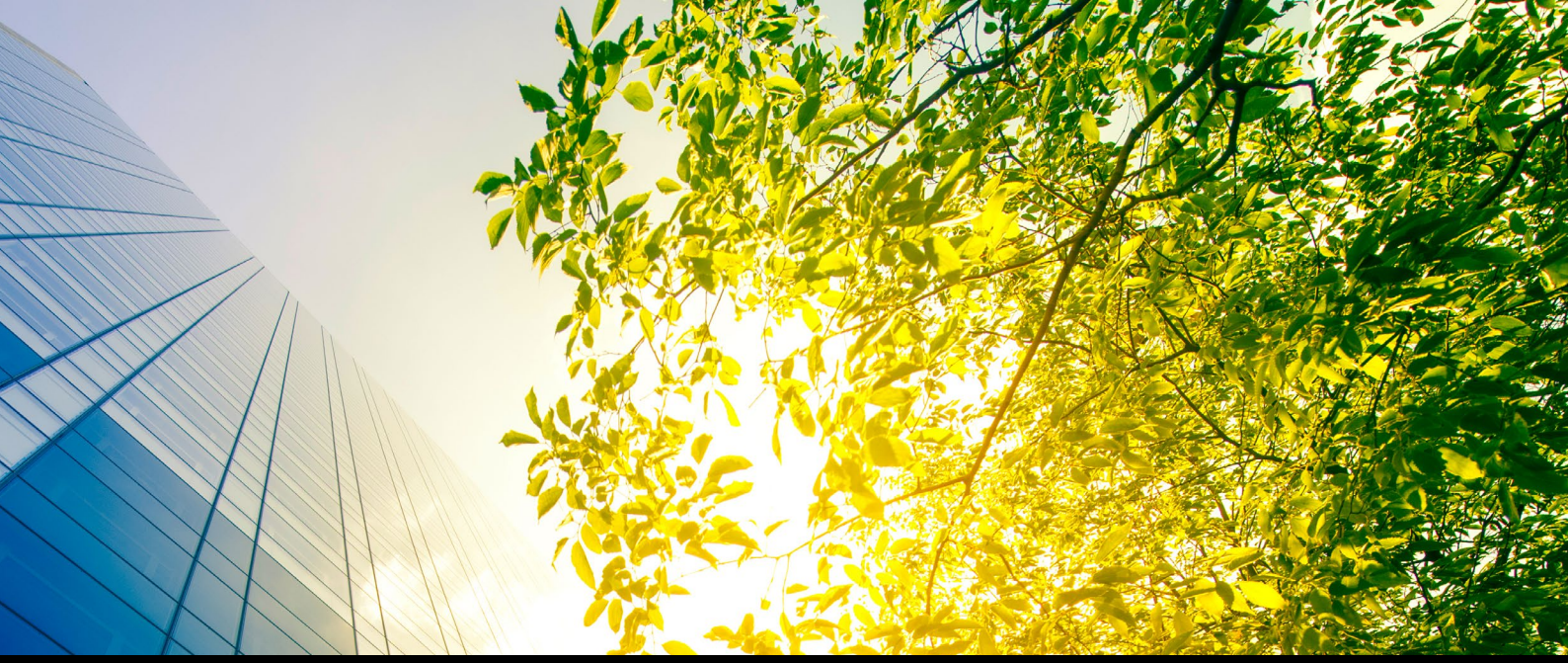

A PLAN FOR BUILDING A

SOVEREIGN AND SUSTAINABLE AUSTRALIAN STEEL INDUSTRY AND **SUPPORTING A NET ZERO AUSTRALIA**

WHITE PAPER | FEBRUARY 2023

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AUSTRALIAN STEEL INSTITUTE

ABOUT THE AUSTRALIAN STEEL INSTITUTE

The Australian Steel Institute (ASI) is the nation's peak body representing the entire steel supply chain, from the primary producers right through to end users in building and construction, resources, heavy engineering and manufacturing.

Steel is the backbone of Australia's construction, resources, infrastructure and manufacturing sectors. It is a vital and sustainable source of innovation, employment and capability in our cities and our regional communities.

A member-based organisation, the ASI's activities extend to, and promote, advocacy and support, steel excellence, standards and compliance, training, events and publications.

LEADERSHIP AND ADVOCACY

The ASI provides marketing and technical leadership to promote Australian-made steel as the preferred material to the building, construction, resources, and manufacturing industries, as well as policy advocacy to government.

It exists to represent the Australian steel industry and to support its future growth, so that the industry can maintain and create jobs and income for Australia, and provide the highest-quality certified steel products for Australians.

The ASI achieves this by ensuring that political and policy decision makers, industry, consumers, allied industries and professions, and other key stakeholders continue to recognise the strength, beauty and versatility of Australian steel, and the importance of maintaining and growing a strong steel industry sector.

COORDINATION

The ASI acts as the focal point for the steel industry, providing leadership on all major strategic issues affecting the industry. It focuses particularly on economic, environmental and social sustainability, and works with government, the media and other associations to provide an independent voice for industry. This includes promoting the advantages of local content procurement in the nation's interest, both to the client and to government.

TECHNICAL SUPPORT

The technical support arm of the ASI facilitates events and technical training at both shop floor vocational and degree qualified continuing professional development level, as well as case study seminars and awards. The ASI also publishes industry-leading journals based on the latest research.

The technical references provided through the ASI's electronic online resources and library are proudly the best in the southern hemisphere. With longstanding links to global research and other steel industry associations such as the World Steel Association, the ASI can offer a truly international solution.

OUR **VISION**

To influence profitable growth for the complete Australian steel value chain..

OUR **MISSION**

To promote steel as the material of choice.

To promote the capability and capacity of the Australian steel supply chain.

To provide leadership in advocacy, compliance, safety, sustainability and technical education.

Image courtesy of Bisalloy, Australia's only high-performance quenched and tempered plate steel products manufacturer.

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1. EXECUTIVE SUMMARY

Image courtesy of Bisalloy, Australia's only high-performance quenched and tempered plate steel products manufacturer.

The theme of the conference says it all, Australia's steel industry is vital and adaptive. The steel industry has diversified [supply chains] from smaller, family-owned businesses through to large national, multinational companies and feeds into construction, manufacturing, mining, defence, and a wide range of high-value uses and in doing so supports over 110,000 jobs and contributes to nearly $13 billion to the nation's economy.

It's encouraging to see the steel sector remain so robust in the face of the global headwinds over the last few years but the Government's certainly not taking it for granted.

Ed Husic, Australian Steel Convention, 10 October 2022[1]

INTRODUCTION

The Australian steel industry consists of four primary steel producers, supported by over 300 steel distribution outlets throughout the country and numerous manufacturing, fabrication and engineering companies.

Australia's primary steel producers and steel product manufacturers together form a strategically important value chain that has the capability to supply in excess of 90 per cent of the steel grades and qualities required in this country.

If special categories such as very large diameter pipe, stainless steel, electrical steel, and tinplate are excluded, then the capability is significantly closer to 100 per cent.

It is important to note the economic and social contribution of the Australian steel industry. It employs over 100,000 people and generates $29 billion in annual revenue.

Steel is fundamental to a modern society.

It is used in the buildings in which we work, live and play and the transport infrastructure we use. Steel is also a vital component in the energy generation and transmission industries, in the extraction of minerals, oil and gas and in manufacturing and agriculture.

The steel industry is also a key enabler for the nation's renewable energy transition and associated legislative climate targets. Between now and 2030 it is estimated that more than 400 kt of steel will be required per annum to service over 28 GW of renewable energy generation projects across wind, solar, water and transmission infrastructure as illustrated in Box 1 (on the following page).

New South Wales (NSW) has announced net zero emissions by 2050 and committed to 12 GW of renewables to be installed by 2030.

Queensland and Victoria have committed to renewable energy targets of 50% by 2030.

South Australia (SA) has set an interim goal of 50% net emissions reduction by 2030 - ambition to achieve 100% net renewable energy by 2030.

Tasmania has legislated 200% renewable energy generation by 2040.

Australia currently has limited local capability and has missed out on substantial economic value in recent years with renewable projects highly reliant on established overseas supply chains.

Some incremental local investments have recently been initiated but without further investment and government support this trend to predominantly overseas supply is set to continue.

[1] https://www.minister.industry.gov.au/ministers/husic/speeches/address-australian-steel-convention

Box 1 – Use of steel in Australia's energy transition

Wind:

- It is estimated that each 1 MW of onshore wind power generation requires 124 tonnes of steel (mainly plate and reinforcing).
- Offshore wind increases generation scale and steel consumption further. Each 1 MW of offshore wind power generation requires 190 tonnes of steel.

Solar:

- The steel components include a foundation pile (normally a hot rolled channel or column), torque tube (octagonal, square or tubular hollow section), frames or rails for photovoltaic panels and brackets.
- Approximately 45 tonnes of steel are required for each 1 MW of solar energy generated.

Water:

- Hydro projects require large diameter steel liner pipes, penstock, related fabrications, tunnel reinforcement, and foundations.
- It is estimated that each 1 MW of hydro power generation requires 161 tonnes of steel.

Transmission:

- Each 1000 kms of transmission line can require 2500 towers, with 30 tonnes steel per tower.

A NEW GOVERNMENT FOR AUSTRALIA

A new Australian Government was elected on 21 May 2022.

It is headed by a Prime Minister who said:

> Serious countries should make things. Serious countries can stand on its own two feet when it comes to manufacturing essentials.[2]

The Prime Minister has also observed that Australia ranks last in the OECD in manufacturing input.[3]

In the same speech he mentioned the most recent Harvard Atlas of Global Economic Complexity report, which found[4]:

> Australia is a high-income country, ranking as the 9th richest economy per capita out of 133 studied. Its 25.7 million inhabitants have a GDP per capita of $51,680 ($53,316 PPP; 2020). GDP per capita growth has averaged 0.5% over the past five years, above regional averages.
>
> Australia ranks as the 91st most complex country in the Economic Complexity Index (ECI) ranking. Compared to a decade prior, Australia's economy has become less complex, worsening 8 positions in the ECI ranking Australia's worsening complexity has been driven by a lack of diversification of exports. Moving forward, Australia is positioned to take advantage of a moderate number of opportunities to diversify its production using its existing knowhow.
>
> Australia is less complex than expected for its income level. As a result, its economy is projected to grow slowly. The Growth Labs 2030 Growth Projections foresee growth in Australia of 2.0% annually over the coming decade, ranking in the bottom half of countries globally.

It is also a government that has made an international commitment to a 43% emissions reductions target by 2030 - on the way to a net zero commitment by 2050 - that is enshrined in legislation.[5]

[2] Anthony Albanese Press release, *Labors' $1 billion Investment in Advanced Manufacturing*, 15 May 2022: https://anthonyalbanese.com.au/media-centre/labors-1-billion-investment-in-advanced-manufacturing-marles-husic

[3] A New Labor Playbook for National Productivity Reforms, address to the Australian Chamber of Commerce and Industry, 5 May 2022: https://anthonyalbanese.com.au/media-centre/a-new-labor-playbook-for-national-productivity-reforms-acci

[4] https://atlas.cid.harvard.edu/countries/14

[5] Through passage of the *Climate Change Act 2022*

One of the important ways this can be achieved is through encouraging the development of 'low emissions steel'. Developing an advanced manufacturing culture in Australia would be encouraged through supporting the developing and deploying of low-emissions steelmaking technologies in Australia.

What is 'low emissions steel' is explained in Box 2[6] (below).

Box 2 – What is low emissions steel?

Steel is a refined form of iron metal. Making it produces large quantities of greenhouse gas emissions, primarily from the use of coal as a 'reductant'-the carbon in coal reacts chemically with the oxygen in iron ore, leaving iron metal and carbon dioxide.

