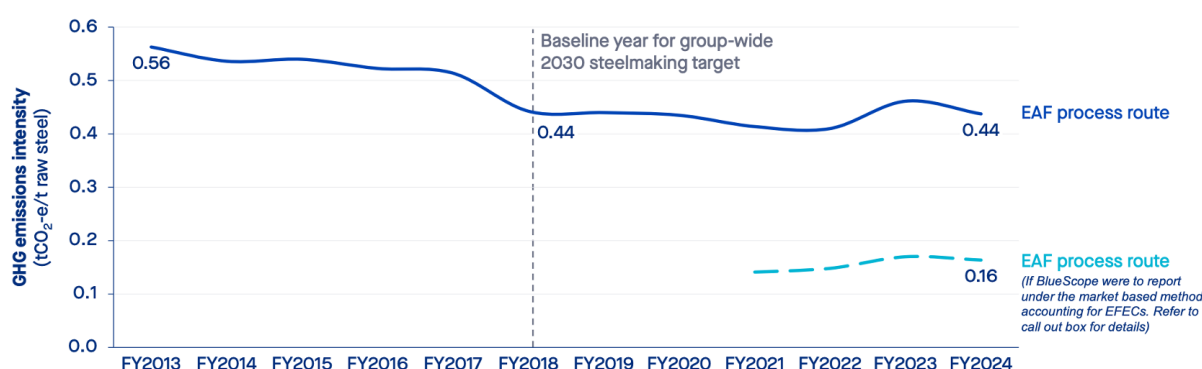
BlueScope's North Star EAF in Delta, Ohio, US, received a US\$700m capex investment in 2019 to expand capacity by 40% or 0.85Mtpa from 2.1Mtpa to 3.0Mtpa by the addition of a third EAF, commissioned in 2022. In August 2024, the BlueScope board approved a further US\$130m investment across nine modular projects for debottlenecking, targeting an additional 10% capacity lift (+310,000tpa) to bring total plant capability to 3.3Mtpa by 2028.

In 2021, BlueScope acquired MetalX's ferrous scrap steel recycling business for US\$240m to feed the raw materials requirement of its three EAFs. Now operating as BlueScope Recycling and Materials (BRM), this entity secures highly localized, integrated scrap yards directly adjacent to the facility.

In 2022, BlueScope acquired Coil Coatings for US\$500m, making it the second-largest coil painter in the US, tripling BlueScope's US metallic coating and painting capacity to 1.3Mtpa. BlueScope already has a capacity of 475,000tpa at its existing operations in the US in California and Washington.<sup>35</sup>

Because the North Star facility relies entirely on EAF technology powered by electricity and scrap/pig iron melt practices, its structural greenhouse gas (GHG) footprint is naturally a fraction of integrated coal-fired blast furnaces. North Star reports an emissions profile that currently sits at a world low of just 0.16 tCO<sub>2</sub>-e/t-cs, powered by a long term PPA for zero emissions nuclear energy — Figure 2.6.

**Figure 2.6: BlueScope North Star Emissions Intensity (Scrap-EAF)**



Source: BlueScope CAR (2024)<sup>36</sup>

In June 2026, it was reported North Star is on course to almost triple profits for FY2026, compared with a year ago, as Trump administration tariffs temporarily give US-based steel producers a massive advantage over importers, allowing for US steel price hyper-inflation at a time when US demand for steel for data centre construction and industrial uses is rising.<sup>37</sup>

<sup>35</sup> AFR, [BlueScope steps up US expansion with \\$670m Coil Coatings buy](#), 11 April 2022

<sup>36</sup> BlueScope, [Climate Action Report](#), 16 September 2024

<sup>37</sup> AFR, [BlueScope's US steel price windfall puts suitors on the back foot](#), 17 June 2026

## Whyalla Steelworks, SA

The Whyalla Steelworks is an integrated steelmaking value chain that produces slabs, billets, hot-rolled structural steel and rail products. Previously owned and run into the ground by GFG Alliance; the parent entity of InfraBuild. The steelmaking assets covered by GFG Alliance across the Whyalla Steelworks include:

- An integrated BF-BOF using magnetite pellets as iron ore feedstock from its connected Middleback Range iron ore mine. In September 2023, GFG Alliance closed its coke ovens and have since imported coke from other sources.<sup>38</sup>
- Whyalla also has a ladle metallurgy furnace and downstream steel rolling mills and product fabrication. Whyalla has a production capacity of ~1.2Mtpa of cast steel, and 475ktpa of hot-rolled products.
  - ~50% of steel is directed into a billet caster, a part of which is then transferred to InfraBuild to produce steel rail products for the domestic market. The remaining steel billet is used for other structural applications.
  - ~50% of steel is directed into a slab/bloom caster on-site, fed through a structural rolling mill to produce long steel products, primarily for construction applications.

In February 2025, the SA Government amended the Whyalla Steel Act 1958 to force the Steelworks and associated infrastructure under OneSteel Manufacturing Pty Ltd into administration to secure the long-term future of the steel supply chain before it was too late. This was a decisive and critical action by the state to secure the future economic resilience of the region against the crippling of the Steelworks under the former ownership that starved not only the furnaces but the enabling and surrounding infrastructure of critical sustaining capex, whilst systemically failing to pay creditors.

When the Steelworks was forced into administration, the Federal Government and SA Government announced a \$2.4bn rescue and re-industrialisation package to transform the Steelworks into a clean iron and steel hub. The funding was administered in distinct parts:

- **\$100m** for immediate, on the ground support, providing: \$50m for Creditor Assistance payments, \$32.6m in infrastructure upgrades, and \$6m to establish the Jobs Matching and Skills Hub in Whyalla.
- **\$384m** to fund the Steelworks operations during administration, ensuring workers and contractors continue to be paid, financed as a 50:50 split between state and federal governments.
- **\$1.9bn** allocated for investment in the future of the Steelworks, working with the new owner to invest in the upgrades and new infrastructure which will be vital to ensuring the facility has a sustainable, long-term future.

The 2026-27 Federal and State Governments tipped in a further \$223m over the next two years in additional funding for Whyalla, bringing total allocation to \$2.6bn.<sup>39</sup> Two administrations within a decade underline the operational and financial challenges of continuing the end-of-life, emissions-intensive, legacy BF-BOF and manufacturing process. Following a string of shutdowns, the decrepit blast furnace was closed for a further 5 weeks over May for maintenance.<sup>40</sup>

In April 2023, prior to GFG Alliance's forced administration, LIBERTY Steel announced the planned investment of a 1.5Mtpa Digimelter EAF from Danieli.<sup>41</sup> The \$500m EAF was originally announced to be completed in 2025, before being delayed to 2027.<sup>42</sup> Inexplicably, this pledge was taken at face

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<sup>38</sup> GFG Alliance, [Coke Ovens Closure: History in the Making](#), 05 September 2023

<sup>39</sup> AFR, [Whyalla Steelworks Bailout Heads Past \\$2.6bn as Blast Furnace Fails](#), 13 May 2026

<sup>40</sup> AFR, [Whyalla Steelworks Five-Week Shutdown Causes Chaos for Builders](#), 27 April 2026

<sup>41</sup> Danieli, [BF Technology Transition at Liberty Steel in Whyalla](#), 26 April 2023

<sup>42</sup> AFR, [Gupta's \\$500m Whyalla Steelworks Upgrade Delayed by Two Years](#), 15 May 2024

value, rather than recognised as a plain extension of GFG Alliance's long history of empty and broken promises. Sanjeev Gupta had already made the exact same promise of a new EAF for Whyalla in June of 2020, with construction to commence in 2021. It never happened. Prior to this, when GFG Alliance acquired the Steelworks out of administration, he announced a \$1bn upgrade and sustaining capex investment plan. That never happened either.<sup>43</sup>

In May 2026, the Federal Government announced it had shortlisted the two final bidders for the Whyalla Steelworks: India's Jindal Steel; and a joint bid by Australia's M Resources and Hazer Group.

Coal magnate Matt Latimore's **M Resources**, in its joint venture bid with ASX-listed clean hydrogen technology developer **Hazer Group**, have backed up their bid for Whyalla declaring the partners have the financial capacity and ambition to deploy billions in capital to modernise the steelmill and fully develop the iron ore resources. M Resources are working with Italy's Danieli on plans for a custom solution for a DRI-EAF outcome, emphasising a multi-stage approach to putting Whyalla back on sound footing. Following the unsuccessful bid by consortium BlueScope, POSCO, JSW Steel, and Nippon Steel, it has been reported POSCO is likely to join the M Resources bid if successful,<sup>44</sup> part of a wider possible consortium of global steel makers including Kobe Steel and ArcelorMittal.<sup>45</sup>

**Jindal Steel**, the Indian manufacturing conglomerate, has signalled it is prepared to invest significant sums in SA if its bid for the Whyalla Steelworks is successful, indicating a potential replication of its US\$2bn (A\$2.8bn) low-carbon iron and steel plant it constructed in Oman.<sup>46</sup>

In November 2025, CEF published a detailed analysis on the path forward for Whyalla Steelworks. Our report, [A Strategy for Whyalla: Enabling the Transformation and Decarbonisation of the Steelworks](#), laid out a policy architecture to leverage targeted industrial and climate policy to support a FOAK green iron and green steel capital deployment in the Australian context.<sup>47</sup> There is a key role and opportunity for Australia's special investment vehicles (SIVs) to deploy strategic, public-interest capital into market-forming mechanisms that can leverage the balance sheet and credit rating of the Federal Government to de-risk projects, provide concessional financing facilities, public-private partnerships, first-loss capital for FOAK projects, revenue-underwriting and demand offtake to utilise renewables from the outset.

Unbundling project-on-project risk with strategic government capital participation in each stage of the green iron value chain can significantly lower the cost of capital and thus bridge the commercial gap between fossil fuel-based production and renewable-based production. The report outlined a proposed ring-fenced ownership structure across magnetite mining, the DRI facility, EAF and enabling renewable energy infrastructure and renewable hydrogen facility to minimise project-on-project risk and crowd-in international export credit agency financing through capital participation of international joint venture partners.

The development of a Whyalla EAF to complement and provide a domestic-offtake source for a new DRI plant is critical to Australia's economic security, national security, minimising sovereign capacity risk, jobs creation and future-proofing of established Whyalla workforce, as well as being an economic multiplier for the region. Domestic production of critical long steel and structural steel products support downstream fabrication and distribution firms with sovereign supply chains for construction, rail and infrastructure projects. The Whyalla EAF is a perfect investment case for the Government's Future Made in Australia objective, facilitating the decarbonisation of steelmaking in Australia and scaling sovereign capacity of critical industrial commodities.

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<sup>43</sup> AFR, [Sanjeev Gupta has Got to be Joking, Joe Aston](#), 10 April 2023

<sup>44</sup> The Australian, [Steel Giant to Join Bid for Whyalla Steelworks](#), 27 May 2026

<sup>45</sup> The Australian, [Latimore forges new alliance for Whyalla steel bid](#), 10 July 2026

<sup>46</sup> AFR, [Indian Giant Jindal Makes its Case for Whyalla, and for Carbon Tariffs](#), 22 July 2026

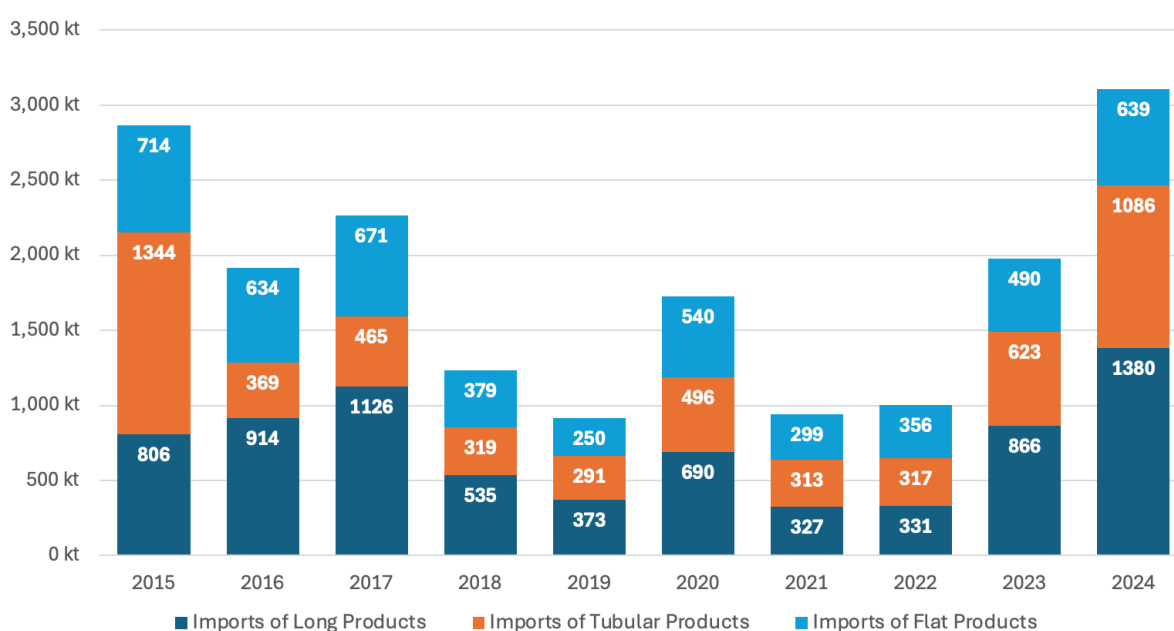
<sup>47</sup> CEF, [A Strategy for Whyalla: Enabling the Transformation and Decarbonisation of the Steelworks](#), 17 November 2025

## 2.2. Supply and Demand for New Australian Electrified Steelmaking with Scrap-based Feedstock

Australia has the scope to start building several new renewable energy powered, scrap-fed EAFs across WA, QLD, and potentially SA as soon as next year, unlocking billions of dollars of investment, creating offtake PPAs for new firm renewable energy whilst bringing new value-add employment opportunities even as we embrace green industries of the future in line with the Federal Government's Future Made in Australia (FMIA) vision.

Australia currently possesses steel supply-demand market dynamics that can support the emergence of multiple scrap-based EAFs. Imports of semi-finished and finished steel products have surged in recent years, with significant growth in long and tubular steel products - Figure 2.7. Scrap-fed, firm renewable energy powered EAFs provide an ideal decarbonised production platform for the production of construction and infrastructure-based steel products. Public and private domestic procurement of long and tubular steel products from EAF proposals can play a significant role in enabling the development of these proposals through the distribution and mitigation of market risk and counterparty risk through long-term offtake contracts.

**Figure 2.7: Australian Imports of Semi-Finished and Finished Steel Product by Category**



Source: Worldsteel <sup>48</sup>

Coupled with the growing demand for imported semi-finished and finished steel products, Australia exports a material volume of ferrous scrap to Southeast Asia. In CY2024, Australia exported 2.31Mt of scrap steel, 13% greater than 2023, reaching an all-time high volume of scrap exports. The annualised scrap steel exports of the first 9MCY2025 show scrap steel exports will continue to remain high at 2.23Mt. The long-run (15-years) average scrap steel export volume of Australia is 2Mtpa.<sup>49</sup> Expanding EAF capacity can support circularity, sustainability, and expand value-adding onshore within Australia's manufacturing landscape.

<sup>48</sup> Worldsteel, [Steel Statistical Yearbook 2025 — Publication](#), 04 December 2025

<sup>49</sup> OCE, [Resources and Energy Quarterly – December 2025](#), 19 December 2025

NSW is the largest source of scrap steel in Australia, producing an estimated average of 1.4Mtpa, followed by 1.1Mtpa from Victoria, 1.0Mtpa in QLD, and 0.7Mtpa in WA. Australia's scrap exports, combined with domestic scrap steel consumption of ~2.1Mtpa, represents a ~4Mtpa scrap generation market. The construction of an EAF in Collie and an EAF in Brisbane, in addition to existing mill upgrades and expansions, would still result in an estimated ~0.7Mtpa export market.<sup>50</sup>

CEF recognises that while aggregate scrap trade balance is supportive for the development of EAFs, not all scrap steel is equivalent in quality and does not directly translate into furnace-ready local supply chains. Regional mismatches in scrap generation and furnace locations; scrap collection, sorting, and preparation; copper and other tramp-element contamination; competition from established export offtakers; metallic yield losses; and sustainability for required steel products are critical considerations and factors to the viability of utilising Australia's scrap generation in EAFs.