Steel is also made using natural gas instead of coal, and a process known as 'direct reduction'. This involves splitting natural gas into a mix of carbon monoxide and hydrogen, and using these gases to reduce iron ore to iron metal. Gas-based direct reduction roughly halves the carbon dioxide emitted per tonne of steel.

But lower-emissions steel is still not 'green steel'. For this you need a carbon-free reductant. The best candidate is pure hydrogen-using it to make steel leaves only water is a by-product.

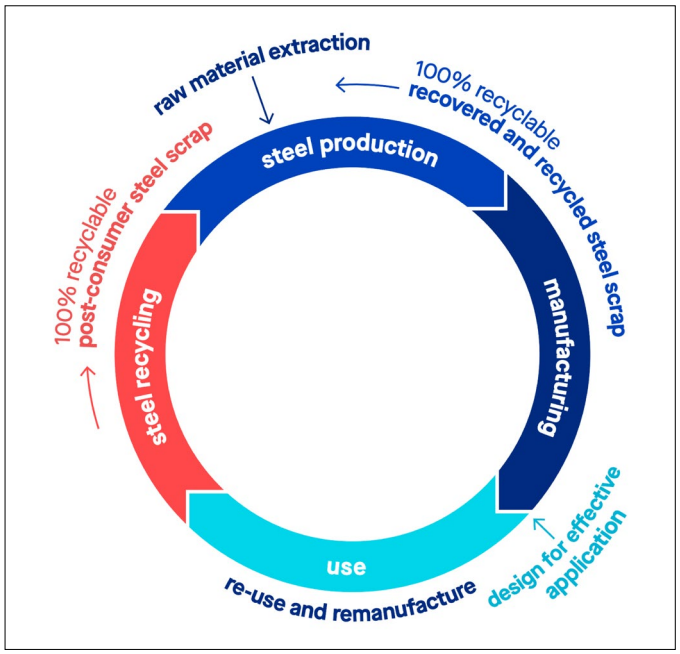
Other very low-emissions steelmaking techniques are possible, such as gas-based direct reduction with carbon capture and storage.

It is relatively easy to make low-emissions recycled steel from scrap. No reductant is required, and so the main source of emissions is the electricity used to melt the steel (in an 'electric arc furnace'). Even using coal-based electricity, recycled steel produces about one quarter of the emissions of new 'ore-based' steel made using coal.

.....(to) tackle climate change, the world will need large volumes of decarbonised ore-based steel over coming decades.

Steel is also an extremely recyclable commodity. It is important to have the policies that permits steel to play its part in the circular economy, as illustrated in Figure 1.[7]

Figure 1 – Steel's circular economy cycle



Impressively, both the Prime Minister and the Industry Minister have committed to the development of an Australian steel industry as a vital part of the Australian manufacturing landscape.

The following recommendations should be adopted by federal, state and territory governments to ensure the continued development of a sustainable and sovereign Australian steel industry in a net zero emissions environment.

INDUSTRY POLICY

The Government is creating a $15 billion National Reconstruction Fund, designed to drive economic development, boost sovereign capability, and create jobs.

It has also suggested that within the Reconstruction Fund, $3 billion will be allocated for investment in steel (amongst other commodities), whilst the National Hydrogen Strategy, which has the intention of developing a competitive renewable hydrogen industry that is a major global player by 2030, has continued in place.

Encouragement for research and development in the utilisation of renewable hydrogen in steelmaking also forms part of Australia's National Hydrogen Strategy.

[6] Grattan Institute (2020) *Start With Steel: A Practical Plan to Support Carbon Workers and Cut Emissions*: 19 https://grattan.edu.au/wp-content/uploads/2020/05/2020-06-Start-with-steel.pdf

[7] BlueScope Steel (2022) *Sustainability Report 2021/22*: 13 https://s3-ap-southeast-2.amazonaws.com/bluescope-corporate-umbraco-media/media/3763/bluescope-sustainability-report-2021_22.pdf

For instance, the Australian Renewable Energy Agency (ARENA) has identified the steel and aluminium value chains as priority areas where it aims to support innovative and replicable technologies, processes and commercial models that can help to lower emissions.

Australian jurisdictions are also involved developing collateral assistance plans for the development of 'hydrogen hubs', many of which anticipate steel production as one of the industries attracted to operate at hub locations.

Finally, it is recognised the steel sector is often referred to as a 'hard to abate' sector. That is because carbon plays an essential role in the chemical reaction to manufacture new (virgin) iron and steel, with no commercial alternatives currently available.

Support for the Australian steel industry is important if Australia's aspirational net zero aspirations are to be met. This includes ensuring that workers with the skills necessary to work in the industry are trained and available.

The following recommendations are made:

- **The Government should declare the Australian steel industry as a priority area for the purposes of the National Reconstruction Fund with a policy set identifying a specific amount to be available for eligible steel investments.**
- **The Government should tailor treatment for emissions-intensive trade-exposed (EITE) activities through the continuation of the established methodology for defining EITEs currently used for the Renewable Energy Target (RET), which combines trade exposure and emissions-intensity metrics at the industry level.**
- **The Government should implement a Carbon Border Adjustment Mechanism (CBAM) to preserve the international competitiveness of EITE activities such as steel manufacturing and fabrication.**
- **A range of funding mechanisms should be made available to suit the varied needs and circumstances of the different steelmakers, including grants and co-funding, and loan schemes to assist the steel industry to develop and implement lower emissions production technologies.**
- **Funding for appropriate projects supporting the development of an Australian low emissions steel capacity under the National Hydrogen Strategy should continue.**
- **Government and industry should continue to support the Steel research Hub and the Facility for Intelligent Fabrication as institutions designed to enhance the advanced manufacturing capabilities of the Australian steel manufacturing and fabrication industry.**
- **Jobs and Skills Australia should be commissioned to undertake a capacity study on the workforce needs of the Australian steel industry.**
- **The knowledge and skills required to be demonstrated under relevant qualifications recognised under the Australian Qualifications Framework should be examined to see if they remain suitable for purpose.**

PROCUREMENT

The Government has developed a Buy Australian Plan designed to improve the way government contracts work and build domestic industry capability through the Australian Government's purchasing power.

It has also reformed the Commonwealth procurement rules, which will (amongst other things) require:

- 20% of procurements by value are sourced from small to medium enterprises (SME), up from 10%; and
- consideration of the broader impact of climate change when considering whether a procurement constitutes 'value for money'.

It is pleasing the Government is open to considering broader policy issues (such as climate change impacts) when considering what constitutes 'value for money' rather than the traditional focus achieving the cheapest cost option.

Nevertheless, given the importance of ensuring Australia maintains a sovereign steelmaking capacity, the 'value for money' concept should be wide enough to ensure the option chosen is one that benefits the economy and communities as a whole.

Appropriate guidelines that identify what constitutes 'value for money' should be developed.

Another continuing issue for the Australian steel industry is the requirement to compete with jurisdictions that do not meet international labour or environmental standards.

A whole family of Australian Standards ensures safe and economic use of steel. These standards are used as a matter of course by Australian-based members of the steel supply chain, as regulated by former state and federal governments.

Government procurement contracts should require the use of products that meet relevant Australian Standards, or their equivalent.

Finally, to ensure supply chain security, it is also important that the procurement policies of Australian governments provide as much opportunity as possible for Australian steel and fabricated products to be used in Australian infrastructure.

This means the continued development of policies such as the Victorian Industry Participation Policy, which identifies specific projects as being strategic projects, for which minimum content requirements can be specified.

This will require the Australian Government to continue to ensure that schemes designed to support the development of small to medium sized enterprises (SMEs) continue to remain outside the scope of free trade agreements negotiated by the Australian Government.

That said, Australian Governments are also engaged in significant investments in infrastructure. They have found that labour and material constraints have imposed cost and construction time blowouts. There is a need to ensure that projects commence in an ordered manner.

Accordingly:

- **Governments should apply a weighting in favour of procurements providing local benefits to the areas in which relevant infrastructure is being constructed.**
- **Legislation should permit the declaration of project of strategic importance, which may specify (amongst other things) a local content requirement.**
- **So as to facilitate investment decisions and limit skills and material constraints, jurisdictions should establish clearly identified pipelines of infrastructure to be developed.**
- **Government procurement regulatory instruments should make mandatory adherence to the Principles for Procurement and Conformance of Construction Products set out in the APCC document *Procurement of Construction Products – A Guide to Achieving Compliance*.**

ENSURING A FAIR AND COMPETITIVE TRADING ENVIRONMENT

The Australian steel industry is internationally trade exposed and operates in one of the most open and competitive regions for steel supply in the world.

However, for the industry to be able to prosper it is important to ensure that international markets operate in a fair, efficient manner, and that Australia's ability to impose a remedy against unfair trade is as robust and effective as possible within the World Trade Organisation (WTO) Anti-dumping Agreement.

Reflecting this concern does not mean that the Australian steel industry is seeking to be shielded from genuine competition. Dumping and foreign government subsidisation of goods exported to Australia is not genuine competition and can distort markets and injure Australian manufacturers.

It is recognised that a small market such as Australia cannot be self-sufficient in all steel products. It is in the interests of our customers to have a choice of suppliers—both local and international—that all compete on a level playing field.

It is therefore important that Australia maintains an effective and efficient anti-dumping system that is accessible to the small and medium enterprises that constitute much of the Australian steel and manufacturing industry.

Accordingly, the Australian Government should consider the following recommendations:

The anti-circumvention framework of Australia's anti-dumping legislation should be strengthened by:

- **Clarifying that duty absorption applies to the exporter's behaviour, not just that of the importer.**
- **Aligning the transhipment provisions with the intent of the European methodology, which allows the measures to be extended to all exporters from a third country, except for those that can verify that they are bona fide exporters.**
- **Ensuring that trade data can't be made confidential beyond exporter country to make detection of circumvention by minor modification or trans-shipment easier.**
- **Appointing personnel with specific industry experience to assist with the technical aspect of investigations.**

Ensure the most effective measures are applied by:

- **Allowing the Australian industry applicant to nominate form of duties to ensure the measures are as effective as possible for their market.**
- **Streamlining the Lesser Duty Rule so that it is based on the industry applicant full cost to make and sell and an appropriate level of profit to allow for re-investment that includes future investment in decarbonizing.**
- **Altering the Customs Act to reinstate differential duties so that they are more accurate and effective for different models of the goods.**
- **Ensuring relief from dumping is provided to industry sooner.**
- **Ensure the ministerial direction to impose preliminary securities at day 60 of the investigation is adhered to rather than default to the Statement of Essential Facts at 110+ days.**
- **Streamline the 'Review of Measures' and 'Duty Assessment' processes to ensure that the correct amount of duty is collected and paid.**

Other recommendations:

- **Extend the period for which dumping securities can be converted to interim dumping duties from four months to six months, as permitted under WTO rules, to make measures effective sooner.**
- **Prioritise new investigations versus accelerated importer reviews and completing continuation inquiries.**
- **Increase the resources of the Anti-Dumping Commission to improve investigation timelines and accuracy of outcomes.**
- **Review of SME access and assistance arrangements to improve the access and ability of SMEs to utilise Australia's anti-dumping system.**
- **Increase Transparency in the system.**
- **The general Australian reservation contained in government procurement chapters of free trade agreements disapplying the instrument to forms of preference to benefit small and medium enterprises should remain policy.**

QUALITY AND SAFETY

Two separate Parliamentary Committees have found non-conformance with Australian Standards.

In many circumstances this issue of non-compliant substitutions concerns building surveyors or inspectors who do not have the engineering expertise, knowledge, or often the opportunity to identify steel defects, or check whether the steel supplied is compliant.

Moreover, observable defects such as substandard welding that needed to be ground out and replaced, laminations in plate that could cause catastrophic failure, substandard corrosion protection affecting the life of an asset and generally poor workmanship were found, unfortunately, to be commonplace on imported structural steelwork.

The Australian Building Codes Board is developing guidance material to implement the recommendations from the 2018 *Building Confidence* report to assist jurisdictions in implementing the recommendations.

This includes enhanced powers of inspection and auditing powers for building inspectors.

All these reforms are well and good – but it is small comfort if an owner is stuck with a dangerous or inadequate building requiring repair through the incorporation of non-compliant product.

Queensland has passed legislation designed to ensure non-conforming product is not used in Australian buildings and infrastructure by imposing a chain of responsibility on building industry participants.

Other jurisdictions, such as NSW, are considering adopting the concept. It should be implemented throughout Australia. At the same time, Workplace Health and Safety (WHS) regulations (or the codes of practice that sit under them) should be modified to better define the link between non-compliant construction products and risk/safety.

Key to this is actually addressing non-conformance at the construction level i.e. non-compliant builders. Most cases involving non-compliant material will actually be by non-compliant builders.

For this reason, WHS regulations should be designed to work in tandem with building legislation.

To enhance building safety and sustainability the following recommendations are made:

- **Australian Governments should set a deadline by which the Building Confidence recommendations should be implemented throughout Australia.**
- **Uniform national legislation creating a 'chain of responsibility' on anyone who manufactures, imports or supplies a building product to ensure non-conforming building products are not incorporated into buildings should be introduced.**
- **The accreditation concept already applied within the NSW and South Australian procurement policy frameworks should be extended so that:**
  - **(a) All structural steel products should be sourced from mills with Australasian Certification Authority for Reinforcing and Structural Steel (ACRS) or comparable independent third-party certification;**
  - **(b) All fabricated steelwork products should be obtained from suppliers certified under the National Structural Steelwork Compliance Scheme by Steelwork Compliance Australia third-party certification;**
  - **(c) All structural steel and fabricated products should be sourced from businesses accredited under the steel industry's Steel Sustainability Australia Certification Program; and**
  - **(d) Steelwork meeting Australian Standard AS/NZS 5131 should be used by all governments when entering into contracts for the construction of all forms of building. This should be a condition imposed by the Commonwealth for any jurisdiction receiving Commonwealth funds for infrastructure projects.**
- **Only high-risk building products certified by accredited third-parties as meeting standards prescribed in the NCC should be used in buildings.**
- **That the risks to health and safety posed by the use of non-conforming products in construction be identified in WHS regulations and Codes of Practice.**

The next chapter sets out the current nature of the Australian steel industry.

2. THE AUSTRALIAN STEEL INDUSTRY IN FIGURES

Image courtesy of Molycop, whose product lines include grinding media, fasteners and the Comsteel range of forged railway wheels and axles.

A Labor Government will also harness the power of government purchasing to support new industries in areas such as train construction, medical equipment and military capability.

The benefits won't be confined to new industries. For example, more manufacturing in this country will mean more opportunities for the use of Australian steel, made from our iron ore and coal. More local economic activity. And above all, more jobs.

Anthony Albanese, Australian 2021 Minerals Week Launch, 2 June 2021[8]

The Australian steel industry consists of four primary steel producers, supported by over 300 steel distribution outlets throughout the country and numerous manufacturing, fabrication and engineering companies.

Australia's primary steel producers and steel product manufacturers together form a strategically important value chain that has the capability to supply in excess of 90 per cent of the steel grades and qualities required in this country. If special categories such as very large diameter pipe, stainless steel, electrical steel, and tinplate are excluded, then the capability is significantly closer to 100 per cent.

Australia produces around 6 million tonnes of steel per annum across 5 manufacturing mills, with approximately 74 per cent produced via the more emissions-intensive method in the blast furnace - basic oxygen furnace (BF-BOF) and the remaining produced via the electric arc furnace (EAF) method. Table 1 sets out the steelmaking capacity and processes.

Table 1 – Steelmaking capacity and processes in Australia

COMPANY	LOCATIONS	TYPICAL PRODUCTION	PRODUCTION PROCESS
BlueScope	Port Kembla, NSW	3.2 million tonnes	Integrated (BF/BOF): iron ore / coal / scrap steel Coke ovens, sinter plant, blast furnace, BOF steelmaking
InfraBuild	Laverton, VIC	0.7 million tonnes	EAF route: scrap steel EAF steelmaking
	Rooty Hill, NSW	0.6 million tonnes	
Liberty Primary	Whyalla, SA	1.2 million tonnes	Integrated (BF/BOF): iron ore / coal / scrap steel Coke ovens, pellet plant, blast furnace, BOF steelmaking
Molycop	Waratah, NSW	0.25 million tonnes	EAF route: scrap steel EAF steelmaking

[8] https://anthonyalbanese.com.au/media-centre/embracing-the-opportunity-of-change-2-june-2021

Table 2 sets out the main elements of the Australian steel supply chain.

Table 2 – Australian steel supply chain

PRIMARY STEEL PRODUCTION		
SECTOR	**FLAT PRODUCTS**	**LONG PRODUCTS**
PROCESSES	- Cokemaking - Sintering - Ironmaking - Steelmaking (BOF) - Continuous Casting (Slab) - Hot Rolling (Plate / Strip) - Cold Rolling - Continuous Metal Coating - Continuous Coil Painting	- Cokemaking - Sintering - Ironmaking - Steelmaking (BOF/EAF) - Continuous Casting (Slab / Bloom / Billet) - Hot Rolling (Rod / Bar / Beam) - Ingot Making
COMMON PRODUCTS	• Hot Rolled Coil • Cold Rolled Coil • Plate • Metal Coated Strip • Painted Strip • Welded Beam	• Rail and Sleeper • Merchant Bar • Specialty Bar • Specialty Rod • Reinforcing Rod and Bar • Hot Rolled Structural
SECONDARY STEEL PRODUCTION		
PROCESSES	- ERW Pipe and Tube Forming - Electro-galvanizing - Heat treatment	- Wire Drawing - Galvanized Coating - PVC Coating - Reinforcing Mesh Manufacture - Forging
COMMON PRODUCTS	• Precision Tube • Structural Pipe • Galvanized Pipe • Quench and Tempered Plate	• Plain Wire • Barbed Wire • High Tensile Wire • Grinding Media
DISTRIBUTION AND PROCESSING		
PROCESSES	- Slitting - Shearing - Cut to length - Machining - Pre-drilling - Pre-cutting - Profiling - De-burring	- Inventory Management - Warehousing / Stocking - Order Collation - Logistics - Temporary Storage Solutions - Bundling and Packaging - Pre-assembly - Installation Coordination
COMMON PRODUCTS	• Mults / Slits • Sheets	• All Primary Products • All Secondary Products

The product is used for the applications set out in Tables 3 and 4.

Table 3 – Building and construction applications

CONSTRUCTION MODELLING		
OUTPUTS	- Detailed Design	- Component Drawings
FABRICATION		
PROCESSES	- Coping - Boring / Drilling - Machining - Cutting	- Welding - Hot Dip Galvanizing - Painting - Assembly and Transport
COMMON PRODUCTS	• Beams • Columns • Girders • Gantries • Platforms	• Towers • Supports • Staircases • Rolling stock • Truck Chassis and Trailers
STEEL REINFORCING		
PROCESSES	- Welding - Cutting	- Drawing - Bending - Fabrication
COMMON PRODUCTS	• Mesh • Rock Bolts	• Prefabricated elements • Fitments
ROLL-FORMING		
PROCESSES	- Profiling	- Folding and Bending
COMMON PRODUCTS	• Roof Sheeting • Cladding • Rainwater Goods • Structural Decking	• Purlins and Girts • Framing • Culvert Pipe • Ductwork

Table 4 – Manufacturing applications

PROCESSES	- Machining - Punching - Pressing - Drawing - Forging / Upsetting - Hot Dip Galvanizing	- Seaming - Welding - Heat Treatment - Soldering / Gluing - Powder Coating - Enamelling
COMMON PRODUCTS	• Ovens and Stoves • Air Conditioners • Water Tanks • Hot Water Heaters • Insulated Panels • Componentry and Brackets • Caravans • Trailers • Toolboxes	• Fasteners • Coil and Leaf Springs • Nail Plate • Furniture and Cabinets • Racking and Shelving • Cable Trays and Ladders • Pipe Hangers • Struts • Meter Boxes

Table 5 shows Australian iron and steel production the period 2016 to 2021.

Table 5 – Australian iron and steel production (million tonnes)

PRODUCTION	2016	2017	2018	2019	2020	2021
Pig Iron	3.642	3.758	3.882	3.664	3.723	3.751
Crude Steel	5.259	5.328	5.689	5.493	5.490	5.780
Hot Rolled Products	4.693	4.606	4.680	4.961	4.915	4.848
Hot Rolled Long Products	1.954	1.603	1.603	1.978	1.964	1.733
Hot Rolled Flat Products	2.739	3.003	3.077	2.982	2.951	3.115
Railway Track Material	0.089	N/A	N/A	0.080	0.090	N/A
Hot Rolled Bars (excl. concrete reinforcing bars)	0.644	0.672	0.672	1.052	1.018	1.079
Wire Rod	0.927	0.931	0.931	0.615	0.578	0.654
Hot Rolled Coil, Sheet, and Strip (<3mm)	2.501	2.709	2.747	2.679	2.612	2.763
Other Metal Coated Sheet and Strip	1.473	1.536	1.613	1.515	1.589	1.749
Non-metallic Coated Sheet and Strip	0.719	0.724	0.761	0.764	0.797	0.887
Tubular Products	0.155	N/A	N/A	N/A	N/A	N/A

Source: World Steel Statistical Yearbook 2022

Australia competes in a global market that has both significant over-capacity and widespread market access issues. Export levels are set out in Table 6.

Table 6 – Australian steel exports

EXPORTS (million tonnes)	2016	2017	2018	2019	2020	2021
Semi-finished and Finished Products	0.776	0.979	0.998	1.149	0.891	0.711
Ingots and Semis	0.041	0.018	0.095	0.66	0.02	0.118
Long Products	0.119	0.087	0.110	0.152	0.99	0.155
Flat products	0.529	0.809	0.724	0.886	0.721	0.375
Tubular Products	0.65	0.39	0.42	0.44	0.67	0.63

Source: World Steel Statistical Yearbook 2022

Table 7 sets out the level of steel imports into Australia.

Table 7 – Australian steel imports

IMPORTS (million tonnes)	2016	2017	2018	2019	2020	2021
Pig Iron	0.011	0.017	0.013	0.021	0.12	0.10
Semi-finished and Finished Products	1.935	2.269	2.290	1.860	1.835	1.171
Ingots and Semis	0.016	0.003	0.001	0.002	0.56	0.231
Long Products	0.914	1.126	1.077	0.785	0.690	0.327
Flat Products	0.634	0.671	0.661	0.569	0.540	0.299
Tubular Products	0.369	0.465	0.549	0.503	0.496	0.313

Source: World Steel Statistical Yearbook 2022

According to the World Steel Association the three largest crude steel producing countries in 2021 were China (1,032 million tonnes), India (118 million tonnes) and Japan (96 million tonnes). Australia and New Zealand combined produced 0.3% of the 1.951 million tonnes of crude steel produced in 2021 with Australia being the 28th largest producer of crude steel.[9]

The level of import and export balance the apparent level of steel use, indicated in Table 8.

Table 8 – Apparent steel use in Australia

APPARENT USE	2016	2017	2018	2019	2020	2021
Apparent Crude Steel Use (million tonnes)	6.477	6.026	6.091	6.091	5.648	6.900
Apparent Crude Steel Use per Capita (kg)	268	245	244	240	220	266
Apparent Finished Steel Use (million tonnes)	5.849	5.441	5.500	5.500	5.100	6.230

Source: World Steel Statistical Yearbook 2022

Despite extensive industry restructuring and some very high-profile 'business transformations' over the last decade, domestic steel production and the associated downstream industries remain a very significant contributor to the Australian economy.