As a result, binding, specification-based scrap agreements and improved scrap-processing infrastructure are material to the development and competitiveness of EAFs in Australia. Furthermore, developing state and federal-level government roadmaps on decommissioning public infrastructure and supporting dismantling, transportation, and management of circular materials is an important contribution to project proponent visibility on future supply chains. For example, the Centre for Decommissioning Australia (CODA) estimates there is ~5.7Mt of offshore infrastructure that will need to be removed in Australia's offshore areas, of which an estimated 3.5Mt is steel.

Australia now has four EAF with continuous casting and rolling capability proposals in the development pipeline, as well as a separate downstream rolling mill that would produce finished steel products from imported semi-finished steel feedstock. These proposals are mini-mills, primarily designed to utilise lower-cost scrap steel feedstock to produce long-steel products within domestic, and typically local, markets. Long products of steel typically have lower metallic-quality requirements than many flat and specialty-steel applications. As a result, the use of higher-impurity scrap steel for use in EAFs that produce long steel products, such as reinforcing bar and wire rod, present an opportunity for Australia to scale its long steel manufacturing capabilities and replace rising imports for use in Australia's built environment.

## **Box 2: Catalysing Australia's EAF Proposal Pipeline**

As of July 2026, none of the four EAF proposals in Australia have reached a final investment decision. Furthermore, none of the proponents have announced a cornerstone equity investor for each of the EAFs — see Appendix B for development matrix of proponents. Crowding-in a cornerstone equity investor is critical to the development of greenfield still mills, as private lenders pricing in higher construction risk, market risk, operational risk, and elevated sponsor risk relative to established operators (e.g. BlueScope).

There is a critical role government's special investment vehicles (SIVs) can play in crowding-in private equity and securing competitive private sector lending by de-risking aspects of the project development, as well as lowering weighted average cost of capital. Section 5 of this report discusses further the various mechanisms and SIVs that can be leveraged to enable the progression of Australia's EAF proposals towards final investment decision, and subsequently into construction and commissioning.

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<sup>50</sup> Sims Limited, [New Zealand Investor Day](#), 26 November 2025

## Generation Steel, WA



Credit: Generation Steel

Generation Steel (previously named Green Steel WA) is a green steel recycling EAF proposal in Collie, situated in the southwest of WA. The Green Steel Mill aims for an EAF facility to recycle domestic WA sourced scrap steel into long steel (including rebar, rod, and merchant bar) products for local and international markets, powered by contracted renewable assets through WA's SWIS grid.

The Collie EAF proposal comprises a \$850m investment to produce up to 450,000tpa of long-steel products, utilising 500,000tpa of scrap. In August 2024, Generation Steel was granted Works Approval by the Department of Water and Environmental Regulation, and State Planning Approval in May of 2024, aided by a \$2.7m grant from the WA Government to support the progression towards FID.<sup>51</sup> At the time, the proposal had aimed to begin construction in 2HCY2024, with operations commencing in 1HCY2026.

Generation Steel has now completed its bankable feasibility and FEED studies for the 450,000tpa EAF, with a FID now expected in 2HCY2026. Generation Steel has partnered with Danieli for the procurement of its MIDA QLP (Quality Long Product) to produce long steel products.

MIDA (Minimill Innovative Danieli Architecture) is Danieli's next-generation steelmaking concept that integrates melting, casting and rolling into a single continuous process. Unlike traditional plants that require separate facilities for each production stage, the MIDA layout connects the Electric Arc Furnace directly to a continuous caster and inline rolling mill. This eliminates intermediate reheating, significantly reducing energy consumption and physical footprint. This results in a highly compact, flexible plant capable of producing finished long products, including rebar, merchant bar and wire rod, from 100% recycled scrap steel in a single uninterrupted workflow.

By eliminating intermediate reheating between casting and rolling, MIDA reduces energy consumption by up to 45% compared to conventional mini-mills, translating to lower operating costs and reducing grid demand.

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<sup>51</sup> Green Steel WA, [Works Approval in Hand](#), 29 August 2024

Following the Access Offer<sup>52</sup> received from Western Power to connect the EAF to the South West Interconnected System (SWIS),<sup>53</sup> Generation Steel announced a PPA Term Sheet with Tonic Renewables for the supply of firm renewable energy to power the Collie EAF. The PPA aims to secure 134GWh pa of renewable energy from Tonic's 75MW Binningup Solar and 55MW/220MWh Battery facility.<sup>54</sup> Subsequently, in July 2026, Generation steel announced fully executed wind and solar PPAs with existing SWIS assets for energy equal to its total energy requirements.

Through 2025-26, Generation Steel have announced multiple scrap supply agreements for ferrous scrap feedstock to power the Collie EAF and possible customer offtake for green steel, including:

- October 2025: MoU with **South32's Worsley Alumina** to recycle scrap steel from South32's (now Alcoa) alumina operations in WA.<sup>55</sup>
- December 2025: Customer partnership with **Lendlease**.<sup>56</sup>
- March 2026: MoU with **Birdon Group** to establish a pathway for connecting offshore and maritime decommissioning to establish a ferrous scrap supply from Birdon into low-emissions steel production at Collie.<sup>57</sup>
- March 2026: A non-binding MoU for **Hazer Group** to supply 8,500tpa of graphite (produced from separating methane gas into carbon and hydrogen) over 10 years from 2030 onwards.<sup>58</sup>
- July 2026: Confirmed distribution agreement MOU with **Stride Reinforcement** in Victoria and customer MOU with **Laing O'Rourke**. Announced partnership with **Schnell** for its own cut and bend facility in WA for 100ktpa capacity, at cost of \$40m. This shows a pathway to navigate competitive channel economics where major cut and bend are not collaborative on offtake (e.g. demand uncertainties, focus on scaling internal supply chains, or alliance to existing producers (e.g. InfraBuild)).

In November 2025, the WA Government announced an Expression of Interest (EOI) for locally-produced green steel procurement to be used within major government infrastructure projects. To support the State's procurement capabilities, the WA Industry Participation Strategy will publish an addendum for steel, introducing stronger expectations for local sourcing of recycled and low-emission steel, as well as issue directions to Western Power, Synergy and Horizon Power to drive local content procurement.<sup>59</sup>

The EOI, designed with industry input through a consultation round, will develop a comprehensive strategy for local content procurement, including mapping the project pipeline of green steel facilities, potential capacity and timelines, and level of government support sought to facilitate green steel manufacturing in WA.<sup>60</sup> Demand-side support through public procurement will provide significant support for Generation Steel as the leading proposal for low-emissions steel produced in WA. This EAF could also create demand pull for DRI or green iron from the Pilbara or Midwest WA.

CEF notes that it has now been 9 months since the WA Government's EOI announcement with no further developments announced. Local low-emissions steel content requirements on Commonwealth co-funded infrastructure, or binding long-term government procurement contracts

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<sup>52</sup> Formal proposal outlining the terms, costs, and technical requirements of grid connection to the SWIS.

<sup>53</sup> Green Steel WA, [LinkedIn: Green Steel of WA](#), September 2025

<sup>54</sup> Green Steel WA, [LinkedIn: Green Steel of WA](#), September 2025

<sup>55</sup> Green Steel WA, [LinkedIn: Green Steel of WA](#), October 2025

<sup>56</sup> Green Steel WA, [LinkedIn: Green Steel of WA](#), December 2025

<sup>57</sup> Green Steel WA, [LinkedIn: Birdon Group](#), April 2026

<sup>58</sup> Hazer Group, [Hazer Signs Graphite Offtake LOI With Green Steel of WA](#), 19 March 2026

<sup>59</sup> WA Government, [Government Projects to be Built with Green Steel that's Made in WA](#), 09 November 2025

<sup>60</sup> WA Government, [Supply of Local Manufactured Green Steel for Major Government Projects: EOI](#), 19 March 2026

are necessary subsequent stages to progress the EOI, and such developments would provide significant forward revenue confidence that can underwrite private project financing.

On 11 June 2026, the WA Labor government announced a further \$9.8m investment into Generation Steel to progress the project towards FID, delivered through the \$230m Collie Industrial Transition Fund. Prior to the announcement, the WA State Government had committed \$4.5m to the project, with the new \$9.8m matched by further equity funding by Generation Steel. Construction of the mill is anticipated to create up to 500 jobs in Collie, with 287 ongoing jobs once operational.<sup>61</sup>

Climate Energy Finance notes that the existing principals of Generation Steel do not have the required equity funding underpin such a major greenfield investment in the absence of a major cornerstone investor, notwithstanding the strategic merits of such a proposal, noted above. However, Generation Steel has brought in additional expertise to strengthen its path to FID, including new Executive Chairman and construction industry veteran Enzo Gullotti. Mr Gullotti and Mr Aggarwal have demonstrated project finance capability having successfully raised capital and achieved financial close for the East Rockingham Waste to Energy project in WA, with debt funding raised from CEFC.

The remaining barrier for even the most advanced proposals, including Generation Steel, is cornerstone equity especially from private investors. This is the gap the NRFC Net Zero Fund could catalyse via public commitments for its concessional lending, rather than follow, private capital into Australia's first FMIA-era steel FIDs. Alternatively, equity positions could be considered by the Federal Government via the NRFC — as discussed further in Section 5.1.

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<sup>61</sup> WA Government, [Cook Labor Government to Help Develop Collie Green Steel Mill](#), 11 June 2026

## Future Forgeworks, QLD



Credit: Future Forgeworks

December 2024 saw Future Forgeworks announce plans to construct a 350,000tpa EAF and rolling mill to produce reinforcing bars to Queensland's construction industry. Future Forgeworks targeted FID and construction to commence in early 2026, with first steel produced in 2027.<sup>62</sup>

The mill, located in Swanbank in Southeast Queensland, is now set to produce first steel in early 2028. The mill's standard product offerings will include 250-600MPa grades in straight bar (6–12-metre lengths) and compact coil (2-8-tonne bundles), with 8-tonne bundles being an Australian-first capability. The facility has been designed with provision for a future wire rod line, enabling expansion in response to market demand. The project is anticipated to inject over \$100m into the local economy during its construction and create over 400 construction jobs, as well as up to 200 permanent on-site mill-based jobs, and more than 500 supply chain jobs.

In February 2025, Future Forgeworks announced the selection of Germany's SMS Group — the largest and oldest steel equipment manufacturer — to deploy SMS' Continuous Mill Technology (CMT350) mill, featuring an EAF, ladle furnace and continuous casting and rolling process in an integrated engineering, procurement and fabrication contract.<sup>63</sup> The CMT mill significantly improves energy-efficiency of the steelmaking process by feeding liquid steel directly to a high-speed caster and integrating rebar rolling mill while also minimising yield loss and improving product quality. This integration therefore eliminates the need for methane gas and fossil fuel-fired reheating furnaces, reducing emissions by up to 30% from traditional EAF and rebar rolling mill facilities and reducing energy consumption — further improving operational competitiveness. The addition of the decarbonisation of its electricity input will reduce emissions by over 70% compared with current processes.

In September 2025, Future Forgeworks completed all pre-FID concept, feasibility and design engineering. Forgeworks partnered with engineering firm Aurecon to complete technical assessments, as well as receiving formal approval from Powerlink for a grid connection concept and an MoU with a renewable energy supplier for dedicated zero-emissions energy supply to the

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<sup>62</sup> Future Forgeworks, [Future Forgeworks Chooses Swanbank, Ipswich to Ignite Australia's Green Steel Revolution](#), 02 December 2024

<sup>63</sup> SMS Group, [Future Forgeworks Awards SMS Group Contract for Australia's First Sustainable CMT Mill to Produce Rebar Steel in an Endless Process](#), 07 February 2025

facility.<sup>64</sup> Following this, Forgeworks received full development approval from local and state governments in November of 2025.<sup>65</sup>

In March 2026, Forgeworks broke ground on the Swanbank Green Steel Mill. Forgeworks now expects first steel to be produced in early 2028. At full capacity, the project aims to use locally sourced recycled scrap steel to meet up to 90% of Queensland's rebar demand with green steel, positioning to become a key supplier of locally-produced, low-emissions steel to the infrastructure buildout ahead of the 2032 Olympics.<sup>66</sup> As part of its project readiness, Future Forgeworks have confirmed that 60% of scrap supply is under binding long-term contracts with Queensland scrap companies, with the other 40% under discussion.

As of the start of July 2026, Future Forgeworks have locked in final delivery partners for the Swanbank mill, appointing UGL and CPB Contractors as construction partners, alongside engineering and design partner Beca. The UGL-CPB joint venture commenced early contractor works in April of 2026, with the Engineering, Procurement, and Construction contract scheduled to commence in the fourth quarter of CY2026.<sup>67</sup> Aurecon have extended their partnership with Future Forgeworks with their selection as Owners Engineer — providing ongoing support for engineering, construction management, project management and operations. Alongside technology provider SMS Group, the appointment of the delivery partners significantly de-risks construction and operational risks on process and balance of plant design for a smaller-scale start-up in Australia's steelmaking industry relative to the scale of the incumbent industry. We also note the Future Forgeworks leadership team and Advisory Board bring a strong mix of large-scale project delivery, steel manufacturing and capital markets expertise, positioning the company to execute its strategy.

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<sup>64</sup> Future Forgeworks, [Swanbank Green Steel Mill hits Major pre-FID Technical De-risking Milestone](#), 22 September 2025

<sup>65</sup> Future Forgeworks, [Swanbank Green Steel Mill Given Green Light for Development](#), 07 November 2025

<sup>66</sup> Future Forgeworks, [Queensland wins the Green Steel Race as the Swanbank Steel Mill Project Breaks Ground](#), 18 March 2026

<sup>67</sup> Future Forgeworks, [Future Forgeworks Appoints UGL, CPB Contractors and Beca, Forging the Path to Project Delivery](#), 30 June 2026

## Alter Steel, QLD



Credit: Alter Steel

Alter Steel has proposed the construction of an EAF and downstream rolling mill in Pinkenba, Brisbane QLD. Alter Steel's proposed plant would produce 500,000tpa of reinforcing bar, wire rod, hot-rolled mesh, spooled coil and bar. The firm estimates a total investment of \$860m to build its integrated casting and rolling mill, creating more than 230 permanent jobs.

Alter Steel is a subsidiary of private-owned Westview Group – one of Australia's larger, long established steel businesses – that has established steel bar and thick wire operations for the construction industry, with Lendlease, John Holland and CPB Contractors among its customer base. Westview Group operates Bestbar, Wire Industries, Unipod and Alter Steel. We note the senior leadership team each bringing over 30 years of experience operating steel mills and delivering steel into fabrication and construction at scale, a key positive when taking on such a massive expansion.

InfraBuild currently supplies 70% of the steel products Westview distributes. With growing uncertainties of the continued operation of InfraBuild under the severely financially challenged Sanjeev Gupta-led GFG Alliance, Westview made the decision to progress the Pinkenba EAF proposal to ensure long-term stability of steel feedstock to its steel distribution businesses.<sup>68</sup>

In July 2025, Alter Steel announced a non-binding MoU with Sims Limited to establish a scrap supply and services agreement to supply the Pinkenba EAF. Under the terms of the MoU, Sims would exclusively supply up to 550,000tpa of ferrous scrap and provide access to port and rail infrastructure given Alter's proposed site is located just 1km from Sim's Pinkenba site.<sup>69</sup>

In October 2025, Alter Steel announced the selection of Danieli as its technology partner for the proposed steel mill in Pinkenba. The proposed technology stack would see Danieli deploy a MIDA QLP mini-mill with Digimelter and Q-One power feeder with a completion date suggested at end 2027.<sup>70</sup> The integrated mill means continuous casting and rolling, eliminating the need for billet

<sup>68</sup> AFR, [Westview Plans \\$750m Steel Mill for Brisbane as Gupta Woes Worsen](#), 09 December 2024

<sup>69</sup> Sims Limited, [Sims Limited and Alter Steel Collaborate to Help Grow Queensland's Clean Steel Industry](#), 31 July 2025

<sup>70</sup> Danieli, [Alter Steel Selects Danieli for New, Green Steel Mill in Australia](#), 30 October 2025

reheating, reducing energy use by up to 75% compared to conventional mills, saving 330kWh/t-steel compared to conventional mills, and cutting carbon emissions 80% to just 0.37t/t of steel.

In April 2026, Alter Steel announced a partnership with Hatch to become Alter's engineering partner, leading the development of the proposal with a target to reach FID later in 2026.<sup>71</sup>

The selection of its Brisbane site was driven, by a significant factor, the role in which Brisbane city local and state government agencies would play in enabling scrap processing supply chains and end-market demand within the same industrial corridor.