The steel industry is also noteworthy in terms of having a high proportion of jobs and businesses located in regional areas or non-capital cities, where unemployment is typically higher than the national average.

The industry is technically complex and requires a highly skilled workforce to support it, which in turn encourages and practically supports the ongoing presence of high-quality tertiary education institutions in regional areas.

As Table 9 makes clear, the steel industry employs many Australians, with an employment pattern heavily skewed to regional areas and smaller cities such as Newcastle, Wollongong and Whyalla.

[9] World Steel Association (2022) *2022 World Steel in Figures*: 9, 15: https://worldsteel.org/wp-content/uploads/World-Steel-in-Figures-2022-1.pdf

Table 10 – Employment[10]

SEGMENT	EMPLOYMENT
Primary metal and metal product manufacturing	40462
Iron smelting and steel manufacturing	17705
Iron and steel casting	2424
Steel pipe and tube manufacturing	1859
Structural steel fabricating	20318
Prefabricated metal building manufacturing	7199
Metal roof and guttering manufacturing (except aluminium)	3353
Other structural metal product manufacturing	10001
Boiler, tank and other heavy gauge metal container manufacturing	5319
Other metal container manufacturing	4316
Sheet metal product manufacturing (except metal structural and container products	8535
Spring and wire product manufacturing	3145
Nut, bolt, screw and rivet manufacturing	1675
Metal coating and finishing	9840
Other fabricated metal product manufacturing n.e.c.	19846
TOTAL EMPLOYMENT	**155997**

These figures emphasise the importance of steel and steel products to the Australian economy.

The vast majority of these businesses are amongst the 42 per cent of businesses employing up to 19 employees.[11]

To ensure the sovereign capacity to produce steel and steel products in Australia is enhanced, appropriately framed industry policy is necessary.

This is discussed next.

[10] Australian Bureau of Statistics 81550DO003_202021 Australian Industry, 2020-21, released 27 May 2022

[11] Contribution to Australian Employment, contained on the Australian Small Business and Family Enterprise Ombudsman Small Business Data Portal, accessed 28 December 2022: https://www.asbfeo.gov.au/contribution-australian-employment

3. INDUSTRY POLICY

Image courtesy of InfraBuild, one of Australia's leading integrated steel manufacturing, processing, distribution and recycling businesses.

There are tremendous opportunities for the steel industry to be transitioned to a low-emissions economy. Offshore wind, for example, will play an important role in producing a robust grid built on renewable energy but we're going to need a hell of a lot of steel for the turbines, steel for the rotors, steel for the towers.

Ed Husic, Australian Steel Convention, 10 October 2021

THE GOVERNMENT VIEW

On 10th October 2021, the Minister for Industry and Science the Hon Ed Husic MP addressed the Australian Steel Convention.[12]

The Minister said:

> Steel, from our point of view, is a vital part of the manufacturing landscape in this country. We went to the election with a very firm view that given the events of the previous years, notably the pandemic and the way it changed people's thinking about what we could rely upon when we needed it at the times we needed it most, that has caused a reset in the thinking around industry policy and the way that we gear up and produce and the way that governments engage with the private sector to deliver on those things. So that's been very important as well.

He also said:

> Specifically, under the Powering Australia plan, within the Reconstruction Fund, $3 billion will be allocated to investing in green metals, steel, alumina, aluminium; clean energy component manufacturing; hydrogen electrolysers and fuel switching; agricultural methane reduction and waste reduction and through Powering Australia we'll support the energy needs of the manufacturing sector by getting power to where it's needed to an overdue upgrade of our outdated energy grid.

Finally, and most importantly, he said:

> Now, I've also had regular conversations with Chris Bowen, the Climate Change and Energy Minister. Our view is we really need to develop industry specific plans that open up opportunity for the steel sector and if we get - we've got what we want to do in terms of energy transition, what we want to do in procurement reform and local content reform, the National Reconstruction Fund to support growing capability locally so that we build capability and we put it to work, that we open up opportunity for steel, particularly Australian steel, and be able to use it in terms of some of the offshore wind, wave energy, rewiring the nation issues that we do have.

POWERING AUSTRALIA

The incoming Government indicated in its policy statement it would:

- allocate up to $3 billion from Labor's National Reconstruction Fund to invest in green metals (steel, alumina and aluminium); clean energy component manufacturing; hydrogen electrolysers and fuel switching; agricultural methane reduction and waste reduction; and
- protect the competitiveness of Emissions Intensive Trade Exposed industries by ensuring they will not face a greater constraint than their competitors.[13]

[12] https://www.minister.industry.gov.au/ministers/husic/speeches/address-australian-steel-convention
[13] https://alp.org.au/policies/powering-australia

NATIONAL RECONSTRUCTION FUND

The October 2022 Budget Papers suggest Government will invest $15 billion over 7 years from 2023–24 to establish the National Reconstruction Fund (NRF) with the overall intention to:

> support, diversify and transform Australian industry and the economy through targeted co-investments in 7 priority areas - resources, agriculture, forestry and fisheries, transport, medical science, renewables and low emission technologies, defence capability and enabling capabilities.[14]

The National Reconstruction Fund Corporation Bill 2022 was introduced into the Australian Parliament on 30th November 2022.

It is 'framework' legislation which leaves specifics, including the priority areas of the Australian economy to be funded left to subordinate legislation.

Moreover, the ASI has been told it may be eligible for funding under the renewable and low emission technologies and defence capabilities.

However, it is clear the Government considers the maintenance of a sovereign Australian steel industry is important to guard against future supply chain shocks as well assisting the delivery of government net zero policy goals.

RECOMMENDATION

The Government should declare the Australian steel industry as a priority area for the purposes of the National Reconstruction Fund with a policy direction set identifying a specific amount of funds to be available for eligible steel investments

THE SAFEGUARD MECHANISM

The steel industry is often referred to as a 'hard to abate' sector. That is because carbon plays an essential role in the chemical reaction to manufacture new (virgin) iron and steel, with no commercial alternatives currently available.

It is also because after decades of continuous improvement, current iron and steelmaking processes are highly optimised in terms of their energy use and consumption of raw materials.

Steelmakers are continuously incentivised to reduce emissions as they arise from energy use and other inputs to production process, both of which add to production cost and reduce profit margins.

To reach net zero, the industry will need major technology breakthroughs – essentially fundamentally new processes that have yet to be commercialised anywhere. This reliance on new technologies means that decarbonisation will not be linear – but rather a series of stepped reductions as such technologies are commercialised and adopted.

The Australian steel sector is also highly trade exposed. Australia's crude steel production was 5.7 Mt in 2020-21 with steel imports of 1.9 Mt and exports of 0.8 Mt.[15]

Many steel products are commodities with their prices determined in global markets. A significant proportion of imported steel comes from jurisdictions that do not impose direct carbon prices on their steel producers.

Government policy that imposes a cost only on Australian steel producers will lead to a loss of competitiveness and a rise in imports.

Given that several Australian facilities are less emissions intensive than many import competitors, there is a risk that a rise in steel imports would cause an increase in global carbon emissions, as well as risking the employment and economic activity associated with domestic steelmaking.

Lastly, it is important to note the economic and social contribution of the Australian steel industry employing over 100,000 people and generating $29 billion in annual revenue. The steel industry is also a key enabler for the nation's renewable energy transition and associated legislative climate targets.

Between now and 2030 it is estimated that more than 400 kt of steel will be required per annum to service over 28 GW of renewable energy generation projects across wind, solar, water and transmission infrastructure.

Treatment of Emission Intensive Trade Exposed (EITE) facilities, such as steel manufacturing facilities is one of the most important design elements of the Safeguard Mechanism.

Recognising the 'hard to abate' nature of the steel sector along with its economic and social value whilst ensuring a level playing field for trade exposure is critical if the Safeguard Mechanism is to achieve its objective of lowering emissions and avoiding carbon leakage.

The Government has suggested tailoring the treatment of EITE facilities:

> (B)ased on the principle of comparative impact—ensuring Australian businesses are not competitively disadvantaged relative to international competitors, and that emissions do not 'leak' overseas. This is considered in the context of an increasingly decarbonised world, where competitiveness will increasingly depend on being a low emissions producer.[16]

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14 Commonwealth Treasury (2022) Budget Paper 2 October 2022-23:153 https://budget.gov.au/2022-23-october/content/bp2/download/bp2_2022-23.pdf

15 Department of Industry, Science and Resources, *Resources and Energy Quarterly 2022*

16 Department of Climate Change, Energy, the Environment and Water, *Safeguard Mechanism Reforms Discussion Paper* (2022): 20 https://storage.googleapis.com/converlens-au-industry/industry/p/prj2135e8da0cf17d76c70fc/public_assets/Safeguard-Mechanism-consultation-paper.PDF

RECOMMENDATION

The Government should tailor treatment for EITEs through the continuation of the established methodology for defining EITEs currently used for the Renewable Energy Target (RET), which combines trade exposure and emissions-intensity metrics at the industry level.

RECOMMENDATION

The Government should implement a Carbon Border Adjustment Mechanism to preserve the international competitiveness of EITE activities such as steel manufacturing and fabrication.

This approach would be simple and would recognise the significant effort undertaken by facility operators and government to assess facilities when the methodology was originally established. There are no significant issues that would warrant it changing for the steel industry.

Periodic reviews should be related to the level of assistance (i.e., the nature of the 'tailored treatment') provided to EITE facilities, and take account of developments in abatement technology, industry economics, and international competition including carbon costs.

Such reviews should be at pre-defined intervals with maximum forward visibility regarding any changes (e.g., if a five-yearly review determined material changes in EITE assistance should be made for a facility, a further five years would elapse before they were fully implemented).

CARBON BORDER ADJUSTMENT MECHANISM

A carbon border adjustment mechanism (CBAM) taxes emissions intensive goods imported from a country that either lacks a carbon price or is otherwise failing to take reasonable action to limit carbon emissions.

The Government has indicated it would investigate a CBAM to ensure a level playing field for local producers of steel (amongst other products) when they compete against imports produced in jurisdictions without mandatory emissions targets.[17]

The European Union is implementing a CBAM. The United Kingdom and Canada are developing similar policies whilst Japan is investigating adopting a similar scheme.

It is important that Australia's steelmakers and fabricators are not prejudiced through importation of products from nations that are not taking the same steps as Australia in reducing carbon emissions.

It is equally important to ensure that steel imports to places such as the European Union aren't disadvantaged by imposition of a CBAM.[18]

LOW EMISSIONS TECHNOLOGY FUNDING

The ASI also supports the provision of low emissions technology funding to assist the steel industry to develop and implement lower emissions production technologies.

This should include funding for both incremental abatement opportunities using existing and developing technologies, as well as breakthrough technologies that will be needed to achieve a step-change in emissions.

Given the pilot nature of much investment, which may not deliver a commercial return for steelmakers, government funding for abatement projects should not be assumed to fully offset increased costs borne as a result of declining safeguard mechanism baselines.

RECOMMENDATION

A range of funding mechanisms should be made available to suit the varied needs and circumstances of the different steelmakers, including grants and co-funding, and loan schemes to assist the steel industry to develop and implement lower emissions production technologies.

Assistance for EITE facilities will also need to include measures that directly address these costs through the design of the mechanism, such as the nature and decline rate of baselines, headroom, multi-year monitoring periods, and the direct administrative allocation of credits to such facilities.