The Brisbane Economic Development Agency (BEDA) has coordinated with Alter Steel as early as 2023 to progress key development and coordination requirements, including playing a leading role in project site identification and due diligence, facilitating connections with government departments and industry stakeholders, as well as coordinating potential financial partners and investors. BEDA has supported Alter Steel in securing critical services including power, gas, water and oxygen supply, access to Brisbane's skilled worker pipeline, with the industrial precinct integrated with port and rail infrastructure and adjacent to Sims Metal scrap steel management plant in Pinkenba.<sup>72</sup>

## GM Steel, QLD

GM Steel, a start-up based in Queensland, announced a planned \$450m investment into a proposed 350ktpa EAF in Toowoomba, QLD, producing reinforcing bar from locally-sourced recycled steel.<sup>73</sup> In March 2026, GM Steel announced it had secured development approval from both the QLD State Government and the Toowoomba Regional Council for its proposed EAF.<sup>74</sup>

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<sup>71</sup> Hatch, [Alter Steel Advances Pinkenba Steel Mill toward Final Investment Decision with Hatch](#), 07 April 2026

<sup>72</sup> The Guardian, [Why Brisbane was the Right Place for a new Low-carbon Steel Mill](#), 19 June 2026

<sup>73</sup> Australian Steel Institute, [ASI Metal Musings, Issue 15](#), 13 March 2025

<sup>74</sup> GM Steel, [Development Permit Approved](#), 04 March 2026

## Greensteel Australia, NSW

Greensteel Australia is a new start-up established by the founders of Reosteel, brothers Mena and Romany Ibrahim, aiming to develop a decarbonised, electrified steel mill in Australia. Reosteel was initially established as the re-branded Boral Steel following its acquisition by BHP in the 1990s, then consolidated with other entities following the spin-out of BHP's Steel Long Products division in 2000 as OneSteel. It is CEF's understanding that the current Reosteel, established in 2020 by the Ibrahim family, is not associated with the history of Boral Steel or BHP. Reosteel operates several downstream reinforcing mesh and reinforcing bars (rebar) mills across Sydney and Canberra. Greensteel Australia is now the parent entity of Reosteel.

Greensteel Australia has a history of press releases that have yet to be translated into proposals with engineering designs, bankable feasibility studies, environmental impact assessments, or final investment decisions.

- In October 2024, Greensteel announced a partnership with Danieli to construct a 600ktpa rolling mill powered entirely by green hydrogen. Signalled as a FOAK facility, Danieli would develop the plant — featuring a reheating furnace powered by 100% green hydrogen — with first operations by late 2026.<sup>75</sup> Greensteel later announced it was re-considering.
- In May 2025, Greensteel announced it had placed a A\$1.6bn order for a DRI plant, two EAFs, a structural steel rolling mill with high-speed rail capability, and a second rolling mill for rebar with Danieli. The arrival of the DRI and EAFs was originally slated for late 2026. No further announcements have been made on this order or a proposal that would utilise these technologies.
- In May 2026, the South Australian Government announced the administration process of the Whyalla Steelworks had shortlisted 5 bids from domestic and international groups, one of which was Greensteel Australia, early in 2026.<sup>76</sup> However, Greensteel Australia's proposal did not progress following the further consolidation of bids to M Resources in partnership with Hazer Group, and Jindal Steel.

In July 2026, Greensteel Australia announced an intention to invest \$500m to repurpose the site of the former BHP Newcastle Steelworks in Mayfield, NSW, to produce up to 600ktpa of finished long steel products.<sup>77</sup> At the heart of Greensteel Australia's announcement was the utilisation of a first-of-a-kind Australian deployment of an all-electric-induction furnace to be supplied by Danieli that would displace methane gas used in conventional mills, with expected arrival from October 2027 and commissioning by January 2028.

The initial stage of this proposal, as announced by Greensteel, is not an EAF, and contains no aspect of steel production or casting onshore. The plant will operate with imported semi-finished steel products in billets and blooms/beam blanks from Southeast Asia that will then be heated in an electric induction furnace before feeding into a bar mill and (planned future wire rod mill) producing finished long products in rebar and coiled wire rod.

The initial \$500m investment is reportedly being committed in its entirety by the Ibrahim family. Greensteel has stated an intention to pursue a second phase investment in an EAF to integrate into the rebar facility, as well as future plans for a DRI facility to feed the new mills — the details of which remain opaque.<sup>78</sup> Greensteel has also brought in economist Dr Ross Garnaut AC as the inaugural chair of the Greensteel Advisory Group.

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<sup>75</sup> Greensteel Australia, [Greensteel Australia Partners with Danieli to Launch World First 100% Hydrogen-Powered Rolling Mill](#), 14 October 2024

<sup>76</sup> INDaily, [Greensteel pens \\$1.6b steelmaking infrastructure order poised for Whyalla](#), 10 April 2025

<sup>77</sup> Greensteel Australia, [Greensteel Australia's \\$500M Investment Returns Steelmaking to the NSW Hunter Region](#), 07 July 2026

<sup>78</sup> ABC, [New steel plant for Newcastle nearly three decades on from BHP's closure](#), 7 July 2026

## Section 3. Global Industrial Policy Landscape to Safeguard Domestic Industry

The financial viability of steelmaking in small, open economies remains structurally challenged by global overcapacity, with import-sensitive markets across the Asia-Pacific considerably exposed. China alone represents over half the world's steel consumption and production. As a result, the repercussions of domestic steel consumption peaking in 2020 are profound, and growing. China continues to dump excess capacity in international markets, halving its average realised export price since it peaked back in 2022 even as China's steel exports hit an all-time record high of 119Mtpa in CY2025.

This has catalysed a rising level of protectionist industrial policy measures, with recent developments spearheaded by the US' rising isolationist foreign policy and the erection of massive import duties. From the EU to Brazil, India, and Australia, nations have responded to protect their domestic steel industries, failure to do so will see even further concentration of global steel sector control go to China, a trend concurrently occurring in many key sectors from batteries and EVs to solar modules, aluminium and critical minerals.<sup>79</sup>

Global trade is being undermined and countries are struggling to work out a viable geopolitical response to China's massive, ongoing investment in integrated manufacturing and mining supply chains to the point where it undermines the national security of all other nations.

This geopolitical response is undermining efforts to build bilateral and multi-lateral investments in FOAK DRI as a path to green iron facilities, as well as the need to build consensus on the path to an Asian CBAM to extend and leverage the EU / UK CBAM.<sup>80</sup>

### Section 3.1. Global Steel Market Conditions

As mentioned above, global-facing steelmakers are facing increasing market pressures that have created multiple headwinds to the progress of decarbonisation for integrated iron and steel producers towards green iron and electrified steel pathways. Steelmakers, particularly across the Asia-Pacific are facing low or negative returns on capital, continued margin compression as a result of global overcapacity, as well as insufficient demand pull for decarbonised products — driven by a lack of consumer willingness to pay clean premiums — particularly from the automotive sector given it is likewise suffering extreme margin pressures at a time of massive capital reinvestment demands.

The rapid rollout of capacity and surging demand for steel over recent decades was driven by the surge of China's domestic market. In the 20 years to 2020, China's steel demand grew markedly; driven by a burgeoning construction and infrastructure industry as China's economy continued its economic miracle of industrialisation and urbanisation. In the two decades to 2020, China's domestic steel demand surged 723% to over 1 billion tonnes per annum, growing at a CAGR of 11%.<sup>81</sup>

However, since 2020, China's domestic steel consumption has declined every year at a CAGR of -5% to 2025, falling 21% from its peak in 2020 to 796Mtpa, its lowest volume in almost a decade - see Figure 3.1. The scale of China's consumption contraction, falling 213Mtpa, is 29% greater than the annual production of the second largest steel-making country globally, India.

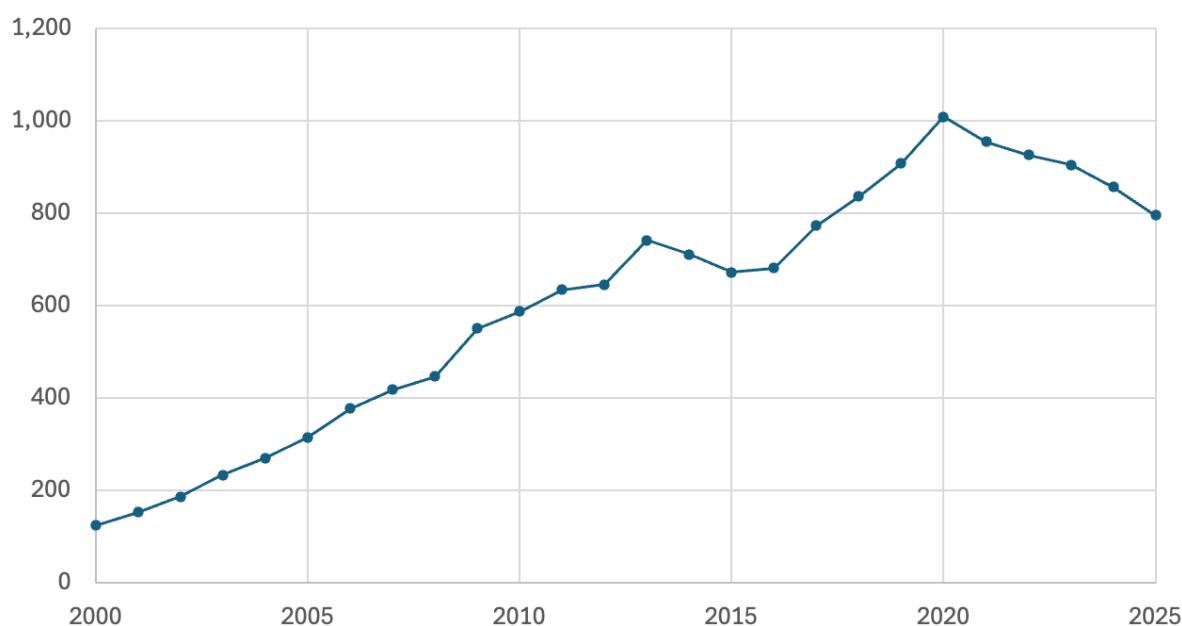
Falling domestic consumption in the world's largest steel market, coupled with continued utilisation of China's young BF-BOF capacity has seen China shift significantly towards export markets.

<sup>79</sup> CEF, [Raw Power: China locks-in global dominance of critical minerals and metals](#), April 2026

<sup>80</sup> CEF, [A Price on Carbon: Building Towards an Asian CBAM](#), June 2025

<sup>81</sup> Worldsteel, [World Steel in Figures Annual Reports](#), 2000-2025

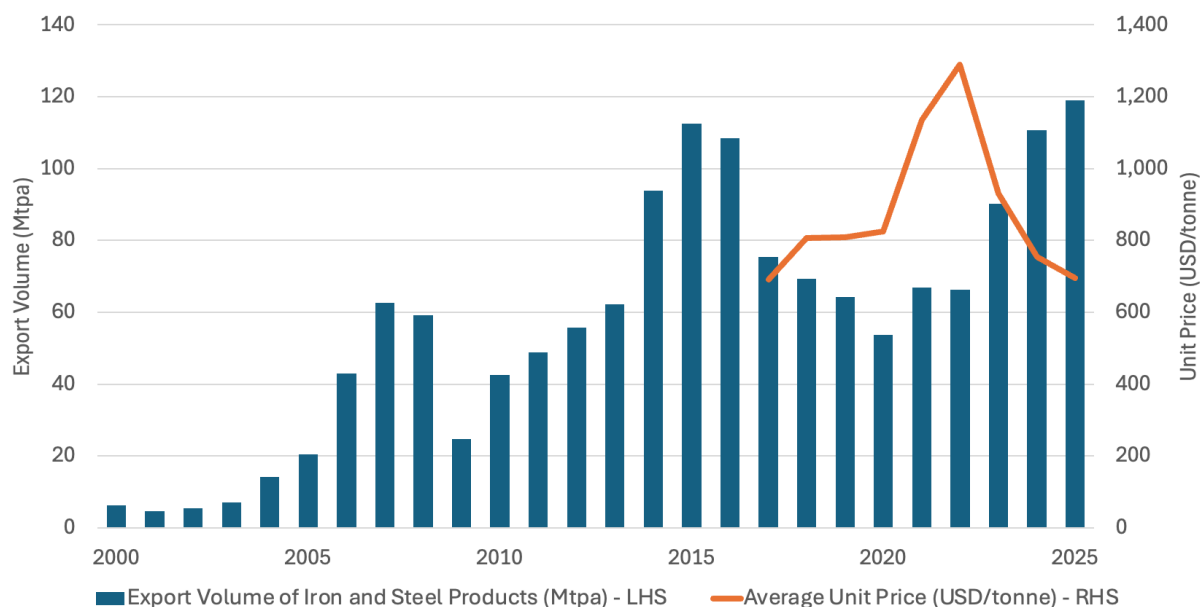
**Figure 3.1: Steel Consumption in China (Mtpa)**



Source: Worldsteel Association, Climate Energy Finance calculations

Since steel consumption in China peaked in 2020, exports of iron and steel products into the global market have surged, putting downward pressure on iron and steel commodity prices in markets across the Asia-Pacific, including Australia. Since 2020, Chinese exports have risen 122% to an all-time high of 119Mtpa in 2025, growing at a CAGR of 17%. The value of Chinese steel exports peaked in 2022 at an average of US\$1,289/t. Since then, average steel prices realised by Chinese exporters have continued to deflate, averaging US\$696/t in 2025, falling 46% from their peaks.<sup>82</sup>

**Figure 3.2: Chinese Iron and Steel Export Volume and Prices**



Source: Generation Administration of Customs of China (GACC), Climate Energy Finance calculations

<sup>82</sup> GACC, [Customs Data](#), accessed 2026

Despite falling demand from key markets exceeding that of the growth of emerging and developing market's steel consumption — driven by the respective industrialisation and infrastructure development of their respective economies — steel production capacity expanded at its fastest rate since 2009 in 2025, exacerbating trade frictions and geopolitical tensions, and further depressing prices in international trade and trade-exposed economies. Even in surging markets such as India, targeting an expansion towards 300Mtpa by 2030 from 165Mtpa in 2025, international market pressures have translated to depressed prices. From highs in 2025 of ₹52,750/t (US\$586/t) for hot-rolled coil, prices had deflated 19% by May 2026.

Excess global steel capacity is expected to reach 745Mtpa by 2028, exceeding the OECD's current steel production by 319Mtpa. This overcapacity would approach the historical highs of the last steel crisis a decade ago. The OECD's 2026 Steel Outlook emphasised the global steel industry's viability is seriously challenged by growing excess capacity driven by pervasive subsidies and other non-market policies and practices in certain economies; driving distortions in global markets; hurting economic security and resilience; and discouraging innovation and sustainability.<sup>83</sup> Rising energy costs linked to the conflict in the Middle East are adding further strain, weighing on investment decisions across the industry, with a significant proportion of lower-emissions iron and steel projects now postponed.

The OECD have emphasised that pervasive subsidisation in non-market economies, including most recently the US, is slowing the transition to low-emission steel production and the economic resilience and security of market-based steel producers within globalised economies. The median subsidisation rate for Chinese steel firms has almost doubled since 2019, reaching a level 15 times that of OECD counterparts in 2024. The resulting surge in excess capacity is flooding international markets with dumped and subsidised exports. As a result, industrial policies for safeguarding steel industries and incentivising a path to steel sector decarbonisation have almost entirely been crowded out by protectionist measures, as detailed below.

## Section 3.2. International Policy Response

As a result of increasing market pressures, trade actions on steel are rising in intensity and expanding to cover embedded steel along value chains to safeguard domestic steel industries. Antidumping (AD) and countervailing duty (CVD) actions, targeted at specific products and countries, remained at high levels in 2025. Brazil, Canada, India, Mexico, the United States, European Union, and the United Kingdom have all raised tariffs on many basic steel products. There are an estimated 400 active AD and CVD measures that have remained in place since 2016, with a further 75 new investigations launched in 2025 alone.

### European Union

The European Commission continues to emphasise that global overcapacities severely threaten the profitability and competitiveness of European industries. The EU reviewed the existing steel safeguard to address the latest market developments and determined it necessary to introduce effective protective measures beyond 30 June 2026 when current safeguard measures will legally expire. The Commission rightly highlighted in March 2025 that global negative trade-related effects are likely to be exacerbated, as an increasing number of third countries are adopting measures aimed at limiting imports into their markets, resulting in the EU market becoming the main receiving ground of global excess capacities.

In April 2026, the European Commission reached an agreement to introduce more stringent trade barriers to shield domestic steelmakers from global overcapacity. The agreement will set a new tariff-free quota of 18.3Mtpa on steel imports. Steel imported above the quota will now face a 50% tariff for 30 categories of steel imported into the EU.<sup>84</sup> The new measure slashes the tariff-free quota

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<sup>83</sup> OECD, [OECD Steel Outlook 2026](#), 04 June 2026

<sup>84</sup> European Commission, [Commission Welcomes Political Agreement on New EU Steel Measure](#), 13 April 2026

by 47% and doubles the tariff applied on out-of-quota imports against the current domestic steel safeguard measures erected in 2024.

The measure will also see the Commission introduce a ‘melt and pour’ requirement to improve traceability and transparency for imported steel products. The requirement aims to address circumvention of steel tariffs through the reporting of country of origin in which the steel was originally melted and poured – that is when the steel was first produced in liquid form in a furnace and cast into first shape.<sup>85</sup>

The European Commission have emphasised that the erection and strengthening of the trade bloc’s trade restrictions are a necessary response to other large import markets’ trade restrictions that have made the EU the primary recipient of global excess steel. Since 2007, the EU has lost 65Mtpa of steel manufacturing capacity and 100,000 steel sector jobs, with its remaining steel industry running at a capacity utilisation of just 67% in 2024, and further undermined by the resulting, ongoing fossil fuel hyperinflation in the EU resulting from Putin’s invasion of Ukraine.<sup>86</sup>

## United Kingdom

March 2026 saw the UK launch its national Steel Strategy, designed to revitalise the national steel sector through protective measures for domestic industry and public support mechanisms to accelerate decarbonisation, boost profitability and maintain strategic national capabilities.<sup>87</sup>

From 1 July 2026, the UK Government will reduce tariff-free steel import quotas by 60% compared to current arrangements, with out-of-quota imports subject to a 50% tariff, mirroring that of the EU.<sup>88</sup>

The UK Government have emphasised, similarly to the European Commission, that global steel overcapacity, compounded by high operating costs and structural challenges to decarbonisation and transformation of the steel sector, have resulted in crude steel production in the UK declining more than 50% in the last decade to 4Mtpa in 2024.<sup>89</sup> The UK’s Steel Strategy aims to boost domestic production’s share of national demand from 30% in 2024 to 40-50%.

## United States

From 2025, the Trump Administration has introduced sweeping protectionist and isolationist measures, including the erection of trade barriers and tariffs to safeguard its domestic steel industry. All tariffs imposed on products of steel apply to the full customs value of the imported product, including derivative products. Articles made entirely or almost entirely of aluminium, steel, or copper are subject to a 50% tariff on their full customs value. Derivative articles of steel and aluminium and copper articles which are not almost entirely aluminium, steel, or copper are subject to a 25% tariff on their full customs value.<sup>90</sup>

## Canada

In June 2025, Canada implemented tariff-free quotas on steel imports to help stabilise the Canadian market and prevent the harmful diversion, covering semi-finished, flat, long and tubular steel products of foreign steel from third countries into Canada. Imports above the quota levels for countries without free trade agreements, set at 100% of the import volumes of 2024, were subject to a 50% tariff. Following this, the Canadian Government increasingly ratcheted down the tariff-free

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<sup>85</sup> European Council, [Council and European Parliament Strike Deal to Protect EU’s Steel Industry from Global Overcapacity](#), 13 April 2026 (updated 24 April 2026)

<sup>86</sup> European Council, [Council and European Parliament Strike Deal to Protect EU’s Steel Industry from Global Overcapacity](#), 13 April 2026 (updated 24 April 2026)

<sup>87</sup> UK Government, [The UK Steel Strategy](#), 20 March 2026

<sup>88</sup> UK Government, [UK Steel Industry Backed by Major New Trade Measure and Strategy](#), 19 March 2026

<sup>89</sup> UK Government, [UK’s Steel Trade Measure from 1 July 2026](#), 02 April 2026

<sup>90</sup> White & Case, [United States Modifies Steel, Aluminium, and Copper Section 232 Tariffs](#), 07 April 2026

quota and penalty applied to excess imports. The tariff free quota level was reduced to 50% of 2024 levels, and then, in December, slashed to 20% of 2024 volumes. The tariff free quotas were then expanded to include free trade agreement countries (excluding Mexico and the US), set at 100% of 2024 volumes, before reducing to 75% in December of 2025.

Directly addressing rising imports from China's steel exports, Canada introduced a 25% tariff on steel imports that contained steel melted and poured in China.<sup>91</sup>

## Brazil

In May 2025, the tariff rate quota introduced in June 2024 was extended for another year and its coverage expanded. In February 2026, tariffs were increased to 25% on certain sheet, wire, and wire product imports.<sup>92</sup>

## India

In December 2025, India's finance ministry imposed a 3-year import tariff of 11-12% on steel products to curb cheap shipments from China.<sup>93</sup> Free Trade Agreement (FTA) partner nations and export-oriented manufacturers remain exempt from this specific duty line.

June 2026 saw India's Directorate General of Trade Remedies initiate an anti-dumping investigation into hot rolled steel from China, Japan and Russia as causing harm to the domestic industry. China's finished steel exports to India more than doubled in April 2026 to the highest in at least two years.<sup>94</sup>

## Australia

Driven by complaints from domestic steel firms BlueScope and InfraBuild, the Australian Anti-Dumping Commission (ADC) and federal regulators have introduced a wave of new investigations, provisional duties, and final tariff extensions.

In May 2026, the ADC confirmed major definitive anti-dumping and countervailing duties against China. Beside a minor 3.4% subsidy offset duty, specific Chinese exporters were hit with massive anti-dumping duties in hot-rolled coil steel ranging from 38.1% to 79%. In June 2026, flat-rolled steel product imports from China received a 9-51% duty, with 22% duties imported on South Korean imports.<sup>95</sup>

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<sup>91</sup> OECD, [OECD Steel Outlook 2026](#), 04 June 2026

<sup>92</sup> OECD, [OECD Steel Outlook 2026](#), 04 June 2026

<sup>93</sup> Reuters, [India Imposes Three-year Tariff on Some Steel Products to Curb Cheap Imports](#), 31 December 2025

<sup>94</sup> Reuters, [India opens steel dumping probe into China, Japan, Russia](#), 27 June 2026

<sup>95</sup> GMK Center, [Australia is imposing anti-dumping duties on flat-rolled steel from China and South Korea](#), 1 July 2026

## Section 3.3. Reforming Australia's Current Industry Policy to Domestically-Oriented Statecraft

CEF strongly supports the Future Made in Australia strategy, particularly where it creates and leverages a long term zero- or low-emissions energy supply to ensure alignment with zero-emissions industries of the future, and noting the absence of a financial incentive for green industry, particularly exports, absent an effective safeguard mechanism and Asian CBAM.

However, if FMIA funding is subverted into what could easily become an endless stream of temporary bailouts of largely foreign owned, end-of-life refineries suffering from undue foreign competition (led by China), this strategy will repeat the failed lessons of the past i.e. socialising the losses after privatising the gains.

We look forward to a clearer and more ambitious FMIA 2.0 that brings permanent solutions, ideally locking in long term firm renewable energy as a key competitive advantage for Australia.

### The bailout merry-go-round

Australian heavy industry faces an existential challenge: how to power energy-intensive value-adding industrial operations such as smelting, processing and manufacturing with low-cost firm renewable energy at scale, particularly whilst the Safeguard Mechanism fails to provide a sufficiently robust pricing of carbon pollution pathway, and in the absence of an Australian CBAM to protect our domestic industries from dumped high emissions manufacturing imports, as well as in the absence of an Asian CBAM to financially incentivise exporting embodied decarbonisation.<sup>96</sup> There is no easy path forward, but the multiple policy problems here are of national significance if Australia is to realise its clean energy superpower and green industrial powerhouse ambitions embodied in FMIA.

Our current system fails to align new firm energy supply to demand at an internationally competitive price that makes these operations viable and competitive. As a result, strategically important national industrial assets limp on at permanent risk, with regular massive transfusions of public aid from taxpayers in the form of bailouts. Given many of these Australian facilities are foreign owned, and approaching or already at the end of their useful life, the Australian government is struggling with the wicked so-called 'free markets' risk of socialising the losses having seen previous governments privatise the profits.

### Whyalla Steelworks, SA

In South Australia, the Whyalla Steelworks entered forced administration in February 2025 after gross mismanagement and offshore capital flight by former owner Sanjeev Gupta's GFG Alliance. The Federal and SA governments announced a \$2.4bn rescue package that month, stating rather optimistically that Whyalla "is critical for future ambitions for green steel manufacturing, which will be increasingly lucrative as the world decarbonises".<sup>97</sup> The funding was administered in distinct parts:

- \$100m for immediate on the ground support: \$50m for Creditor Assistance payments, \$32m in infrastructure upgrades, and \$6m to establish the Jobs Matching and Skills Hub.
- \$384m to fund Steelworks operations during administration, ensuring workers and contractors continue to be paid.
- \$1.9bn for investment in the future of the Steelworks, working with the new owner to invest in upgrades and new infrastructure vital to ensuring the facility has a sustainable, long-term

<sup>96</sup> Climate Energy Finance, [A Price on Carbon: Building Towards an Asian CBAM](#), June 2025

<sup>97</sup> Prime Minister of Australia press release, [Albanese and Malinauskas Labor Governments saving Whyalla Steelworks and local jobs with \\$2.4 billion package](#), 20 February 2025

future. Within this, a \$1.0bn Green Iron Investment Fund (GIIF) for Australia was established, with half of the proceeds required to be deployed in South Australia.

The SA Government is contributing \$650m of the \$2.4bn, including \$192m co-financing of the stabilisation pool and \$395m towards the future upgrades and investments in enabling infrastructure.

The SA Government's 2025-26 budget provisioned an additional \$192m, provided the federal government continues 50:50 contributions in the event of an extended sales process.<sup>98</sup> In early 2026 the federal government earmarked a further \$223m with the SA government committing A\$319m in additional funding over the next two years to support the sale and operations of steelworks in its 2026-27 budget.<sup>99</sup> This takes the total proposed public subsidy to Whyalla to approaching \$2.5bn, with so far nothing lasting to show for it, given the Whyalla Steelworks suffered yet another catastrophic failure in April 2026.<sup>100</sup>

### **Rio Tinto Boyne Aluminium Smelter, QLD**

March 2026 saw the Federal and Queensland governments announce a \$2bn taxpayer rescue package for Rio Tinto's Boyne aluminium smelter in Gladstone, Australia's second largest aluminium smelter after Tomago in NSW, and QLD's single biggest energy user, securing its operations until the 2040s. The State and Federal governments each will commit \$1bn to support the smelter transitioning its operations to firmed renewable energy.<sup>101</sup> The agreement builds on three of the largest ever Australian power purchase agreements (PPAs) signed by Rio Tinto in recent years to underwrite \$7.5bn in new renewable energy in the state, including huge wind and solar farms nearby totalling 2.8GW, and storage capacity of 600MW, ensuring cost competitive energy for the plant beyond its current power contract that expires in 2029. The smelter supports about 3,000 direct and indirect jobs.

The end of life 50 year old coal-fired power station that currently powers the Boyne smelter is earmarked for closure in 2029, when the current power contracts for the smelter and for the Yarwun and Queensland alumina refineries expire.<sup>102</sup> Rio had previously warned that electricity prices meant the smelter's future was "on thin ice" and had repeatedly tried to offload the business in the last decade and a half.<sup>103</sup>

### **Rio Tinto Tomago Aluminium Smelter, NSW**

Rio Tinto's Tomago aluminium smelter in NSW consumes 12% of the state's energy supply, is Australia's biggest single energy user and supports >4,000 direct and indirect high value jobs in a key export industry. Rio is refusing to underwrite long term PPAs for Tomago and is instead advocating for a major taxpayer bailout, threatening that at current power price projections and with electricity making up more than 40% of operating costs, aluminium production at the site would be "unviable" beyond 2028.

In December 2025, the Albanese government pledged to work with NSW to keep Tomago operational.<sup>104</sup> March 2026 saw the CEFC offer \$1bn of concessional debt support.

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<sup>98</sup> SA Government, [State Budget 2025-26: Supporting Whyalla](#), 04 June 2025

<sup>99</sup> Argus Media, [Australian state adds funding for Whyalla steelworks](#), 4 June 2026

<sup>100</sup> ABC News, [Whyalla steelworks jobs at risk if 'one last crack' to restart blast furnace fails](#), 30 June 2026

<sup>101</sup> ABC News, [Federal and state governments announce \\$2b bailout for Rio Tinto's Boyne aluminium smelter](#), 25 March 2026

<sup>102</sup> Renew Economy, ["A slam dunk:" Rio Tinto gets \\$2 billion lifeline to shift massive smelter from costly coal to firm renewables](#), 25 March 2026

<sup>103</sup> AFR, [Cashed up Rio warns smelters 'on thin ice'](#), 1 August 2019

<sup>104</sup> Prime Minister of Australia press release, [Work progresses to secure Tomago Aluminium and drive the Hunter region's clean energy future](#), 12 December 2025

In its June 2026-27 budget announcement, the NSW government maintained it is ready to support Tomago while seeking to ensure value for taxpayers. It says it is continuing to work closely with the federal government, which is undertaking direct negotiations with the smelter on a new PPA, including using Snowy Hydro to underwrite renewables projects to power the smelter and the CEFC to provide concessional financing.<sup>105</sup> It is CEF's view that while we desperately need a permanent fix to address the economic challenges of Tomago, including the lack of a path to a price on carbon pollution in international trade, such as an Asian CBAM, given Tomago exports >90% of its annual output. CEF also questions the viability of Snowy Hydro, given it has failed to demonstrate it can manage two 'nation building' projects, let alone many of these.

The state budget includes a provision for NSW to contribute to ensuring Tomago's ongoing operation, pending its federal counterparts finalising talks with the smelter, however details remain sketchy.<sup>106</sup>

### **Nyrstar Zinc and Lead Smelters, TAS & VIC**

In June 2026, the Tasmanian, SA and federal governments committed \$105m to save Nyrstar's zinc smelter in Hobart and its lead, zinc and antimony smelter in Port Pirie, SA,<sup>107</sup> adding to a previous \$135m in bailouts committed in August 2025.<sup>108</sup> SA invested \$55m with the Commonwealth spending \$57.5m and Tasmania \$22.5m. Nyrstar's private billionaire Swiss owners at Trafigura have long called for government support for the smelters, claiming they were losing millions per month - privatising the profits and then socialising the costs.

As such, CEF calls on the Federal Government to ensure Australian taxpayers get some long term value for this endless merry-go-round of taxpayer bailouts to foreign Australian corporate tax avoiding billionaires, beyond just temporary worker reprieves before the next Federal election. We need to ensure the private billionaires either give up a decent share of equity and/or commit to investing in modernisation and/or decarbonisation and/or commit to ongoing apprenticeships including First Nations people as a public return on public subsidies. Nyrstar's end-of-life facilities in Australia are old and inefficient, and subject to excessive geopolitically motivated global competition – led by China<sup>109</sup> – making any bailout commercially very difficult to justify, despite the fact these facilities employ some 1,400 workers across the two sites.<sup>110</sup>

### **Glencore Copper Smelter and Refinery, QLD**

In October 2025, Federal Labor and Queensland Liberal National Party jointly announced a \$600m subsidy over three years to prop up another Swiss billionaire controlled group previously accused by the Australian Tax Office (ATO) for transfer pricing of profits offshore to Singapore (but unable to be proven in court<sup>111</sup>) – Glencore's Mount Isa Copper Smelter and Townsville Refinery – until at least 2028, split evenly across both tiers of government. The Mount Isa Copper Smelter provides half of Australia's copper smelting capacity, with the Townsville refinery processing up to 300,000tpa of pure copper cathode used for copper wire and cabling. The announcement notes that "maintaining Australia's domestic minerals and metals processing capability is fundamental to our economic

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<sup>105</sup> Yahoo News, [Labor 'confident' of Tomago smelter deal](#), 2 July 2026

<sup>106</sup> Renew Economy, [A tale of two budgets: A win for cheaper, cleaner energy in one state, more "coal-keeper" in the other](#), 24 June 2026

<sup>107</sup> Industry Minister Tim Ayres press release, [Governments supporting critical minerals processing and securing local jobs](#), 10 June 2026

<sup>108</sup> ABC News, [Nyrstar smelters in Hobart and Port Pirie to receive \\$105 million in further federal-state government help](#), 10 June 2026

<sup>109</sup> NY Times Opinion, [Ezra Klein & Kevin Rudd, What Americans Need to Understand About China](#), 14 July 2026

<sup>110</sup> ABC News, [Port Pirie and Hobart smelters need 'urgent' government help, owner says](#), 25 June 2026

<sup>111</sup> Australian Government ATO, [Commissioner of Taxation v Glencore Investment Pty Ltd](#)

resilience, at a time where global production is becoming increasingly concentrated in a single market”, and that the operations support 600 jobs.<sup>112</sup>

Glencore had said that without support the operation was uneconomic, with energy costs in QLD’s northwest double or more than those in India, China, Canada and the US – yet the governments’ bailout self-defeatingly does nothing to permanently solve this pressure point.<sup>113</sup>

### **Liberty Manganese Smelter, TAS**

Liberty Bell Bay (LBB) in Tasmania, Australia’s only domestic producer of manganese alloy, a critical input into steelmaking, was owned by Sanjeev Gupta’s exceptionally financially distressed GFG Alliance.<sup>114</sup> March 2026 saw Liberty Bell Bay go into administration. April 2026 saw the federal and Tasmanian governments announce a joint \$3m loan funded equally to maintain the workforce while administrator EY conducted an expedited sale. This assistance came on top of a loan of up to \$20m provided by the Liberal National Party government of Tasmania in 2025, supposedly tied to finance the purchase of manganese ore and hence facilitate a promised restart of the smelter. GFG Alliance defaulted on the loan and operations did not restart.