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17 Sydney Morning Herald, *Carbon tariffs on the table to shield local industry facing pollution caps,* 11 January 2023: https://www.smh.com.au/politics/federal/carbon-tariffs-on-the-table-to-shield-local-industry-facing-pollution-caps-20230111-p5cbri.html

18 The Australian Industry Group has found that 4.99 per cent of Australian iron and steel products are exported to the EU. See Ai Group *Swings and Roundabouts the unexpected effects of Carbon Border Adjustments on Australia* (2021): 57. Table 5: https://www.aigroup.com.au/globalassets/news/reports/2021/carbon_border_adjustments_policy_paper.pdf

NATIONAL HYDROGEN STRATEGY

The 2019 National Hydrogen Strategy, which has the intention of developing a competitive renewable hydrogen industry that is a major global player by 2030 has continued in place.[19]

Encouragement for research and development in the utilisation of renewable hydrogen in steelmaking also forms part of the Strategy. To further this goal the Australian Renewable Energy Agency ARENA has identified the steel and aluminium value chains as priority areas where it aims to support innovative and replicable technologies, processes and commercial models that can help to lower emissions.

An example of initiatives that are being supported is set out in Box 3.

Australian jurisdictions are also involved developing collateral assistance plans for the development of 'hydrogen hubs', many of which anticipate steel production as one of the industries attracted to operate at hub locations.

An example of this is the Port Kembla Hydrogen Hub, which is being developed in part to facilitate the Illawarra region's significant steel and mining industries.[21]

Another is the development by the South Australian Government of a world-leading hydrogen power station, electrolyser and storage facility within the Whyalla City Council area, which will assist the development of 'green steel' projects in that area.[22]

RECOMMENDATION

Funding for appropriate projects supporting the development of an Australian low emissions steel capacity under the National Hydrogen Strategy should continue.

Box 3 – Decarbonisation of operations at Port Kembla steelworks[20]

On behalf of the Australian Government, the Australian Renewable Energy Agency (ARENA) has today announced $924,784 for BlueScope Steel to investigate options to decarbonise operations at the Port Kembla Steelworks (PKSW) in New South Wales.

The Port Kembla Steelworks Renewables and Emissions Reduction Study will consider the technical and economic viability of several decarbonisation options for the plant. This initial project will explore two main pathways to lowering emissions at Port Kembla: Smart Carbon Usage and Direct Carbon Avoidance. The project is expected to be completed in 13 months.

Smart Carbon Usage refers to opportunities to substitute coal with renewable carbon sources in the steel production process. The project includes a series of plant trials where BlueScope will investigate the potential to partially replace coal that is injected into the blast furnace with renewable biochar. Direct Carbon Avoidance refers to longer term opportunities to decarbonise steelmaking, including through the utilisation of renewable hydrogen, in combination with a Direct Reduced Iron process.

The project will provide valuable insights into the potential pathways to decarbonise steel production at PKSW. BlueScope's initial insights will be captured in a series of publicly released findings to maximise the benefit for a wider set of stakeholders.

BlueScope has engaged the University of Wollongong and the Future Fuels Cooperative Research Centre to assist in delivering the Project. These project partners will provide expertise in steelmaking technologies, process, modelling and pneumatic conveying of raw materials.

ARENA CEO Darren Miller said reducing emissions from making steel was a priority for Australia. "To meet our net zero targets, Australia needs to reduce emissions from the iron ore mining sector and steel industry. More than seven per cent of the world's emissions come from steelmaking and these emissions have proven difficult to abate. We're pleased to be partnering with an Australian company motivated to solve this decarbonisation challenge," he said.

This project will explore prospective technologies which have the potential to reduce emissions across steel manufacturing at PKSW, including the role Australia's emerging renewable hydrogen industry can play on the pathway to low emissions steel. Based on the project's outcomes, future investigations will be tabled for those high-potential, priority technology options identified for PKSW.

"As the world's largest exporter of iron ore, Australia has an important role to play in lowering emissions across the steel value chain. We're excited by the insights this project will provide. This is a positive step toward building a low emissions steel industry here in Australia," Mr Miller said.

ARENA has identified the steel and aluminium value chains as priority areas where it aims to support innovative and replicable technologies, processes and commercial models that can help to lower emissions.

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19 COAG Energy Council (2019) *Australia's National Hydrogen Strategy* https://www.dcceew.gov.au/sites/default/files/documents/australias-national-hydrogen-strategy.pdf

20 https://arena.gov.au/news/investigating-low-emissions-steel-production-at-port-kembla/

21 https://research.csiro.au/hyresource/port-kembla-hydrogen-hub/

22 https://www.energymining.sa.gov.au/industry/modern-energy/hydrogen-in-south-australia/hydrogen-jobs-plan

STEEL RESEARCH HUB

Support for the Australian steel industry is important if Australia's aspirational net zero aspirations are to be met. This particularly means continued investment in the Steel Research Hub. The Australian Research Council (ARC) Hub for Australian Steel Innovation (Steel Research Hub) was officially launched on 13th October 2022 with the aim of delivering a range of innovative research outcomes that underpin the next generation of functional steel products and advanced manufacturing processes, supporting the transition of the national steel manufacturing industry to a more sustainable position.[23] Projects include:[24, 25, 26]

INTEGRATED AND EFFICIENT STEEL MANUFACTURING	RESOURCE INTENSITY AND SUSTAINABILITY
Fundamental understanding of processing limits in blast furnace ironmaking	By-products utilisation
The effect of slag formation on hot metal and BOS desulphurization	Conversion of co-product/by-product streams into usable materials and valuable products
Numerical investigation of temperature variations in blast furnace hearth sidewall and Taphole Refractories	Characterisation and preparation of waste plastics for coke-making
Numerical investigation of temperature variations in LPS 2BF blast furnace hearth sidewall and taphole refractories	Transport infrastructure construction using steel furnace slag
Sintering of contemporary raw materials blends for ironmaking	
PRODUCT INNOVATION AND TECHNOLOGY	**STRUCTURAL AND COLD-FORMED STEEL OPTIMISATION**
Computational modelling of molecular mechanisms determining surface proper	3D Development, analysis and design of cold-formed steel mid-rise apartment building frames
Long-life hot dip coated wire	Climate optimised building systems
Strong and ductile steel reinforcement products	Cold-formed steel structural floor systems for residential and mid-rise construction
Additive manufacturing of welded overlay	Thermal bridging by ceiling frame members
Development of fundamental understanding and processing schedules for hot rolled microalloyed steels with 800MPa strength	
COATING PROCESS EFFECTIVENESS	**ENABLING TECHNOLOGIES INTEGRATION**
Corrosion performance and prediction	Automation and digitalisation at Port Kembla Steel Works
Low speed jet wiping of liquid metal coatings	Development of sound sensors for control of ladle metallurgy
Surface engineering of materials for increased resilience in Al-Zn coating baths	Knowledge capture and discovery in steel manufacturing processes
	Development of sound sensors for BOF
	Big data analytics for billet caster control in EAF steelmaking
SME ENGAGEMENT AND INNOVATION	
SME engagement and innovation	

23 https://www.uow.edu.au/media/2022/arc-hub-for-australian-steel-innovation-launched-by-the-hon-jason-clare-mp.php
24 https://www.uow.edu.au/steel-research-hub/our-research/process-integration-and-sustainability
25 https://www.uow.edu.au/steel-research-hub/our-research/advanced-corrosion-performance-and-operational-efficiency/
26 https://www.uow.edu.au/steel-research-hub/our-research/steel-supply-chain-transformation/

Similarly, the Facility for Intelligent Fabrication is a collaboration bringing together existing University of Wollongong research with the technical and further education (TAFE) sector's complementary training and facilities and Weld Australia's network of companies in the welding and fabrication sector.[27]

The Facility is advancing projects that have included the use of augmented and virtual reality, the integration of smart sensors in the manufacturing process, and the use of information from a computer aided design (CAD) file to develop the most optimal path for welding robots to traverse whilst making products and the development of enhanced robotic handling processes.[28]

These examples are reason enough for the Australian steel and fabrication industry to be part of an industry policy promoting the development of an advanced manufacturing capacity, thereby securing both safe, long-term, well-paying employment, as well as greater supply chain security.

RECOMMENDATION

Government and industry should continue to support the Steel Research Hub and the Facility for Intelligent Fabrication as institutions designed to enhance the advanced manufacturing capabilities of the Australian steel manufacturing and fabrication industry.

Box 4 – Labour shortages

Severe labour shortages

Skilled migrants, who have historically been instrumental in meeting demand, are in extremely short supply. This is mostly because Australia is 'missing' almost half a million people in net overseas migration between 2019-2020 and 2021-22 due to international border closures

.....

Respondents noted that skilled workers are hard to find. Steel trades (such as boilermakers and steel fabricators) were cited as being particularly difficult to secure, which one steel supplier put down to steel being a less desirable career choice and plumbing, electrical or carpentry. As explained during a telephone interview:

> I know I'll probably sound old-fashioned, but boiler making as a trade is... I mean, most of the kids out my way want to be plumbers or electricians or carpenters. Right? No one wants to be a boilermaker. You might find the occasion when someone wants to be a welder, but those metalworking trades.... Our workforce is ageing, big time. And so how do we attract kids, effectively into those trades that we're probably going to need?

SKILLS

Minister Husic told the Australian Steel Conference:

> We're hearing obviously, and I know, a lot of people here have to confront the challenge that's brought about by national skills shortages after a decade of inaction that's left us with a lot of catching up to do. We brought this national focus on addressing skills shortages to the Jobs and Skills Summit we held early last month and we are getting on with the job of working with industry, rebuild the skills base.
>
> One way we're doing it will ensure the training of thousands of workers by mandating that 1 in 10 employees on major government projects have to be an apprentice, trainee or cadet and we'll invest in the skills Australia needs to drive future economic growth. We'll do that as well through what we're doing in driving TAFE fee-free places, just over 460,000 of them, and making sure that we are investing in job transition as well and that has been a feature – that's policy.

Infrastructure Australia has identified skills shortages as being one of the greatest constraints in the continued development of an Australia sovereign steel industry, as indicated in Box 4.[29]

Jobs and Skills Australia has recently been asked to undertake a capacity study of the Australian workforce needed to transition to a clean energy economy.[30]

Given the skills shortages identified by Infrastructure Australia (amongst many other bodies) and the importance the Government places in a sovereign Australian steel capacity, a similar study should be conducted into the skills needs of the Australian steel industry.

RECOMMENDATION

Jobs and Skills Australia should be commissioned to undertake a capacity study on the workforce needs of the Australian steel industry.

27 https://www.uow.edu.au/engineering-information-sciences/research/facility-for-intelligent-fabrication/
28 Current projects can be found here: https://www.uow.edu.au/engineering-information-sciences/research/facility-for-intelligent-fabrication/
29 Infrastructure Australia (2022) *Infrastructure Market Capacity 2022 Report*:45 https://www.infrastructureaustralia.gov.au/sites/default/files/2022-12/20221219_IA_Market-Capacity-Report_LR.pdf
30 https://www.jobsandskills.gov.au/consultations/clean-energy-capacity-study-draft-terms-of-reference. See also: https://www.jobsandskills.gov.au/sites/default/files/2022-12/clean_energy_capacity_study_draft_terms_of_reference.pdf

More generally, there is scope for government to ensure that financial support is made available to ensure that incentives are in place to upskill by providing viable vocational educational options whilst ensuring that qualifications recognised under the Australian Qualifications Network are suitable for purpose.

RECOMMENDATION

The knowledge and skills required to be demonstrated under relevant qualifications recognised under the Australian Qualifications Framework should be examined to see if they remain suitable for purpose.

To conclude, as the Minister for Climate Change and Energy has said:

> We need traditional industries in Australia. I want to be a country that makes things. I want Australia to be making aluminium and steel for decades to come and beyond. But we need to do so in an increasingly renewable way and in an increasingly carbon neutral way.

The Government must adopt the industry policies that permits these policy outcomes to become reality.

The new Government have made some changes in the way in which products are procured. This is discussed next.

4. PROCUREMENT

Image courtesy of BlueScope, a global leader in premium branded coated and painted steel products.

We've placed manufacturing as a central priority, as I said, in our policy agenda. Largely through the Future Made in Australia commitment which includes maximising use of Australian made goods through our Buy Australian plan and also taking a fresh look at government procurement and local content rules. Ensuring, for example, things like trains are built in Australia through our national rail manufacturing plan, establishing the $15 billion National Reconstruction Fund our plan to rebuild Australia's industrial base.