July 2026 saw the administrators advise LBB staff that the consortium is no longer pursuing a purchase and the administration will now shift its attention to winding up the business.<sup>115</sup>

### **Ending the cycle of bailouts - Green Energy Statecraft**

What is clear is that the merry-go-round of taxpayer-slugging subsidies designed to sustain critical industrial capability and on-shore processing is ineffective as a long-term solution and needs to stop.

Various solutions have been proposed. In a report released in June 2026, Sovereign Power, the Electrical Trades Union and think tank The McKell Institute proposed the creation of a new government entity, Sovereign Power, that would build, run and finance renewable energy generation to power Australian industry, reliably and affordably, offering long-term PPAs to industry, including Tomago.<sup>116</sup> Under the Sovereign Power plan, firmed renewables would be delivered at a cost of ~\$66/MWh, compared to average private market PPAs of \$117/MWh. Inclusive of the value to the grid of Industrial scale demand response management (DRM), this is in line with what Rio Tinto said it needs to produce and export green aluminium competitively in the absence of carbon tariffs.

In relation to Tomago but applying more broadly, Industry Minister Tim Ayres recently signalled the need for collaborative, creative “industrial statecraft”. This would involve “leveraging Commonwealth energy assets and special investment vehicles to increase and accelerate new electricity supply ... on a scale that would improve ... competitiveness and productivity ... creating hundreds of jobs.”<sup>117</sup>

UNSW Green Energy Statecraft program leader Professor Elizabeth Thurbon and colleagues propose mechanisms such as a government backed scheme finance vehicle (SFV)<sup>118</sup> to finance a firmed renewables infrastructure buildout, ensuring clean energy supply to major, strategically important industrial facilities at stable, long-term, commercially viable prices, using government funds strategically to lower the risk premium and providing pathways for taxpayers to share in upsides.<sup>119</sup> In

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<sup>112</sup> Queensland Government press release, [Landmark deal to protect regional Queensland jobs and strengthen Australia's copper capability](#), 8 October 2025

<sup>113</sup> ABC News, [Glencore refinery sites stay open with taxpayer funds](#), 8 October 2025

<sup>114</sup> Prime Minister of Australia press release, [Government's take joint action to support Liberty Bell Bay workers during sale process](#), 24 April 2026

<sup>115</sup> ABC News, [Liberty Bell Bay manganese smelter to close immediately after sale falls through](#), 16 July 2026

<sup>116</sup> The McKell Institute, [Powering Australia's Future](#), June 2026

<sup>117</sup> Industry Minister Tim Ayres press release, [Manufacturing Australia's Future: Resilience and Statecraft in Science and Industrial Policy](#), 19 May 2026

<sup>118</sup> Green Energy Statecraft Project, [Financing the Energy Transition - Faster, Fairer, Smarter](#)

<sup>119</sup> AFR, [Oliver Yates Opinion: Structured investment is the solution for Tomago](#), 7 October 2025

this structural fix, the government would contract for clean energy directly using PPAs and on-sell it to large industrial users under long-term, fixed-price contracts. With government credit de-risking renewables projects at the source, the SFV lowers financing costs across the board. A 1-2% reduction in the cost of capital translates into 10-20% cheaper renewable power – without ongoing subsidies.

Green Energy Statecraft is distinguished from industry policy and protectionism as conventionally understood. As Thurbon et al write: “The term ‘industry policy’ is now highly politicised and widely misunderstood in many national contexts. It is also an unhelpfully broad term that can describe any government intervention in the economy intended to alter the nation’s productive structure, regardless of motivation, from industry development to job creation to pork-barrelling.”<sup>120</sup> Green Energy Statecraft, by contrast, refers to coordinated government action designed to establish and expand strategic clean energy-related industries, enabling domestic firms to compete successfully in highly competitive global markets (particularly until there is an effective Asian CBAM) while also strengthening national security by improving the resilience of critical green industrial capability.

Importantly, public support is not unconditional; it is tied to demonstrated performance against clearly defined targets. These may include production volumes, export outcomes, environmental standards, domestic value creation and technological upgrading. Governments then align supply- and demand-side policies, financing mechanisms and incentives to help ensure those objectives are achieved. This form of discipline is central both to the responsible use of scarce public funds and to maximise the long-term economic and social benefits delivered to citizens.

July 2026 saw UTS Emeritus Professor Roy Green highlight that inaction on Tomago Aluminium is a price Australia can’t afford to pay, stating:<sup>121</sup> “Investing in Tomago can change the conversation in regions like the Hunter from one of anxiety and closure to one of proud, sustainable, well-paid industrial communities that enable families to work and give back to their community. We can turn the rhetoric of repowering our industry into reality – and that’s a benefit that is priceless.”

## Steel Safeguard Measures

By contrast to the Green Energy Statecraft approach, the Australian Steel Institute (ASI) has called for ‘steel safeguard’ measures – essentially an emergency tariff on fabricated steel imports – prompting a Productivity Commission (PC) Inquiry into whether safeguard action is warranted, with the PC due to produce an interim report by September 2026.<sup>122</sup>

Over the past 12 months the ASI has pursued a program of advocacy to address the surge in very low-priced imported fabricated structural steelwork – principally from China – and the serious injury it says this influx has caused to local industry. ASI calls for a Tariff Rate Quota (TRQ) comprising a 50% tariff that applies to all imports above a specific quota limit, 400,000-450,000tpa,<sup>123</sup> addressing the difference in price between imports and the equivalent goods produced by Australian industry. It says this tariff level would be broadly aligned with those in comparable jurisdictions such as the EU and the US, thereby helping to limit any additional surge impact from imports diverted from these markets.<sup>124</sup>

The proposal has been met with criticism by China, other Asian partners and the EU, who say that the move would breach international trade rules while increasing input costs across industry sectors that rely on steel imports such as infrastructure, housing and mining, hurting Australian businesses and consumers. The potential move is increasing geopolitical tensions, with China claiming the proposed tariff could harm bilateral relations and put at risk the improvement in the trade relationship after years of trade restrictions under the Morrison government. However, ongoing

<sup>120</sup> AP4D, [Green Energy Statecraft for Comprehensive National Security](#), November 2024

<sup>121</sup> The Point, [Roy Green Opinion: Inaction on Tomago is a price Australia cannot afford](#), 16 July 2026

<sup>122</sup> Australian Government Productivity Commission, [Fabricated structural steel safeguards](#)

<sup>123</sup> AFR, [Government weighs emergency tariffs on Chinese steel imports](#), 21 January 2026

<sup>124</sup> ASI, [June update on Safeguard enquiry](#), July 2026

dumping of excess industrial capacity by China is a systemic problem - and Australia is late in addressing the issue of protecting our national strategic interests - refer Section 3.2.<sup>125</sup>

Oversupply of heavily subsidised imports is undoubtedly a material challenge to the viability of domestic production. However tariffs are a temporary, trade distorting band-aid fix with adverse downstream consequences for the domestic economy. Steel production is highly energy intensive, with the ASI confirming that ‘energy costs have become a major operational pressure for Australian manufacturers’, while for ‘businesses in the steel sector – many of which are highly energy-dependent – rising prices can significantly impact competitiveness and profitability’.<sup>126</sup> The fix is to rapidly accelerate supply of new low cost firm renewable energy to give Australia a permanent competitive advantage in zero emissions industries of the future e.g. scrap steel, renewable energy-powered EAFs rather than giving open ended permission to pollute for free to BlueScope at Port Kembla, as per the current workings in the Safeguard Mechanism.

A future-oriented, sustainable approach to ensuring the resilience, competitiveness and sustainability of the domestic steel industry would require a different approach. This should include strategic program of Green Energy Statecraft in the form of a national Iron and Steel Decarbonisation Strategy as a priority this decade under FMIA, designed to accelerate the commercialisation of cost-competitive zero-emissions green iron and steel manufacturing using low-cost firm renewable energy at scale, supported through policy and financing mechanisms such as those outlined above, and tied to decarbonisation and performance benchmarks.

Figure 3.3 details nearly \$10bn of federal and state government capital funding and bailouts since 2024 for the very limited amount of Australian mining sector value-add that is left.

**Figure 3.3: Federal and State Government Bailouts of Manufacturing Capacity**

| Facility                      | Entity              | Commodity      | Support (A\$m) | Date        |
|-------------------------------|---------------------|----------------|----------------|-------------|
| Mt Isa & Townsville Refinery  | Glencore            | Copper         | 600            | Oct 2025    |
| Port Pirie & Hobart Smelters  | Trafigura Nyrstar   | Lead and Zinc  | 240            | Jun 2026    |
| Whyalla Steelworks            | GFG Alliance        | Iron and Steel | 2,600          | May 2026    |
| Liberty Bell Bay              | GFG Alliance        | Manganese      | 23             | Aug 2025    |
| Phosphate Hill                | Dyno Nobel          | Phosphate      | 28             | Jul 2024    |
| Tomago Aluminium              | Rio Tinto           | Aluminium      | 1,000          | TBC         |
| Boyne Smelter                 | Rio Tinto           | Aluminium      | 2,000          | Mar 2026    |
| Port Kembla Steelworks        | BlueScope           | Iron and Steel | 137            | Jul 2024    |
| Kemerton LHM Refinery         | Albermarle          | Lithium        | 150            | Nov 2024    |
| Rare Earths Refinery          | Iluka Resources     | Rare Earths    | 1,600          | Progressive |
| Rare Earths Mine and Refinery | Arafura Rare Earths | Rare Earths    | 1,040          | Progressive |
| Kalgoorlie Nickel             | Ardea Resources     | Nickel         | 500            | Progressive |
| <b>Total</b>                  |                     |                | <b>9,918</b>   |             |

<sup>125</sup> AFR, [China warns Labor’s ‘abuse’ of steel tariffs will hurt ties](#), 23 April 2026

<sup>126</sup> ASI, [Managing energy costs in steel](#), 02 August 2025

## Section 4. The Safeguard Mechanism is Insufficient to Drive the Decarbonisation of Australian Steel

CEF strongly supports the progress made with the Safeguard Mechanism and ACCUs over the last two years, with serious steps to update methodologies and improve verification, monitoring and reporting (MRV) and hence system integrity. But CEF also advocates for the 2026 review to deepen and broaden the scheme, and to introduce a price floor that ratchets up progressively in real terms over the coming decade so as to provide the price signal investors and industry desperately needs. And the loop-holes designed to protect so-called trade exposed industries need to be pivoted to ensure financial support to these facilities to get on a path to decarbonisation, rather than the current exemption from action provided. EAFs have a cost disadvantage to a blast furnace, but only where the latter can externalise its pollution for the next couple of decades.

The Federal Government's Net Zero Industry Plan's principal policy driver over the medium-term (through 2035) for driving decarbonisation across industry is the Safeguard Mechanism. The Department of Industry, Science and Resources (DISR) emphasises that the Safeguard Mechanism gives industry the clearest and most direct signal to reduce emissions in line with Australia's climate targets, supporting long-term investment certainty and operational planning as well as encouraging investment in commercially viable abatement technologies and alternative inputs.<sup>127</sup>

### Box 3: The Safeguard Mechanism

The Safeguard Mechanism is the Federal Government's policy for reducing emissions at Australia's largest industrial facilities, applying to all industrial facilities emitting more than 100,000tpa CO<sub>2</sub>-e, covering facilities within mining, oil and gas production, manufacturing, transport and waste.

The SGM underwent a significant reform in 2023, restructuring into a baseline-and-credit ETS, with the legislated limits (baselines) declining predictably and gradually to assist Australia in achieving its NDC commitments of 43% emissions reduction target by 2030, relative to 2005, and net zero by 2050. To meet compliance obligations if a facility's emissions in a period exceeds that of their baseline, captured entities must surrender federally-regulated credits to reduce gross emissions to their baseline. Facilities can surrender Australian Carbon Credit Units (ACCUs) – tradable financial products generated through eligible carbon abatement projects ranging from reforestation to energy efficiency schemes – and/or Safeguard Mechanism Credits (SMCs) – generated when Safeguard facilities gross emissions are below that of their baseline. Similarly to ACCUs, SMCs are tradable credits, designed to incentivise facilities to reduce their emissions beyond their baselines.

However, analogous to the designs of the EU, Korean, and Chinese emissions trading schemes (ETS), the Safeguard Mechanism has concessions for covered facilities whose main product is trade exposed and faces an elevated risk of carbon leakage. Under SGM rules, trade-exposed baseline-adjusted (TEBA) facilities have reduced baseline reduction targets for 3 years based on an assessment of the cost impact of the SGM on a facility relative to the facility's revenue in a financial year. For TEBA facilities, the baseline reduction is 1% pa.

Australia's iron and steel producers, as well as Australia's alumina, aluminium, and fertiliser producers have received full TEBA concessions in the first two years of compliance following the 2023 reforms, effectively nullifying the Safeguard Mechanism's ability to drive industrial decarbonisation in Australia's most emissions-intensive manufacturing facilities.

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<sup>127</sup> DISR, [Net Zero Industry Sector Plan](#), 18 September 2025

In 2026-27, the Federal DCCEEW will undertake a review of the Safeguard Mechanism. This review aims to leverage the learnings after the first two years of Safeguard's operation since the 2023 reforms: 2023-24 and 2024-25.<sup>128</sup> The review is designed to assess the scheme's design and appropriately calibrate various dynamics of the scheme's operations to ensure it is effectively contributing towards Australia's emissions reductions targets.

The Climate Change Authority (CCA) is tasked with advising the government on the extent to which onsite abatement is being driven by the 2023 reforms, and determining whether additional policy incentives are required. DCCEEW have signalled this may include adjustments such as discounting the abatement value of ACCUs when used under Safeguard mechanism compliance above a certain percentage of a baseline, or other mechanisms that limit the surrender of ACCUs.

The review of Safeguard Mechanism in 2026-27 is a critical opportunity for improvement in the scheme's design and efficacy, while potentially also extending the breadth and depth.

In February 2026, DCCEEW published the final Carbon Leakage Review following multiple rounds of consultation, a year after the Review was finalised.<sup>129</sup> The number one recommendation of the Carbon Leakage Review was for an Australian carbon border adjustment mechanism (CBAM) to be introduced for a select group of commodities that have a particular risk of carbon leakage, including cement and clinker, lime, hydrogen, ammonia, iron and steel, and glass.

Should the Federal Government adopt the recommendations of the Carbon Leakage Review, Professor Frank Jotzo outlined that an Australian CBAM should:

- Mirror domestic emissions policy settings for imports to provide a level playing field. As a result, the liability should be assessed on Scope 1 emissions above benchmarks set in line with Safeguard Mechanism baselines and effective carbon prices embodied in imported products.
- **Remove TEBA concessions for commodities and facilities once a CBAM is fully implemented.**
- Introduce measurement, reporting and verification requirements for a CBAM that minimise administrative burdens on importers and exporters.

The Carbon Leakage Review also urged the Federal Government to actively engage in multilateral and plurilateral initiatives that support the implementation of CBAMs, such as the development of interoperable standards and approaches to default emissions intensities or measurement, reporting and verification of embodied emissions. The Review also recommended that potential revenues generated from the introduction of border carbon adjustments could, in part, be directed towards capacity building in trade partner developing countries of emissions monitoring, reporting and verification.

CEF advocates for an expansion of the depth and breadth of the Safeguard Mechanism by progressively lowering the threshold from the current 100ktpa towards 25ktpa, and extending coverage to the electricity sector as a way of leveling the playing field of coal power plants who are currently able to massively pollute for free. This could be a key aspect in support of an Orderly Coal Plant Closure Scheme to ensure sufficient replacement capacity is built ahead of coal closures, potentially brought forward by catastrophic failures as evidenced at Muja AB and Callide.

CEF also advocates for the introduction of a floor price on SMC and/or ACCUs that progressively ratchets up in real terms over the coming decade, to provide investors and safeguard facilities the clarity of pricing over the long term, a key input into the financial viability of decarbonisation measures and offset investments alike.

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<sup>128</sup> Federal Register of Legislation, [National Greenhouse and Energy Report \(Safeguard Mechanism\) Amendment \(Reforms\) Rules 2023 - Explanatory Statement, Attachment B](#), 05 May 2023

<sup>129</sup> DCCEEW, [Australia's Carbon Leakage Review](#), 13 February 2026

## Section 5. Forging Australia's Green Metal Statecraft to Safeguard and Decarbonise Steel

Australia needs to embrace Green Metal Statecraft as a core aspect of the FMIA, working to build bi-lateral and multilateral support mechanisms with our key Asian and EU/UK trade partners. As an export-oriented Middle Power at best, Australia can't do this on our own. But failure to act decisively will see a further hollowing out of our economy, consigning us to great dependence on our dig-and-ship zero-value add mining sector, hoping that China, Japan and Korea continue to pay over the odds for our low quality, high impurity iron ore and our LNG & coal fossil fuel exports even as they diversify away from us and progressively electrify and decarbonise their economies.

In May 2026, the International Monetary Fund (IMF) conducted analysis on the implementation of industrial policy measures across the Asia-Pacific in the 15 years to 2024.<sup>130</sup> The IMF identified the utilisation of industrial policy to promote structural transformation had expanded markedly in recent years. Geoeconomic fragmentation has brought about rising uncertainties in trade, investment and financial integration and globalisation across the Asia-Pacific. Additionally, the long-term structural challenges arising from demographic pressures, climate change and the energy transition, jointly with the drive for greater national security, rapidly evolving automation and digitalisation technologies, have posed significant opportunities and risks for advancing economies. This has prompted increasing market-forming and interventionist measures by policymakers.

Since 2009, industrial policy in the Asia-Pacific has primarily been directed at industrial and manufacturing sectors, with domestic subsidies dominating the number of mechanisms introduced, followed by import-limiting measures. In the 15 years to 2024, domestic subsidies have accounted for 47.9% of all industrial policy measures introduced in the region. Of this, 73% have been in the form of financial grants (accounting for 34.9% of all support measures). Import measures accounted for 26.1% of all support measures, with tariff measures accounting for over half of these.

This mirrors a global resurgence in industrial policies and mission-oriented statecraft packages introduced in recent years to manage increasing geoeconomic fragmentation, national security objectives, shifting global value chains and the energy transformation.

Investment into decarbonised, energy-intensive manufacturing continues to be restricted in Australia as its policy and regulatory environment is emblematic of a system that lacks coordinated planning, enabling infrastructure, anchored industrial demand and a clear allocation of long-term risks for clean commodities.<sup>131</sup>

30 years ago, the World Bank took a staunch position that greatly stigmatised the idea of industrial policy and the efficacy of an entrepreneurial or mission-oriented state in Western economies. In the 1990s, the World Bank warned countries from implementing mission-oriented statecraft packages in the Information Age, heeding that the prerequisites for success are so rigorous that policymakers in other developing economies seeking to follow similar paths and replicate the success of the East Asian Miracle would be met with failure.

Fast forward to March 2026 and the World Bank has recognised that its position has not aged well, with its recommendations to policymakers on industrial development having the 'practical value of a floppy disk today'.<sup>132</sup> While governments often revert to blunt instruments as to primary mechanisms of industrial policy — opting for the bludgeon of sweeping tariffs and subsidies over the scalpel of

<sup>130</sup> IMF, [A New Wave of Industrial Policy in Asia-Pacific: Could Resurgence Lead to Structural Transformation \(Working Paper 26/101\)](#), May 2026

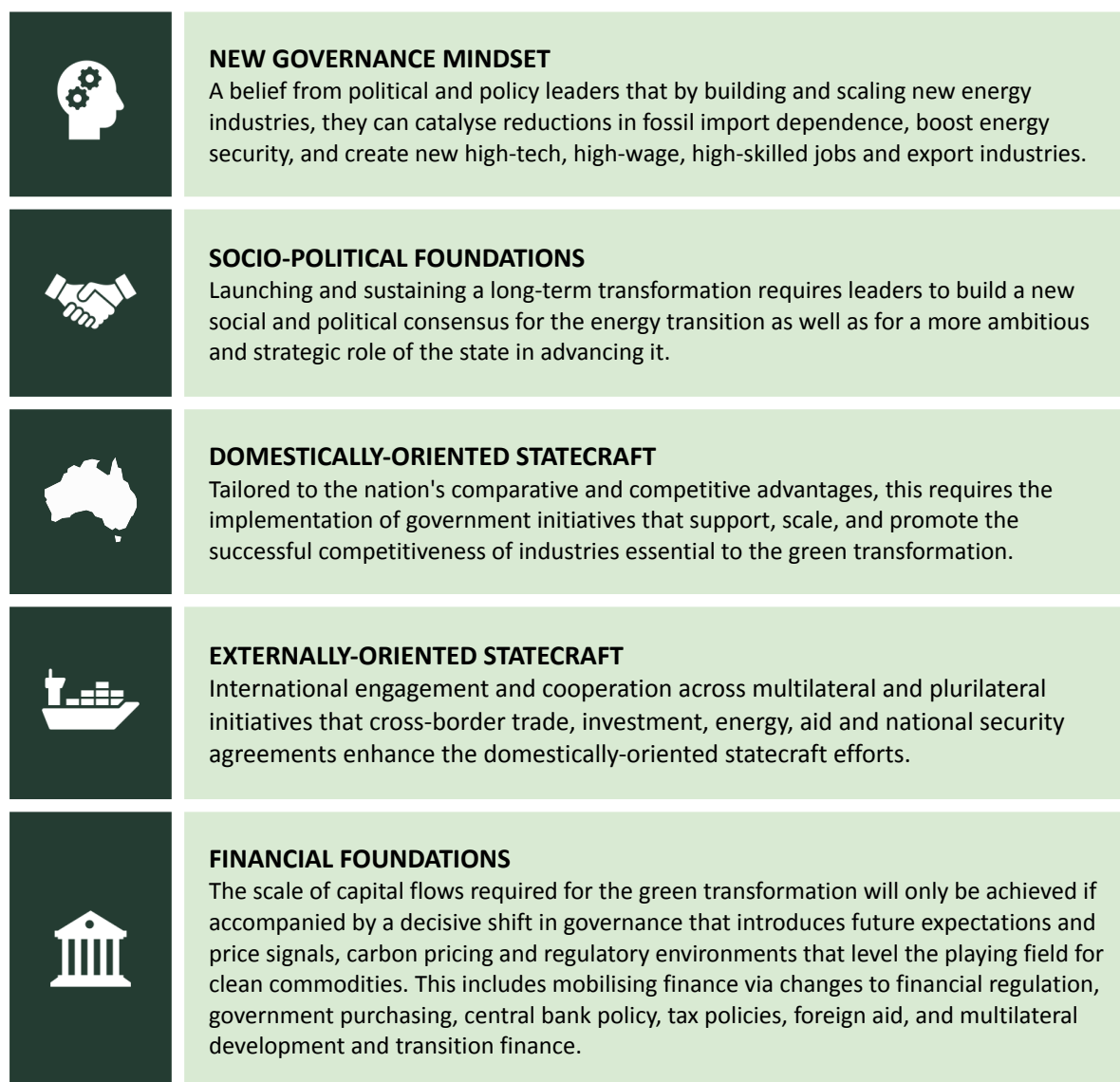
<sup>131</sup> The Energy, [Future Made in Australia Needs a Home-grown Recipe](#), 23 June 2026

<sup>132</sup> World Bank, [Industrial Policy for Development: Approaches in the 21st Century](#), 17 March 2026

industrial parks and skills development programs — effective industrial policy, or statecraft, requires a judicious blend of public institutions, inputs, incentives, and interventions.

Production subsidies, import-restrictions and trade barriers cannot overcome the underlying structural challenges of industrial formation in Australia. What is required is a domestically-oriented statecraft package that expands Future made in Australia as a coordinated policy architecture that can facilitate the anchoring demand through credible long-term offtake, sequence infrastructure with industrial build-out, and allocate system-level risk to the party best able to bear it.

**Figure 5.1: Statecraft Policy Framework**



Source: Green Energy Statecraft for Comprehensive National Security

Governments are often the most efficient bearers of the transition's hardest risks: long-dated offtake, early-mover industrial exposure, and system-coordination risk. When no one allocates them clearly, projects price them in, lifting the cost of capital and slowing investment.

An effective domestically-oriented statecraft policy architecture can create government initiatives and channels of strategic public capital deployment that de-risks key aspects of project development risk in a coordinated approach that can significantly improve the competitiveness and long-term economic viability of high value-add manufacturing, as well as leverage economies of scale and

spillover benefits through common user infrastructure that private firms are unable to leverage in isolation. These include managing:

- **Construction Risk**, encapsulating risks that the project may not be completed on time, within budget, or to specification. This can materialise through cost overruns beyond contingency reserves; delays from contractor failure, labour disputes, supply chain disruptions; technical failures or design defects.
- **Counterparty Risk** is paramount to securing project finance through long-term, secure contracts. Beyond offtake contract counterparty risk, this also encapsulates sponsor risk, contractor risk, supplier risk or lender group risk in syndicating funding arrangements.
- **Operating Risk** comprises risks that the project underperforms its projected outputs, reducing operating cash flows required for project financing. This can materialise through technology underperformance, higher operating costs than modelled, equipment failure or unplanned maintenance, as well as operator incompetence.
- **Market Risk** includes risks that project revenues fall short of projections, driven primarily from lower volume/demand than forecasts, as well as price risks in commodity price fluctuations (merchant risk) and offtake risks with buyers failing to honour purchase agreements or advanced commitments.
- **Financial Risk** covers risks arising from the capital structure and financial markets. This includes interest rate risk, liquidity risk, leverage risk, currency risks and cost inflation risks.
- **Regulatory Risk** comprising risks to changes in environmental, safety, or sector-specific regulations, as well as changes to taxation laws or operating licences.
- **Environmental Risk** including social licence to operate, liabilities from climate transition frameworks (including carbon pricing mechanisms), as well as physical climate-related risks (i.e. flooding, drought, heat).
- **Technology Risk** is a significant barrier to project finance for first-of-a-kind deployments, driving significant risk-adjustments in cost of equity and debt.

A comprehensive statecraft package that extends and builds upon the ambitious FMIA framework and its various supply-side support measures, can effectively reduce or mitigate counterparty risk, market risk, regulatory risk, environmental risk, and FOAK technology deployment risk.

The utilisation of government-backed offtake contracts and clean commodity procurement — leveraging the significant purchasing power of the government in developing critical national infrastructure, as well as the 2032 Olympic Games — can alleviate counterparty and market risks for early-stage development for low-emissions manufacturing.

Furthermore, government-backed energy supply contracts can significantly reduce counterparty and market risk premiums for renewable energy generation and firming developers by de-risking the long-term viability of the counterparty in power purchase agreements. Project financing depends materially on the future expectations and certainties on forward revenue and cash flows. As a significant aspect to the cost of production, de-risking electricity contracting through government-backed energy contracts results in materially lower financing costs for energy infrastructure developers, translating to far more competitive delivered electricity costs for manufacturers — enhancing competitiveness at little-to-no cost to taxpayers.

## 5.1. Enabling Development through Deployment of Strategic Public Capital

Sovereign steelmaking capabilities have long been recognised as crucial for national security and economic resilience, providing a degree of protection from adversarial foreign supply chain disruptions, as well as its role in enabling an incredible network of manufacturing capabilities of knowledge-intensive downstream sectors.

The competitive advantage of Australia's more than 16,000 businesses across the iron and steel industry over imports, through knowledge-intensive differentiation and specialisation of local markets, is enabled by the industrial base provided by the primary manufacturers of steel in Australia. While steelmaking in Australia does not have a comparative advantage over that of Asia-Pacific steelmakers given its world-leading mining and resource extraction sector, facilitating the competitiveness of Australia's base industrial capabilities — particularly as they face immense structural challenges from the transformation to a decarbonised economy — is a vital component to maintaining national security and supporting the tens of thousands of high-skilled jobs enabled by it.

Australian policymakers have long been attached to the doctrine of comparative advantage that has allowed the resources sector to crowd out the prospect of achieving competitive advantage in higher value, knowledge-based goods and services. While it is true, as highlighted above, that Australia holds a comparative advantage in resource extraction, the concentration of its role in the Australian economy has positioned the economy to be dangerously vulnerable to commodity price volatility, shifting trade patterns and geopolitical uncertainty.

Reversing the structural erosion of manufacturing capability requires a step change in ambition and the socio-political mindset of governance by Canberra. A significant aspect of industrial support provided by other jurisdictions to historically emissions-intensive steel producers shifting to electrified steelmaking has been large grants given by national and subnational governments. As highlighted below in Figure 5.2, there is billions of private capital being crowded-in by the deployment of public capital to shift to decarbonised production pathways.

**Figure 5.2: Increasing Role of Government in Crowding-in Private Capital for Decarbonised and Electrified Steelmaking**

| Facility         | Location    | Company       | Investment  | Government  | Government Share |
|------------------|-------------|---------------|-------------|-------------|------------------|
| Kyushi Works     | Japan       | Nippon Steel  | JPY 630.2bn | JPY 179.9bn | <b>28.5%</b>     |
| Setouchi Works   | Japan       | Nippon Steel  | JPY 140.0bn | JPY 42.8bn  | <b>30.6%</b>     |
| Yamaguchi Works  | Japan       | Nippon Steel  | JPY 869.0bn | JPY 251.0bn | <b>28.9%</b>     |
| Glenbrook        | New Zealand | BlueScope     | NZD 300m    | NZD 140m    | <b>46.7%</b>     |
| Dunkirk          | France      | ArcelorMittal | EUR 1.3bn   | EUR 650m    | <b>50.0%</b>     |
| Port Talbot      | Wales       | Tata Steel    | GBP 1.25bn  | GBP 500m    | <b>40.0%</b>     |
| Kurashiki Works  | Japan       | JFE Steel     | JPY 329.0bn | JPY 104.5bn | <b>31.8%</b>     |
| Sault Ste. Marie | Canada      | Algoma Steel  | CAD 987m    | CAD 420m    | <b>42.6%</b>     |

Source: Company Announcements

Absorbing the lessons from key trading partners and advanced markets in decarbonisation, Australian policymakers must recognise that the state can and should operate with a far more ambitious and strategic role in launching and sustaining the long-term energy transformation. The FMIA objectives can achieve near- to medium-term success in capital deployment for industrial decarbonisation through targeted investments and concessional financing instruments across projects with lower technology risks and project-on-project risks — such as is the case for the build out of green iron capacity onshore. The Australian Government, through its special investment vehicles, can help unlock decarbonised value-add in electrified steelmaking that can then provide the foundation for greater ambition and facilitation of capital-intensive decarbonisation critical to securing the future prosperity of the Australian economy.

## **Role of Australia's Special Investment Vehicles**

Australia currently operates five special investment vehicles (SIVs) in the: Clean Energy Finance Corporation (CEFC); Australian Renewable Energy Agency (ARENA); National Reconstruction Fund Corporation (NRFC); Northern Australia Infrastructure Facility (NAIF); and Export Finance Australia (EFA). Combined, Australia's SIVs manage over \$60bn in public capital to advance Australia's net zero and FMIA objectives. Each SIV has a specific mandate and managing ministry of the Federal Government, providing an array of financial tools to support the scaling and decarbonisation of Australian industry.

### **Clean Energy Finance Corporation**

The CEFC's investment mandate is broadly to facilitate increased flows of finance into the clean energy sector and to facilitate the achievement of Australia's greenhouse gas emissions reduction targets, achieved primarily through investing in businesses or projects for the development or commercialisation, or in relation to the use of, clean energy technologies.

For the general investment portfolio of the CEFC, the Board must target an average return of at least the 5-year Australian Government bond rate +2-3% pa over the medium- to long-term as its benchmark. Excluding its administration of the Rewiring the Nation Fund (a \$19bn grid transmission fund designed to be heavily concessionary), the CEFC must limit the amount of concessionality it provides in any financial year to \$300m.<sup>133</sup>

As part of the CEFC's general portfolio, its investment mandate encourages the Board to prioritise investments that:

- Support the development of clean energy manufacturing and processing capabilities in Australia; as well as
- Support technologies and projects to assist Safeguard Mechanism facilities to reduce their emissions, consistent with Australia's national trajectory to net zero and while supporting their international competitiveness.