Ed Husic, Australian Steel Convention, 10 October 2022[31]

The Government has developed a Buy Australian Plan designed to improve the way government contracts work and build domestic industry capability through the Australian Government's purchasing power.

It has also reformed the Commonwealth procurement rules, which (will amongst other things) require:

- 20% of procurements by value are sourced from small to medium enterprises (SME), up from 10%[32]; and
- consideration of the broader impact of climate change when considering whether a procurement constitutes 'value for money'[33].

THE BUY AUSTRALIAN PLAN

The Buy Australian Plan is intended to improve the way government contracts work and build domestic industry capability through the Australian Government's purchasing power through, amongst other things, maximising opportunities for businesses to participate in major infrastructure processes and supporting industry sectors through use of the Government's purchasing power.

A Future Made in Australia office within the Department of Finance to coordinate implementation of the Buy Australian Plan across the Australian Public Service as well as strengthening engagement with states and territories to deliver economic, social and environmental benefits to regions, industry sectors and communities has also been established.

This is to be welcomed.

It is to be hoped there will be an enhanced degree of coordination between other Australian Government procurement initiatives that exist.

The Australian Industry Participation National Framework[34] commits the Australian Government and state and territory governments to adopting a consistent national approach to maximise Australian industry participation in major projects in Australia and overseas.

Each jurisdiction also has its own industry participation policies aimed at increasing Australian industry participation. For instance, the Australian Government has an Australian Industry Participation scheme which may require those responsible for:

- major public and private projects with capital expenditure of $500 million or more;
- Australian Government procurements of $20 million or more; or
- projects receiving Australian Government grants (or payments from the Clean Energy Finance Corporation or the Northern Australia Infrastructure Facility of $20 million or more

31 https://www.minister.industry.gov.au/ministers/husic/speeches/address-australian-steel-convention
32 Rule 5.6 of the Commonwealth Procurement Rules: https://www.finance.gov.au/government/procurement/commonwealth-procurement-rules/encouraging-competition
33 Rule 4.5(e) of the Commonwealth Procurement Rules: https://www.finance.gov.au/government/procurement/commonwealth-procurement-rules/value-money
34 https://www.industry.gov.au/sites/default/files/australian-industry-participation-national-framework.pdf

to develop a plan that requires proponents to provide full, fair and reasonable opportunity for Australian industry to compete for work.[35]

However, some jurisdictions do more than merely ask proponents how they will go about providing Australian industry the ability to tender to provide products for projects.

Queensland has a local benefits test under its Queensland Procurement Policy which requires agencies to conduct a local benefits test for all significant procurement activities, where a weighting of up to 30 per cent may be applied. The purpose of the test is to evaluate the benefits that any supplier would bring to the local area.[36]

Moreover, the South Australian Government has a policy designed to give the local steel industry a competitive advantage through requiring that procurement evaluation criteria must contain a minimum 20 per cent industry participation weighting.[37]

Finally, Victoria has a requirement under the *Local Jobs First Act 2003* that a responsible minister set local content and other requirements for identified strategic projects. Unless an exemption is granted, the responsible minister must set these requirements at no less than 90 per cent for a construction project, or 80 per cent for a services or maintenance project related to a strategic project.[38]

These are principles that should be adopted in all jurisdictions.

To conclude, it is pleasing that Australian Government has agreed to increase the value of goods to be procured from SMEs.

However, downstream or fabrication/manufacturing parts of the steel value chain needs clear investment signals in the form of minimum participation targets for major projects in order to encourage large scale capacity and capability investments that require a multi-year payback.

PROCUREMENT GENERALLY

That said, Australian Infrastructure Ministers were briefed on and acknowledged the significant pressures facing the infrastructure and transport sectors, which included capacity constraints, skills shortages and longer-term supply chain pressures at their meeting held on 5th August 2022.[39]

This is one reason why the Government decided to re-profile $6.5 billion of funding for existing projects within the Infrastructure Investment Program to beyond the forward estimates period.[40]

The Budget Papers particularly acknowledged that the Inland Rail program is being affected by market capacity constraints, increasing costs and pressures on the delivery schedule.[41]

This includes facing cost pressures as a result of competition from State Governments' political decisions to invest in urban metros. The lack of coordination/alignment between States has resulted in inefficient resource allocation, increasing costs for all participants in the industry.

The ASI finally notes the Infrastructure and Transport Ministers' Meeting has resolved to develop (amongst other things) a more consistent approach to the national infrastructure pipeline.[42]

RECOMMENDATIONS

Governments should apply a weighting in favour of procurements providing local benefits to the areas in which relevant infrastructure is being constructed.

Legislation should permit the declaration of project of strategic importance, which may specify (amongst other things) a local content requirement.

RECOMMENDATION

So as to facilitate investment decisions and limit skills and material constraints, jurisdictions should establish clearly identified pipelines of infrastructure to be developed.

35 https://www.industry.gov.au/major-projects-and-procurement/australian-industry-participation/australian-government-funded-projects. It is presumed this obligation will be imposed on those who receive funds from the National Reconstruction Fund Corporation.

36 Office of the Chief Advisor (Procurement) (2019) *Local Effects Test* https://www.hpw.qld.gov.au/__data/assets/pdf_file/0024/3795/localbenefitstest.pdf

37 South Australian Industry Participation Plan Policy (2021): https://www.industryadvocate.sa.gov.au/documents/20210921_Updated-South-Australian-Industry-Participation-Policy-A2036574.pdf

38 https://localjobsfirst.vic.gov.au/__data/assets/pdf_file/0044/189998/Local_Jobs_First_Supplier_Guidelines_-_October_20221.pdf

39 Infrastructure Transport Ministers' Meeting Communique, 5 August 2022: https://www.infrastructure.gov.au/sites/default/files/documents/communique-for-17th-infrastructure-and-transport-ministers-meeting-5august2022.pdf

40 Commonwealth Treasury (2022) Budget Paper, 2 October 2022-23: 161 https://budget.gov.au/2022-23-october/content/bp2/download/bp2_2022-23.pdf

41 Commonwealth Treasury (2022) Budget Paper, 2 October 2022-23: 161 https://budget.gov.au/2022-23-october/content/bp2/download/bp2_2022-23.pdf

42 Infrastructure and Transport Ministers' Meeting Communique, 9 December 2022: https://www.infrastructure.gov.au/sites/default/files/documents/itmm-communique-9-december-2022.pdf

VALUE FOR MONEY AND WHOLE OF LIFE CONSIDERATIONS

Gaining value for money for the taxpayer is one of main goals of the procurement rules followed by Australian Governments.

When assessing value for money officials must consider the relevant financial and non-financial costs and benefits of each proposal.

The ASI considers the definition of what constitutes 'value for money' used by many Australian governments in procurement documentation is construed in a relatively narrow way, overly focusing on achieving the cheapest cost option rather than the option that benefits the economy as a whole.

In addition, 'whole of life' considerations are not given appropriate weight as they relate to large infrastructure projects.

Purchasing locally provides other significant savings for a projects whole-of-life costing, like lower inventory to manage, reduced lead times and improved after-sales support.

Continuity of work within the local industry helps ensure that the existing high skills base is available for ongoing maintenance. Onsite inspection costs can be significantly reduced where the personnel involved are resident in the region.

Locally fabricated steelwork can take advantage of road, rail or local sea transportation, maximising flexibility and economy in meeting delivery schedules and ensuring that project schedules are met.

Regular face-to-face contact between the builder, fabricator and detailer ensures that delays are minimised when design or site erection schedule changes arise. The industry is serviced by a network of steel distribution centres throughout Australia that stock a depth and range of steel products enabling fabricators to quickly source material to respond quickly and cost-effectively to any changes.

Australian steel distributors can also supply processed steel to fabricators to further speed production schedules.

Finally, a whole family of Australian Standards ensures safe and economic use of steel.

Australian Standards are used as a matter of course by Australian-based members of the steel supply chain.

They ensure mechanical properties, chemical composition, dimensional and mass tolerance. They cover welding, painting, galvanising and design to deliver quality and reliable solutions. Like links in a chain, if one Standard's requirements are not met, the whole system is likely to fail.

These are clearly matters that should be dealt with exhaustively in any guidance given with regards to 'whole of life' and 'value for money' issues.

Maintenance of this supply chain capacity (jobs, capabilities, skills and investment) also clearly offers social and environmental advantages to the nation, as well as providing procurers with a greater choice of vendor.

As indicated in the South Australian Industry Participation Policy, value for money is achieved by balancing the benefits of economic development on the one hand with other criteria such as price, quality and delivery. The setting of the minimum participation weightings takes this balance into account.[43]

Value for money evaluation should incorporate triple bottom line, social, economic and environmental sustainability considerations as well as whole of life costing.

It is therefore pleasing that the Australian Government has changed its Procurement Rules so that as part of the value of money principle procuring officers are now required to consider a procurement's broader impact on climate change when undertaking the assessment.

As the Government said:

> This change goes hand in hand with our commitment to reduce Australia's emissions by 43 per cent by 2030 and provides an opportunity to showcase Australia's abundance of talent, resources and innovation. Value for money is the core rule of the CPRs. When assessing value for money officials must consider the relevant financial and non-financial costs and benefits of each proposal.[44]

A wider view of what constitutes 'value for money' should continue to be adopted.

The Australasian Procurement and Construction Council (APCC) published the *Australian and New Zealand Government Framework for Sustainable Procurement*[45], which contained the following principles that guide the implementation of sustainable procurement:

1. Adopt strategies to avoid unnecessary consumption and manage demand;
2. In the context of whole-of-life value for money, select products and services which have lower environmental impacts across their life cycle compared with competing products and services;
3. Foster a viable Australian and New Zealand market for sustainable products and services by supporting businesses and industry groups that demonstrate innovation in sustainability; and
4. Support suppliers to government who are socially responsible and adopt ethical practices.

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43 South Australian Industry Participation Plan Policy (2021): 11 https://www.industryadvocate.sa.gov.au/documents/20210921_Updated-South-Australian-Industry-Participation-Policy-A2036574.pdf

44 Joint Media Release, *A Better Deal for Australian Businesses Under Commonwealth Contracts*, 1 July 2022: https://www.financeminister.gov.au/media-release/2022/07/01/better-deal-australian-businesses-under-commonwealth-contracts

45 https://www.apcc.gov.au/_files/ugd/473156_54e042e91f914e81a2e55b6a9bbbc301.pdf

Further guidance is set out in 12 principles in the APCC publication *Procurement of Construction Products – A Guide to Achieving Compliance* (2015).

These principles set out what constitutes 'best practice' as to how building products should be procured. They are set out in **Attachment 1**.

This publication was prepared by Australian and New Zealand government agencies with responsibility for procurement for their governments. They should follow it.

RECOMMENDATION

Government procurement regulatory instruments should make mandatory adherence to the Principles for Procurement and Conformance of Construction Products set out in the APCC document *Procurement of Construction Products – A Guide to Achieving Compliance.*

SUSTAINABILITY ACCREDITATION

Finally, as steel is recognised as a sustainable material, there was a need to establish mechanisms for companies to determine what a sustainable steelwork supplier is and how to identify one.

Superseding ASI's Environmental Sustainability Charter (ESC), the Steel Sustainability Australia[46] (SSA) Certification Program was established by the ASI to identify sustainable steel suppliers by assessing the environmental and social impact of their steelwork manufacturing and processing operations. The SSA Program engages the entire steel value chain by certifying downstream steel fabricators, roll formers, and reinforcing processors and verifying upstream steel producers against best practice environmental, social and governance (ESG) indicators.