The CEFC's investment mandate also expressly states that the Board, where practical and appropriate, in order to facilitate the CEFC's investment function, cooperate and collaborate with other Commonwealth entities and State entities that support investments in clean energy technologies.

Over its 12 years of operation, the CEFC has crowded-in private capital at an estimated 5:1 ratio.

To support the development of Australia's EAF pipeline, the CEFC can crowd-in private capital through concessional debt financing — enhancing the respective proposals competitiveness with lower weighted average costs of capital (WACC), and longer tenors than commercial debt that can

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<sup>133</sup> Determined as the difference between the present value of the mark-to-market valuation of its loans at market rates and the present value of loans given at concessional rates.

distribute the upfront capital expenditure over a greater timeframe and thus improve unit economics.

### **Australian Renewable Energy Agency**

ARENA's mandate is to support the global transition to net zero emissions by accelerating the pace of pre-commercial innovation, to the benefit of Australian consumers, businesses and workers. ARENA aims to support improvements in the competitiveness and supply of renewable energy and the uptake of energy efficiency and electrification. Since its inception in 2012, ARENA has invested \$4.43bn into 832 projects, unlocking \$32.8bn of investments into projects at a private investment leverage ratio of 1:6.4.

ARENA currently administers the:

- **\$400m Industrial Transformation Stream (ITS)**, targeting at supporting a range of industrial decarbonisation solutions, including but not limited, to electrification, energy efficiency, low emissions processing and fuel switching. As of July 2026, the ITS is in its third round, allocating the remaining \$180m of its original investment mandate.
- **\$1.5bn FMIA Innovation Fund** to support pre-commercial innovation, demonstration and deployment of renewable energy and low emission technologies. Of this, the Fund has allocated \$750m to green metals, including iron, steel, alumina and aluminium.

ARENA can provide critical grant funding that lowers capital cost intensity for electrified and zero direct emissions technologies across the steelmaking and downstream processing value chain. A key example of this is the displacement of methane gas from reheating furnaces that are used to reheat cast steel into malleable feedstock for downstream rolling mills. InfraBuild's ~1.3Mtpa output from its EAFs currently consumes ~ 3 petajoules of methane gas annually; generating 150-160ktpa CO<sub>2</sub>-e in direct emissions. The deployment of electrified reheating furnaces significantly reduce Scope 1 emissions of the new EAF proposals.

### **National Reconstruction Fund Corporation**

The NRFC's mandate is to facilitate increased flows of finance into a wide range of priority areas of the Australian economy, aiming to support the transformation and diversification of Australian industry to create secure, well-paying jobs and boost sovereign capability. In performing the NRFC's mandate, the Fund is able to undertake investments across loans, guarantees and equity facilities. In April 2026, the NRFC's mandate was reformed to maximise the economic and industrial benefits of the transition to net zero, strengthen domestic capabilities, and support industrial decarbonisation and modernisation.

The NRFC's investment mandate covers priority areas of the Australian economy, including value-add in resources; value-add in agriculture, forestry and fisheries; transport; medical science; renewables and low emissions technologies; defence capability; enabling capabilities; and industrial manufacturing and critical supply chains—including the manufacture of iron and steel.

The general portfolio must target an average return of 5-year Australian Government bond rate +2-3% pa over the medium- to long-term as its benchmark.

The NRFC has already made four investments into value-adding the resources sector, including:

- \$40m to Russell Mineral Equipment, an original equipment manufacturer (OEM) of mill relining technologies for the mining and minerals processing industry in QLD. The NRFC's investment will enable the company to scale up its operations at its Toowoomba manufacturing facility.
- \$200m to Arafura Rare Earths Ltd to finance its flagship Nolans rare earth project in the Northern Territory, Australia's first ore-to-oxide rare earths processing operation.

- \$50m in equity to Lontown Resources to support the ramp up and underground transition of its Kathleen Valley Lithium Operation in WA. The investment helped Lontown to attract additional private capital as part of its \$266m institutional placement.
- \$75m to Alpha HPA to support the development of the world's largest single manufacturing facility for high purity alumina (HPA). Upon scheduled completion in late 2027, the facility will be Australia's first commercial-scale HPA facility.

As part of the 2026 reforms, the NRFC redistributed funds from the general portfolio to establish the \$5bn **Net Zero Fund** for investments directed towards:

- Large industrial facilities to decarbonise, improve energy efficiency, and transition to net zero; as well as
- Scaling up domestic manufacturing of renewables and low-emissions technologies.

The Net Zero Fund can invest in debt, equity and guarantee opportunities to support large-scale industrial facilities to decarbonise and to Australian manufacturers of renewable and low emissions technologies. The Fund provides greater concessionality than the general portfolio's investment date, with the Net Zero Fund targeting a benchmark average return of 1% below the 5-year Australian Government bond rate over the medium- to long-term.

The Net Zero Fund aims to deliver targeted investments that bolster the transition to less carbon-intensive manufacturing and production processes, including at some of Australia's most economically and strategically important industrial facilities.

The 2026 reformed mandate of the NRFC directed the Corporation to cooperate and collaborate with other Commonwealth, State or Territory entities that are also able to support investments in the priority areas to minimise potential overlap or duplication and coordinate co-investment where appropriate.

Complementing the CEFC, the NRFC — and particularly the Net Zero Fund — provides concessional equity financing that can crowd in the scale of private capital required. Critically, the Net Zero Fund's mandate targets an average return of 1% below the 5-year Australian Government bond rate. Concessional equity can reduce the WACC for the project's financing costs. When stacked alongside discounted debt for a proportion of an EAF's leverage, this can generate significantly lower total cost of capital hurdles for project developers — improving the competitiveness of new EAFs against that of depreciated steel mills exporting from Asia-Pacific into the Australian market.

Public capital providing concessional capital to crowd-in private capital is a key role of the SIVs, but this process would be far more tax payer efficient if we had a wider industrial system price on carbon pollution that included a floor price that ratchets up over time in real terms, to give investors and industry greater policy certainty.

Labor's policy platform has been amended to give the Albanese government cover to enhance and align fiscal and climate policies. Following a campaign in the lead-up to Labor's 50th national conference by the highly influential Labor Environment Action Network (LEAN), convenor Louise Crawford moved an amendment that paved the way for transformational future action, which was passed unopposed by delegates: "Labor will ensure that all policies, including taxation, work together to provide appropriate incentives and remove disincentives for orderly decarbonisation."<sup>134</sup>

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<sup>134</sup> AFR, [‘Message to the haters’: Chalmers gets cover to cut diesel tax rebate](#), 23 July 2026

## 5.2. Enabling Development through De-risking Renewable Energy Contracting

The opportunity to ring-fence counterparty and market risks from the developers of the renewable energy generation and firming that would power the EAF proposals — through the deployment of strategic, government-backed energy contracts — can provide significantly lower financing costs for the contracting of renewables, and thus, lower levelised costs of energy provided to the manufacturing entity end consumer. To achieve this, the Federal Government could expand the design of the mechanism currently under evaluation as an energy solution for Tomago Aluminium.

### Case Study: Tomago Aluminium Smelter

Put forth by the inaugural CEO of the CEFC, Oliver Yates, the decarbonisation of electricity of Australia's smelters at competitive prices requires the utilisation of government funds strategically, efficiently and through pathways that enable taxpayers to share in the upsides. Deploying a scheme finance vehicle structure allows the government to contract for clean energy directly using power purchase agreements and on-sell it at a stable price to the smelter. Stacked alongside government credit support and concessional debt from special investment vehicles such as the CEFC and the NRFC, this can significantly cut the cost of capital for developers.

EAFs have an electricity intensity of 300-700kWh/t-cs — with electricity consumption varying on scrap to virgin metallic iron feedstock, age, and energy efficiency with pre-heating of charged scrap and loss of heat. For example, the EAFs of InfraBuild (first constructed in 1984 and 1992) have an electricity intensity of ~500kWh/t-cs. For the 3 proposals with an initial phase of scrap charging into an EAF (i.e. excluding the first stage of Greensteel Australia's proposal), the cumulative 1.3Mtpa capacity would likely require 390-910GWh per annum, with a central scenario (500kWh/t-cs) estimate of 650GWh. At a 30% capacity factor, this would require 148-346MW of new renewable energy generation capacity, with a central estimate of 247MW.

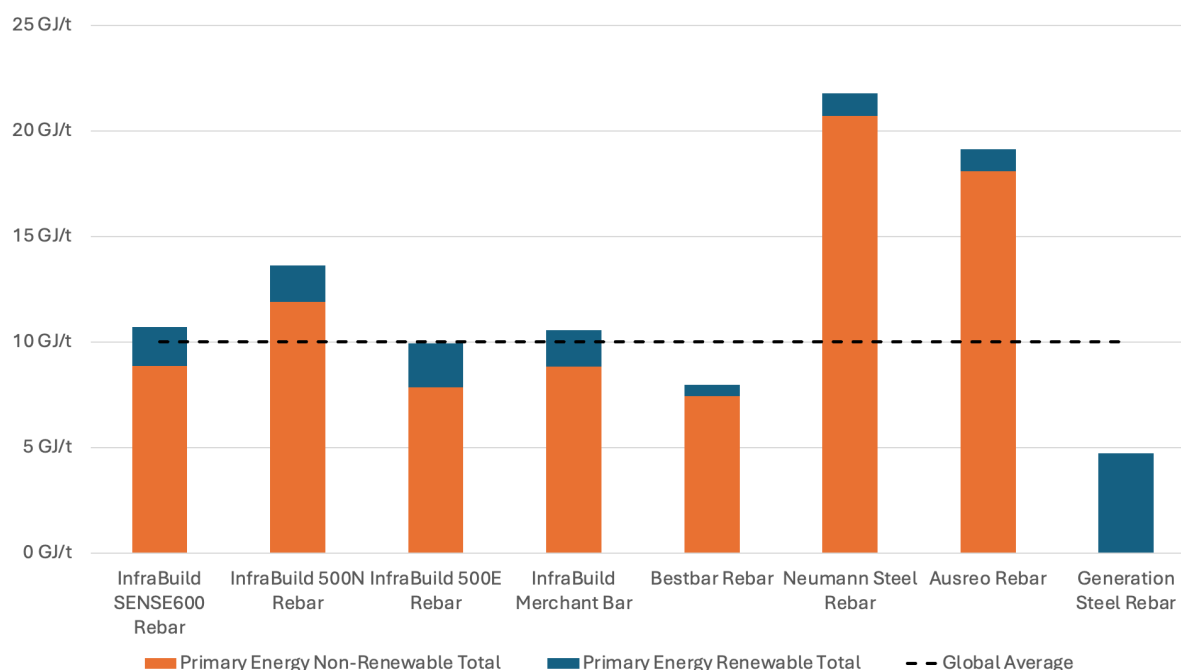
The utilisation of an LTESA/SFV-style government underwriting mechanism to become the counterparty to the renewable energy developer, rather than the manufacturer, can materially enhance the probability and risk profile of forward revenues. NSW's **Long-Term Energy Service Agreements** (LTESAs) provide revenue certainty for private investment in new renewable energy generation, firming and long-duration storage that de-risks projects that enable proponents to secure financing at a lower cost of capital. LTESA's are a component of the NSW Electricity Infrastructure Investment Safeguard, a framework to ensure the orderly and efficient investment into firmed renewables is deployed to meet the needs of the electricity system.

LTESAs are options contracts, providing generators with the option to sell electricity at an agreed minimum fixed price to a government **scheme financial vehicle** (SFV). A separate, government legal entity — the Financial Trustee — establishes, owns and administers the SFV. The LTESA guarantees revenue with the option to sell electricity to the SFV. In an industrial application, the SFV then sells the electricity to an industrial user of electricity at an agreed upon price. The capital-intensive nature of renewable energy projects means that the cost of capital largely determines the levelised cost of electricity a proponent can provide to recover the costs and necessary investment hurdle rates.

Government underwriting mechanisms, such as the LTESA/SFV structure, leverages the credit rating and balance sheet of the government, as opposed to the credit rating and balance sheet of the industrial electricity consumer that would ultimately offtake the electricity. CEF sees government-underwriting mechanisms as a way to leverage significant economies of scale and provide significant de-risking strategic public-private partnerships to unlock firmed renewable energy.

The electrification of energy input has significant impacts to the embedded energy intensity profile of finished steel products. The electrification of steelmaking, through EAFs as opposed to coal-based BF-BOF pathways, improves energy intensity by replacing inefficiencies associated with the burning of fossil fuels with final electricity consumption. Furthermore, the electrification of methane gas reheating, either through induction reheating furnaces or continuous casting of EAF output, can materially shift the embedded energy and embedded carbon content of reinforcing steel products used in Australia's built environment. Subsequently, the contracting of renewable energy is also paramount to the reduction in embodied carbon in final steel output.

**Figure 5.3: Energy Intensity of Rebar Produced in Australia (A1-A3)**



Note: Generation Steel's prospective energy intensity was supplied to CEF.

Source: Climate Energy Finance calculations using public company EPDs.

Discussed in Section 3, CEF emphasised that public support should not be unconditional, and must be tied to demonstrated performance against clearly defined targets. These may include production volumes, export outcomes, environmental standards, domestic value creation and technological upgrading. Governments then align supply- and demand-side policies, financing mechanisms and incentives to help ensure those objectives are achieved. This form of discipline is central both to the responsible use of scarce public funds and to maximise the long-term economic and social benefits delivered to citizens.

Tying government support to performance standards on cradle-to-gate (A1-A3) energy intensity and emissions intensity benchmarks to EAF and downstream rolling mill support could be an efficient mechanism to target strategic government capital to steelmaking in Australia that utilises renewable energy to drive the decarbonisation of the industry and support clean manufacturing.

## 5.3. Government and Infrastructure Procurement Role in Demand Pull Mechanisms

Australia's approach to developing clean commodity industries has to-date relied heavily on supply side policy interventions. While these measures have laid important groundwork, they have proven insufficient to catalyse the scale and pace of investment needed to secure Australia's position in a decarbonising economy. The critical weakness in Australia's existing policy toolkit, including FMIA, is its inability to provide the revenue certainty that project developers and their financiers require.

Australia has an incredible opportunity to utilise the build-out of renewable energy infrastructure, the 2032 Olympic Games, and the continued development of critical infrastructure in roads, bridges, tunnels, buildings, etc, as a driver of demand for decarbonised steel.

Steel is a critical input material needed to deliver Australia's infrastructure pipeline. Steel fabrication is essential in construction products such as foundations, piling, columns, beams, and girders. Areas of specialisation include wind turbine towers, transmission towers, equipment for mining, armoured vehicles for Defence, naval and domestic ship building, and rolling stock.

Infrastructure Australia identified Australia's infrastructure and buildings embodied emissions reached 54.4MtCO<sub>2</sub>-e in 2023, of which 64.7%, or 35.2Mtpa CO<sub>2</sub>-e, were upfront emissions within the infrastructure emissions lifecycle. Of this 64.7%, buildings represented 59%; transport 27%; and utilities 15% of upfront emissions (i.e. materials manufacture, construction and transport to site). Across the 35.2Mtpa CO<sub>2</sub>-e in upfront emissions, 78% (27.5Mtpa CO<sub>2</sub>-e) were a result of embedded emissions within the manufacture of construction materials.<sup>135</sup>

Infrastructure Australia has identified a critical barrier to broad-based decarbonisation of embodied emissions in the built environment as industrial silos and a lack of collective ambition. Despite governments and industry signalling intent and objectives to decarbonise embedded emissions within the sector, action primarily remains on small, individual assets and developments. This is a significant lost opportunity for demand aggregation to develop the necessary market signals from consumers to underwrite zero- or low-emissions manufacturing of construction materials.

An estimated 26.6Mt of structural steel elements is needed to deliver Australia's construction pipeline over the five years 2024-25 to 2028-29, of which public projects on the Major Public Infrastructure Pipeline will need 3.6Mt. This represents an annualised structural steel demand from Australia's construction industry of 5.32Mtpa through FY29. In contrast, Australia's national construction steel fabrication capacity is ~1.4Mtpa, or just 26.3% of the demand pipeline. As a result, the vast majority of steel embedded in the investment pipeline will be sourced from international markets, not Australia's steel industry. From another perspective, this represents a ~4Mtpa addressable market for new low-emissions steel capacity to be constructed in Australia.