The accreditation is designed to be used by regulators, building and construction proponents, specifiers and procurers including government agencies, and environmental rating agencies and bodies such as the Green Building Council of Australia to determine sustainable steel suppliers and products, and to support sustainability targets such as reductions in embodied carbon. SSA Certification assures steel suppliers, and their products are sustainably manufactured and processed and are sourced through responsible and ethical supply chains.

Accordingly, it is recommended that government procurement policies should make it a mandatory requirement for procurers to source steel products from businesses accredited under the SSA program.

RECOMMENDATION

All structural steel and fabricated products should be sourced from businesses certified under the SSA Certification Program.

It is important that the international trade agreements that Australia agrees to that are designed to facilitate free and open trade and the concomitant trade measure provisions that ensure fair trade conditions do not operate in a way that prejudices the development of a sovereign Australian steel industry.

These matters are discussed next.

46 https://www.steelsustainability.com.au/

5. TRADE MEASURES & INTERNATIONAL TREATIES

Image courtesy of Bridon-Bekaert, specialists in steel wire and high-performance ropes.

On the supply side, continuing global excess capacity and overproduction of primary steel products can influence global and Australian steel fabrication industries……

First, the ongoing demand/production imbalance of primary steel can flow through into steel fabrication markets and distort those markets. An imbalance in demand and production of steel fabricated products in some regions can lead to dumping of excess production into other markets. This will have adverse effects on steel fabrication industries competing with dumped imports—this is consistent with the OECD's concern about the displacement effects of trade practices like dumping.

……..

Second, the ongoing demand/production imbalance in primary steel markets can create distortions in markets for steel fabricated products as a result of responses by some exporters to trade remedies on primary steel products that are being dumped or subsidised. Specifically, trade remedies on primary steel products could, in some circumstances, result in the diversion of those products into downstream markets, where trade remedies are not in place to address dumping and foreign subsidisation.

Anti-Dumping Commission Analysis of Australia's Steel Manufacturing and Fabricating Markets Report to the Commissioner of the Anti-Dumping Commission (2017):2

TRADE MEASURES

The Australian Government has said Australia's trade remedies system operates within the context of the government's overall economic strategy to promote business growth, employment and global competitiveness, and that:

> It is important to recognise that anti-dumping measures do not seek to stop imports or give an unfair competitive advantage to Australian producers.
>
> Dumping and foreign government subsidisation of goods exported to Australia is not genuine competition and can distort markets and injure Australian manufacturers. A robust and effective anti-dumping system is an essential part of the government's commitment to free and fair trade.[47]

However, the Australian steel manufacturing and fabrication industry does not fear foreign competition. It merely wants an international marketplace free from distortion, as is made clear in the article discussed in Box 5 (on the following page).

As the Anti-Dumping Commission said in its 2016 *Analysis of Steel and Aluminium Markets*:

> Asian governments are not unusual in intervening in steel and aluminium markets. However, the nature and extent of Asian government interventions, and the relative magnitude of Chinese production has meant that these interventions have been major contributing factors—although not the only contributors—to sustained global overcapacity, ongoing excess production, the build-up of large stockpiles (especially aluminium), and depressed world prices.
>
> It also said that many of the policies adopted by Asian governments would meet the OECDs definition of being market distorting in that they have the effect of sustaining ongoing overcapacity by supporting the building of new capacity or keeping inefficient facilities in operation.[48]

47 Anti Dumping Commission Analysis of Australia's Steel Manufacturing and Fabricating Markets: 5

48 https://www.industry.gov.au/sites/default/files/2019-05/analysis_steel_aluminium_report_-_august_2016.pdf: 43

Box 5 – Keep anti-dumping system (BlueScope steel) – The Australian 10 June 2020[49]

One regrettable economic trend made worse by COVID-19's disruptions to supply chains has been the surge in tariffs and trade barriers used by countries as political weapons.

The trend is indefensible and risks further inflaming global geostrategic tensions at a time when the world economy is most fragile.

While it is a term that is sometimes maligned, the aim of countries should be to practise "free and fair" trade.

Simply, countries should trade with each other to the greatest extent possible without restrictions such as tariffs, quotas and non-¬tariff barriers. But that also means they should play by the rules of world trade and individual trade agreements.

Free and fair trade does not mean trade without rules. Some restrictions are perfectly reasonable, and they include biosecurity and national defence measures.

But where countries violate trade rules, such as by providing ¬illegal subsidies or imposing trade restrictions without reasonable cause, there must be effective measures to combat and compensate for this behaviour.

BlueScope has been a strong supporter of free-trade agreements that reduce barriers to trade in steel. For example, we have been enthusiastic supporters of the Indonesia-Australia Comprehensive Economic Partnership Agreement, and have already signed a new customer for exports from our Port Kembla Steelworks to Indonesia.

This 5,000-tonne order (with another 5,000 tonnes imminent) is a small part of the 800,000 tonnes of steel we export from Australia each year — but it is yet another example of why Australia can be a competitive manufacturer on the global stage.

We are also supportive of the elimination of trade barriers in Australia. Most steel products made in Asia — the largest steelmaking region in the world — enter Australia tariff-free, as a -result of free-trade agreements or because they come from developing countries.

The reality is that in a small market like Australia, we cannot and should not be self-sufficient in all steel products. It is in the interests of our customers to have a choice of suppliers, local and international. Despite the claims of some, Australia is an open market, with more than 2 million tonnes of steel imports each year.

As Australia heads out the front door with the giant task to resurrect our economy after COVID-19, we should check we have locked the back door — and that means a well-resourced, effective anti-dumping system. The risk of a COVID-induced surge in dumped steel from our region is very real and would be disastrous for Australian industry and jobs.

There should be continued bipartisan support for the impartial and professional way in which the Anti-Dumping Commission has operated. Now is not the time to weaken Australia's anti-dumping system.

It was therefore of concern that the Commission's 2017 analysis of the 2016 report said:

> Chinese crude steel production reached a record level in June 2017, based on World Steel Association data. The increase in production, in response to higher steel prices, may reflect speculative stockpiling and futures trading, due to concerns of supply shortages following government announcements on the winter curtailment policy and supply-side reforms.
>
> However, in the short to medium-term, with small, less efficient mills and smelters being squeezed out of the industry in China—in order to raise the efficiency of energy usage in Chinese industry—the remaining large/efficient producers face reduced competition. The resultant increased margins for those surviving producers has tended, and will tend, to encourage increased production, eventually restoring Chinese production to pre-rationalisation levels.[50]

and is disappointing that in 2020 the Chinese Government continues to merge and support state owned steelmaking enterprises as well as imposing variable VAT rebates and export taxes and so distorting Chinese export prices vis-à-vis that which would be considered normal commercial prices in the absence of government intervention.[51]

For smaller businesses, such as those involved in fabrication and manufacturing of finished goods, a period of unfair competition will cause significant long-term financial damage and/or threaten viability.

Investigations must be promptly and efficiently conducted, and trade measures appropriate and proportionate to deal with distortions in the market place resulting from the behaviour of foreign governments.

The issue continues to be an issue for the Australian steel industry.

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49 https://www.theaustralian.com.au/business/keep-antidumping-system/news-story/8baac4e87cb6b7bab184e64b7100b7a4

50 Anti-Dumping Commission (2017) *Analysis of Australia's Steel Manufacturing and Fabricating Markets Report to the Commissioner of the Anti-Dumping Commission*: 33

51 BlueScope Steel Industry questionnaire provided for Anti-Dumping Commission case relating to aluminium zinc coated steel from the People's Republic of China

As the Australian Financial Review has reported[52]:

> Australia's largest steelmaker, BlueScope, has been successful in an application to have anti-dumping duties extended on certain steel products from Taiwan after warning federal authorities of a flood of excess steel headed for Australia as the economy in China slows.

The report continued:

> The BlueScope submission said the Chinese economy weighs significantly on Taiwan.
>
> Short-term price declines and medium term price stagnation will almost certainly carry across to the Taiwanese market, consequently impacting normal values and lowering export prices.
>
> The Commission found that Taiwanese exporters have total spare production capacity greater than the total size of the Australian hot-rolled coil market, and that capacity "cannot be idled in an economic downturn".
>
> Some of it would be directed towards the Australian market in the absence of anti-dumping measures.

and concluded by saying:

> Australia's other large steel manufacturer, InfraBuild, which is owned by British billionaire Sanjeev Gupta, said steel dumping into Australia could occur under any market conditions but "the risk is heightened when there is lower domestic demand in exporter origin countries".
>
> **A spokesman for InfraBuild said it would be a "concern" if there was dumping activity at a time when Australian steel manufacturers are investing in decarbonisation.** (Emphasis added)

The relevant legislation has not been amended for a number of years.

In this context, the following recommendations are made.

RECOMMENDATIONS

The anti-circumvention framework of Australia's anti-dumping legislation should be strengthened by:

- **Clarifying that duty absorption applies to the exporters behaviour, not just that of the importer**
- **Aligning the trans-shipment provisions with the intent of the European methodology, which allows the measures to be extended to all exporters from a third country, except for those that can verify that they are bona fide exporters.**
- **Ensuring that trade data can't be made confidential beyond exporter country to make detection of circumvention by minor modification or trans-shipment easier.**
- **Appointing personnel with specific industry experience to assist with the technical aspect of investigations.**

Ensure the most effective measures are applied by:

- **Allowing the Australian industry applicant to nominate form of duties to ensure the measures are as effective as possible for their market.**
- **Streamlining the Lesser Duty Rule so that it is based on the industry applicant full cost to make and sell and an appropriate level of profit to allow for re-investment that includes future investment in decarbonizing.**
- **Altering the Customs Act to reinstate differential duties so that they are more accurate and effective for different models of the goods.**
- **Ensuring relief from dumping is provided to industry sooner.**
- **Ensure the ministerial direction to impose preliminary securities at day 60 of the investigation is adhered to rather than default to the Statement of Essential Facts at 110+ days.**
- **Streamline the 'Review of Measures' and 'Duty Assessment' processes to ensure that the correct amount of duty is collected and paid.**

Other recommendations:

- **Extend the period for which dumping securities can be converted to interim dumping duties from four months to six months, as permitted under WTO rules, to make measures effective sooner.**
- **Prioritise new investigations versus accelerated importer reviews and completing continuation inquiries.**
- **Increase the resources of the Anti-Dumping Commission to improve investigation timelines and accuracy of outcomes.**
- **Review of SME access and assistance arrangements to improve the access and ability of SMEs to utilise Australia's anti-dumping system.**
- **Increase Transparency in the system.**
- **Require non confidential reports of Duty Assessments to published and any appeal findings that are made by the Anti-Dumping Review Panel.**

[52] Australian Financial Review, *BlueScope wins in new anti-dumping push on Taiwan Steel*,12 December 2022: https://www.afr.com/companies/manufacturing/bluescope-wins-in-new-anti-dumping-push-on-taiwan-steel-20221212-p5c5i4

INTERNATIONAL TREATIES

There is a general requirement to treat overseas parties on no less favourable terms than Australian firms when governments are making procurement decisions for infrastructure falling within scope of an international trade agreement.[53]

This is particularly the case in relation to the Agreement on Government Procurement, to which Australia acceded on 5 May 2019.[54]

It adopts a very purist approach to government procurement.

The WTO and Government Procurement page of the WTO website is instructive.[55] It is set out in Box 6 (opposite).

It is clear the normative effect of the Agreement is to attempt to use its terms to encourage trade amongst nations in a way free from what are perceived as being 'distortions' coming from domestic policy considerations.

However, Article 15 of the US-Australia Free Trade Agreement (for example) permits terms and conditions relevant to the evaluation of tenders according to essential requirements and evaluation criteria set out in tender documents[56], whilst Chapter 15, Annex A, Section 7, General Notes provides:

> This Chapter (Chapter 15, dealing with government procurement) does not apply to: (a) any form of preference to benefit small and medium enterprises;

In other words, this allows for preferences to SMEs.[57]

The nature of the Australian steel manufacturing and fabrication industries is such that it remains necessary for the SME 'carveout' to continue, particularly as Australia discusses a free trade agreement with the European Union.[58]

RECOMMENDATION

The general Australian reservation contained in government procurement chapters of free trade agreements disapplying the instrument to forms of preference to benefit small and medium enterprises should remain policy.