To supplement the expanding supply deficit, fabricated steel imports have risen sharply in recent years. In 2024, fabricated steel import volumes jumped 50% above the annual average between 2016-2021. Infrastructure Australia has reported steel fabricators have claimed imports are often priced 15-50% below domestically-produced products.

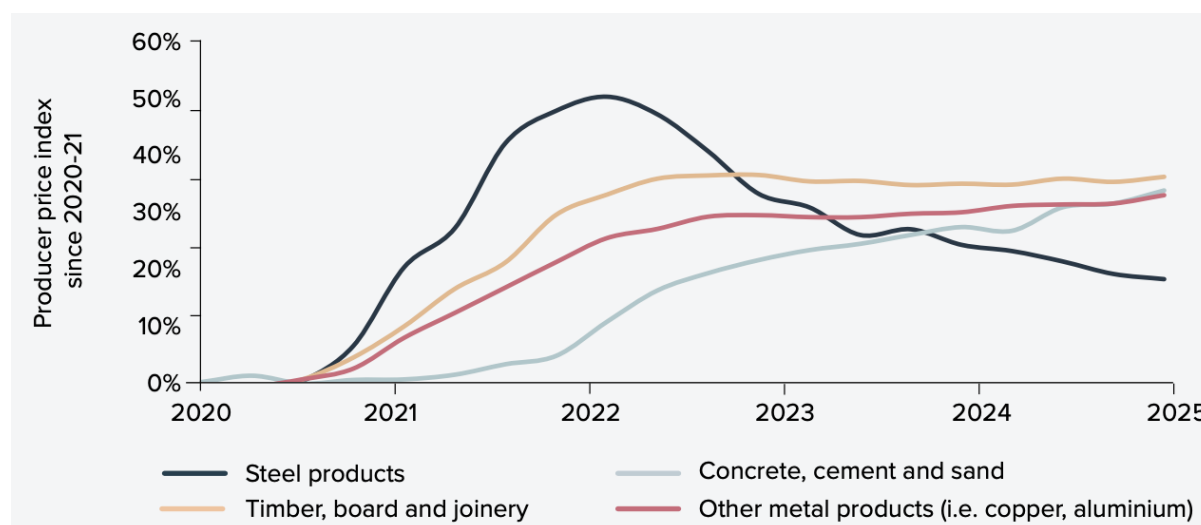
Lack of traceability and certification for imported fabricated steel products significantly increases the difficulty to track and account for material compositions, manufacturing processes and quality control procedures, increasing risks of carbon leakage.

Construction steel products continue to decline in price from their highs in 2022, falling a further 4.9% over 2024-25 year-on-year, with the industry claims of undue dumped import competition well supported by the data evident in Figure 5.4.

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<sup>135</sup> Infrastructure Australia, [Embodied Carbon Projections for Australian Infrastructure and Buildings](#), July 2024

**Figure 5.4: Price trends in construction material prices, indexed to 2020-21**



Source: Infrastructure Australia<sup>136</sup>, Climate Energy Finance calculations

A commercially-sustainable domestic steel fabrication industry is a critical component to ensure the continuity of critical, nation-building infrastructure projects, reducing dependency on international markets that can help alleviate risks from geopolitical tensions, trade disruptions, and global price volatility and shocks; as well as support sovereign capability for defence and energy infrastructure.

Long-term, government-backed contracts for decarbonised steel from Australian EAFs, with green premiums priced into forward revenues, can provide the critical bankable revenue needed to progress these proposals into construction. Failure to introduce a nationally coordinated public procurement and green steel procurement support mechanism in the built environment that enables Australia's EAF proposal pipeline to progress means early-movers in reducing embodied emissions will increasingly look offshore for certifiable partnerships for decarbonised materials.

#### **Box 4: Case Study: Stockland and ArcelorMittal Partnership**

In May 2025, one of Australia's largest property developers in Stockland announced a low-carbon steel partnership with European steelmaker ArcelorMittal. The partnership includes the purchase and import of ArcelorMittal's XCarb low-emissions steel into Stockland's construction pipeline as part of the latter's embodied carbon reduction objectives. XCarb is ArcelorMittal's recycled and renewables-produced steel product, produced from 100% scrap in EAFs powered by certified renewable electricity. Compared to the standard BF-BOF emissions profile, XCarb delivers an embodied carbon saving of 87%.<sup>137</sup>

XCarb will first be deployed at Stockland's Momenta site in Banksmeadow, Sydney. Stockland's Momenta site commenced construction in late 2024, comprising a two-story logistics facility of 15,000m<sup>2</sup>. The building is on track to achieve a 34% reduction in embodied carbon, and is targeting a 5 Star rating under Green Star Buildings v1.

As mentioned above, industrial silos and a lack of collective ambition are a key barrier to demand aggregation forecasts that underpin addressable market forecasts for developers. Industrial policies often operate in isolation rather than as part of a coherent industrial strategy. The lack of coordination across portfolios—energy, minerals, and manufacturing—creates inefficiencies and missed opportunities for synergistic development. This siloed approach fails to leverage the potential multiplier effects that could be achieved through more integrated policy design.

<sup>136</sup> Infrastructure Australia, [Infrastructure Market Capacity 2025 Report](#), November 2025

<sup>137</sup> Stockland, [Lower Carbon Steel Drives Sustainability](#), 09 May 2025

The Federal Government's Built Environment Sector Plan emphasised that embodied carbon of Australia's construction pipeline for buildings and infrastructure from 2022-23 to 2026-27 will be responsible for 37-64Mtpa CO<sub>2</sub>-e in embodied carbon. Generating incentives for developers to decarbonise and reduce embodied emissions in future projects can provide a significant demand signal for the scaling of low-emissions steel and cement in Australia. The verification and certification of reductions in embodied carbon, therefore, are a critical tool to creating incentives for cleaner building and construction that ensures abatement is realised in the construction pipeline.

The Green Star rating system, developed by the Green Building Council of Australia in 2003, is an internationally recognised rating system for embedded emissions in design, construction, operations, fitouts, and communities within the built environment. Since 2020, all new buildings seeking a Green Star rating have needed to demonstrate a 10% reduction in embodied carbon. By 2030, the benchmark will be a 40% reduction in embodied carbon.

## Appendix A

**Figure A1: Existing Steelmaking Capacity (ktpa)**

| Company          | Facility    | Process   | Capacity (ktpa) | Share       |
|------------------|-------------|-----------|-----------------|-------------|
| BlueScope        | Port Kembla | BF-BOF    | 3,200           | 55%         |
| OneSteel (GFG)   | Whyalla     | BF-BOF    | 1,200           | 21%         |
| InfraBuild (GFG) | Laverton    | Scrap-EAF | 750             | 13%         |
| InfraBuild (GFG) | Sydney      | Scrap-EAF | 620             | 11%         |
| <b>Total</b>     |             |           | <b>5,770</b>    | <b>100%</b> |

**Figure A2: New EAF Steelmaking Capacity Proposed (ktpa)**

| Company           | Facility           | Process   | Capacity (ktpa) | Share       |
|-------------------|--------------------|-----------|-----------------|-------------|
| Alter Steel       | Pinkenba           | Scrap-EAF | 500             | <b>22%</b>  |
| Generation Steel  | Collie             | Scrap-EAF | 450             | <b>20%</b>  |
| InfraBuild        | Sydney Expansion   | Scrap-EAF | 380             | <b>17%</b>  |
| Future Forgeworks | Swanbank           | Scrap-EAF | 350             | <b>15%</b>  |
| GM Steel          | Toowoomba          | Scrap-EAF | 350             | <b>15%</b>  |
| InfraBuild        | Laverton Expansion | Scrap-EAF | 250             | <b>11%</b>  |
| <b>Total</b>      |                    |           | <b>2,280</b>    | <b>100%</b> |

**Figure A3: New EAF Capacity Impact on Current Market (ktpa)**

| Scenario                   | BF-BOF | EAF   | Total        | BF-BOF Share | EAF Share |
|----------------------------|--------|-------|--------------|--------------|-----------|
| Existing Whyalla Continues | 4,400  | 3,650 | <b>8,050</b> | 55%          | 45%       |
| Whyalla Capacity Closes    | 3,200  | 3,650 | <b>6,850</b> | 47%          | 53%       |
| Whyalla Replaced with EAF  | 3,200  | 4,850 | <b>8,050</b> | 40%          | 60%       |

Source: CEF analysis of broad industry information

## Appendix B

**Figure B1: Existing Steelmaking Matrix**

| Facility                                                                                                  | Current Whyalla                                  | New Whyalla                             | BlueScope Port Kembla             | InfraBuild Laverton                                                       | InfraBuild Sydney                                  | InfraBuild Newcastle                               |
|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------|-----------------------------------|---------------------------------------------------------------------------|----------------------------------------------------|----------------------------------------------------|
| Is it operational?                                                                                        | Yes intermittent                                 | No                                      | Yes                               | Yes                                                                       | Yes                                                | Yes                                                |
| Is the project built?                                                                                     | Yes                                              | No                                      | Yes                               | Yes                                                                       | Yes                                                | Yes                                                |
| Has it reached FID?                                                                                       | Yes                                              | No                                      | Yes                               | Yes                                                                       | Yes                                                | Yes                                                |
| Does it have a major equity investor?                                                                     | Yes                                              | Two Final Bidders                       | Yes                               | Yes                                                                       | Yes                                                | Yes                                                |
| Is it steel making?                                                                                       | Yes<br>BF-BOF<br>Batch<br>Casting                | Likely<br>Magnetite<br>and DRI<br>Focus | Yes<br>BF-BOF<br>Batch<br>Casting | Yes<br>EAF<br>Batch<br>Casting                                            | Yes<br>EAF<br>Batch<br>Casting                     | No                                                 |
| Is it steel rolling?                                                                                      | Yes<br>Large<br>Structural<br>Beams and<br>Rails | Unlikely                                | Yes<br>Flat Steel<br>Rolling      | Yes<br>Gas-based<br>Mill of<br>Discrete<br>Billets and<br>Merchant<br>Bar | Yes<br>Gas-based<br>Mill of<br>Discrete<br>Billets | Yes<br>Gas-based<br>Mill of<br>Discrete<br>Billets |
| Does it have clean energy guaranteed?                                                                     | No                                               | No                                      | No                                | No                                                                        | No                                                 | No                                                 |
| Does it have clean energy contracted?                                                                     | No                                               | No                                      | No                                | Yes<br>50%                                                                | Yes<br>25%                                         | Yes<br>25%                                         |
| Does it source semi-finished input offshore or its connected downstream businesses use imported products? | Yes                                              | Unlikely                                | No                                | Yes                                                                       | Yes                                                | Yes                                                |

Source: CEF analysis of broad industry information

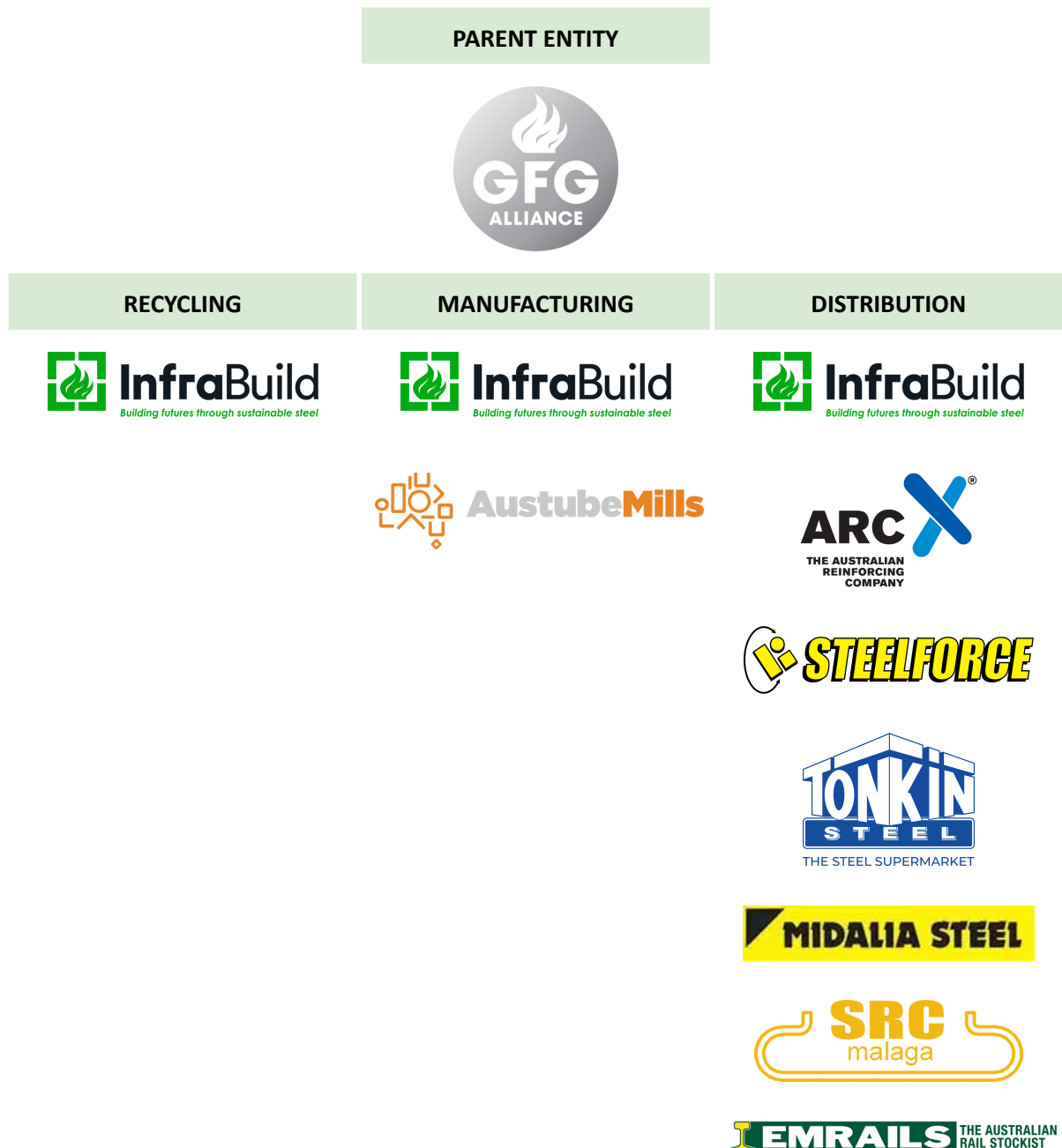
**Figure B2: Proposed New Steelmaking Matrix**

| Company                                                                                                   | Generation Steel                                                                        | Alter Steel                                         | Future Forgeworks                                   | GM Steel                                            | Greensteel Australia                                            |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------------|
| Proposal                                                                                                  | Collie EAF                                                                              | Pinkenba EAF                                        | Swanbank EAF                                        | Toowoomba EAF                                       | Newcastle Rolling Mill                                          |
| Is it operational?                                                                                        | No                                                                                      | No                                                  | No                                                  | No                                                  | No                                                              |
| Is the project built?                                                                                     | No                                                                                      | No                                                  | No                                                  | No                                                  | No                                                              |
| Has it reached FID?                                                                                       | No                                                                                      | No                                                  | No                                                  | No                                                  | No                                                              |
| Does it have a major equity investor?                                                                     | No                                                                                      | No                                                  | No                                                  | No                                                  | No                                                              |
| Is it steel making?                                                                                       | Yes<br>EAF Continuous Casting                                                           | Yes<br>EAF Continuous Casting                       | Yes<br>EAF Continuous Casting                       | Yes<br>EAF Continuous Casting                       | No                                                              |
| Is it steel rolling?                                                                                      | Yes<br>Integrated Hot Rolling of Continuous Casting and Integrated Merchant Bar Rolling | Yes<br>Integrated Hot Rolling of Continuous Casting | Yes<br>Integrated Hot Rolling of Continuous Casting | Yes<br>Integrated Hot Rolling of Continuous Casting | Yes<br>Electric Induction Separate Reheating of Discrete Billet |
| Does it have clean energy guaranteed?                                                                     | Yes                                                                                     | No                                                  | No                                                  | No                                                  | Yes                                                             |
| Does it have clean energy contracted?                                                                     | Yes<br>100%                                                                             | No                                                  | No                                                  | No                                                  | No                                                              |
| Does it source semi-finished input offshore or its connected downstream businesses use imported products? | No                                                                                      | No                                                  | No                                                  | No                                                  | Yes                                                             |

Source: CEF analysis of broad industry information

# Appendix C

Figure C1: InfraBuild Corporate Structure



Source: GFG Alliance Company Accounts

Figure C2: BlueScope Australia Corporate Structure



Source: BlueScope Company Accounts