Box 6 – WTO and government procurement

Government agencies often need to purchase goods and services purposes to fulfil their functions. Such purchases are generally referred to as government/public procurement.

Achieving 'value for money' is a primary aim of most procurement regimes. But how? Open, transparent and non-discriminatory procurement is generally considered to be the best tool to achieve this goal as it optimises competition among suppliers. At the same time, there are competing policy goals; many governments also make use of government procurement to achieve other domestic policy goals, such as the promotion of specific local industry sectors or social groups.

Providing preferential treatment for domestic goods, services and supplies discriminates against foreign suppliers and therefore acts as a trade barrier in this sector. These barriers are not addressed by the multilateral rules of the WTO as government procurement is explicitly exempted from the main disciplines of both the General Agreement on Tariffs and Trade (GATT - see Article III: 8a) and the General Agreement on Trading Services (GATS – see Article XIII:1).

The liberalisation of government procurement markets holds the potential to generate benefits both in terms of procurement efficiency and commercial interests. Therefore, WTO countries have worked on this issue on three fronts, namely via:

(i) the plurilateral Agreement on Government Procurement

(ii) Doha Development Agenda (DDA) Working Group on Transparency in Government Procurement (which is currently inactive)

(iii) GATS negotiations on government procurement.

Among these three areas, work on the GPA is the most active and has produced substantial trade liberalisation. On 6 April 2014, the revised GPA came into force and marks a significant milestone of the WTO. (Emphasis added)

Finally, it is important to ensure the safety of all Australians through ensuring that building materials used in construction conforms with Australian Standards.

This is discussed next.

53 See for example Article 15.2.1 of the Australia-US Free Trade Agreement
54 https://www.dfat.gov.au/trade/organisations/wto/wto-agreement-on-government-procurement
55 https://www.wto.org/english/tratop_e/gproc_e/gproc_e.htm
56 See Articles 15.6.1(e) and 15.9.6 of the Australia-US Free Trade Agreement.
57 For completeness it should be noted the GPA also has the same SME 'carve out'.
58 It is noted that part of the discussions between Australia and the EU to achieve a free trade agreement relate to negotiations on 'government procurement market access offers'.

6. QUALITY & SAFETY

Image courtesy of Steel Mains, Australia's leading manufacturer of steel pipes for the water industry.

Finally, it goes without saying that the committee was alarmed to hear of the shonky practices that are endemic within the building and construction industry, including at its in-camera hearings. This evidence shone a light on how we have ended up with a glut of defective buildings and an industry in crisis. This testimony resonates with the evidence given by numerous other inquiry participations.

NSW Legislative Council Public Accountability Committee Regulation of building standards, building quality and building disputes Final Report (2020):13

It is very concerning when a parliamentary committee uses the term 'shonky' in a report.

The NSW Public Accountability Committee report into the regulation of building standards, building quality and building disputes[59] is one of a number of recent parliamentary committee reports which indicated conformance failures in building materials.

One example cited in the report said:

> Australian Foundation Systems Pty Ltd, a screw pile, concrete foundation systems and steel sheet pile solutions manufacturing and installation business, underscored that certifiers are relying on the information that they receive from building practitioners. According to the submission, hand written records are a problem because they can be falsified and manipulated to look viable. It reported that with the absence of visual inspections by certifiers this gives practitioners 'far too much opportunity to cheat and then inform the certifier that the product and installation has met a specification required by the engineer'.
>
> Australian Foundation Systems Pty Ltd emphasised that it is much cheaper for builders to use 'inferior products that are not fit for purpose, or sub optimal installation' and avoid responsibility by relying on false compliance certificates that are backed up by the certifiers insurance policy.[60]

whilst a Senate Economics Committee report on the Australian steel industry found:

> The inquiry received alarming evidence regarding the safety risks posed by products that do not meet Australian standards, including steel used in bridges, poles, caravans, trailers and safety structures used on mining sites. Most steel fabricated in Australia conforms to appropriate standards produced by Standards Australia, with contracts in many instances requiring proof of third-party certification. However, evidence provided to this inquiry suggested that legal loopholes in contracts and gaps in regulatory regimes in some instances may allow imported fabricated steel to avoid complying with the same standards as steel made in Australia, meaning that Australian steel incurs a higher cost base than imported products that do not necessarily have to meet the same level of quality.[61]

These types of concerns led Australian governments to commission Peter Shergold and Bronwyn Weir to write what is known as the *Building Confidence Report*.[62]

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59 NSW Legislative Council Public Accountability Committee (2020) *Regulation of building standards, building quality and building disputes* https://www.parliament.nsw.gov.au/lcdocs/inquiries/2540/PAC%20-%20Regulation%20of%20building%20standards%20quality%20disputes%20-%20Final%20report%20-%20Report%20no%206.pdf

60 Page 84

61 Senate Economics References Committee (2017) *Australia's Steel Industry: Forging Ahead*: https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Futureofsteel45th/Report

62 Building Ministers' Forum (2018) *Building Confidence Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia:* https://www.industry.gov.au/sites/default/files/July%202018/document/pdf/building_ministers_forum_expert_assessment_-_building_confidence.pdf.

Governments subsequently agreed to (amongst other things):

- provide a new definition for 'complex buildings' with the intention of incorporating it into the National Construction Code (NCC);
- amend the NCC to ensure that building practitioners have a consistent and robust process to follow in developing and implementing innovative solutions to meet the building safety and health outcomes;
- develop a national model registration and licensing framework for building practitioners;
- develop a national building information database portal, which will include the consistent collection and sharing of building and practitioner information;
- encourage continuing professional development training for building practitioners on the NCC; and
- develop a national dictionary of terminology for the construction industry.

It was decided that States and Territories would implement the recommendations assisted by 'model guidance' published by the Australian Building and Construction Board (ABCB).[63]

Whilst this is a step in the right direction Australian Governments are moving at different speeds in implementing the Building Confidence recommendations.

RECOMMENDATION

Australian Governments should set a deadline by which the Building Confidence recommendations should be implemented throughout Australia.

CHAIN OF RESPONSIBILITY

One area not being dealt with in a uniform manner is ensuring that non-conforming product is not used in the first place.

After all, it is all a bit late to seek compensation **after** defective building products have been used. It would be far better to prevent their use **before** buildings have been erected.

The Building Confidence Report indicated:

> Regulation of the building product supply chain is warranted, and product recall and/or prohibition powers should exist for high-risk building products. However, it has not been recommended that all building regulators be given such powers. It is a matter for governments to decide whether such powers should sit with building or consumer affairs regulators. On one matter we are clear: if building regulators are to be given powers to regulate the supply chain, this work should not detract from their primary role.[64]

Queensland has passed creating a **chain of responsibility** on those who manufacture, imports or supplies a building product in an endeavour to ensure non-conforming building products are not incorporated into a building, a concept considered by building industry participants as having the desired effect in prompting closer scrutiny of product compliance.[65]

New South Wales has circulated draft legislation which reemphasises a duty of care owed by building industry participants. It has also proposed the introduction of the Queensland chain of responsibility.

It is appropriate that **all** Australian jurisdictions adopt a uniform law adopting the chain of responsibility concept.

RECOMMENDATION

Uniform national legislation creating a 'chain of responsibility' on anyone who manufactures, imports or supplies a building product to ensure non- conforming building products are not incorporated into buildings should be introduced.

ASSISTING WITH COMPLIANCE

As the Australasian Procurement and Construction Council says in its document *Procurement of Construction Products: A Guide to Achieving Compliance* (2015):

> Evidence suggests that the market penetration of non-conforming products in several key construction product sectors in Australia may be up to 50 per cent This is a sobering and alarming statistic.[66]

Observable defects such as substandard welding that needed to be ground out and replaced, laminations in plate that could cause catastrophic failure, substandard corrosion protection affecting the life of an asset and generally poor workmanship were found unfortunately to be commonplace on imported structural steelwork.

There also is a price depressing effect from these imports that affects a sector of local fabricators that are forced to chase

63 https://www.abcb.gov.au/initiatives/bcr See also https://www.abcb.gov.au/initiatives/bcr/bcr-outputs
64 *Building Confidence*: 21
65 Housing Industry Association (NSW) *Housing Australians* submission to NSW Government on Reforming Building Laws in NSW (2022): 94
66 https://9104f275-f216-4fd2-9506-720eb252b4fc.filesusr.com/ugd/473156_54e042e91f914e81a2e55b6a9bbbc301.pdf

price at the expense of maintaining their quality systems and procedures.

The knock-on effect is that currently many fabricators and steelwork manufacturing SMEs are unable to maintain a reasonable profit that would allow them to reinvest in their businesses, such as new technology like robotic automation.

Testing by the steel industry has also identified metallic coated and pre-painted steels that do not meet Australian Standards and regulations. Examples include substandard metallic coating and paint thicknesses and non-conforming levels of lead in paint.

The non-compliances are not limited to poor quality and bad workmanship but extend to deliberate fraudulent behaviour with examples such as falsified test certificates, welds made with silicone rubber and then painted, attachment of bolt heads with silicon rather than a through bolt and water filled tube to compensate for underweight steelwork with fraudulent claims that their products meet particular Australian Standards.

This issue of non-compliant substitutions concerns building surveyors or inspectors who do not have the engineering expertise, knowledge, or often the opportunity to identify steel defects, or check whether the steel supplied is compliant.

Builders and project managers may take on the responsibility of site inspection but often do not have the skills or knowledge to understand compliance at a material or fabrication level.

Moreover, for structural steelwork there is currently no reliable system for surveillance of imported building products apart from product failure. However, if defects with major structural steel items are discovered, the prime contractor often has no alternative to meet the time constraints but to accept faulty product or try to patch repair any defects.

The implementation of a system that requires the supplier and all stakeholders in the construction chain to ensure that the products that they are selling are certified to comply with relevant standards and fit-for-purpose responsibilities within their scope will be good for Australia.

In 2014, the ASI implemented a National Structural Steelwork Compliance scheme that requires steelwork fabricators to elect to be audited for compliance capability. It is not mandatory and relies on contractor engagement and good purchasing practice for its success.

It is modelled on the steel product compliance principles used in the UK where there is a risk categorisation for each type of structure and the fabricator capability requirements are commensurate with the level of complexity and nature of the risk profile involved. This is also a voluntary scheme as per the model used in the USA.

The scheme is open to all fabrication companies from any country and provides the engineer and client reassurance that the subcontractor is certified as being capable of carrying out the work to Australian Standard requirements at a predetermined risk category of the project.

Steel reinforcing and structural steel product manufactured in or imported into Australia is covered by a compliance scheme managed by the Australasian Certification Authority for Reinforcing and Structural Steels (ACRS). This scheme seeks to certify compliant structural and reinforcing steel by auditing at the steel mill level. It is well established and has a very good track record in ensuring compliant quality steel is used in construction.

South Australia requires that contractors purchase reinforcing bar and mesh, pre and post tensioning strand structural steel from a steel manufacturer that has been certified by the Australasian Certification Authority for Reinforcing and Structural Steels (ACRS) as complying with AS/NZS 4671, 4672, 1163, 3678, 1594 and 3679.1 and 3679.2 standards.[67]

Contractors must also retain records to provide evidence of the supply of steel from an ACRS accredited mill and must make such records available to the Office of the Industry Advocate for review, upon request.

In a similar vein, NSW has a direction issued by the NSW Procurement Board, which requires (amongst other things) compliance with AS/NZS 5131 Structural Steelwork – Fabrication and Erection and will, wherever practicable, specify the use of certified steel fabricators and erectors.[68]

It is set out in **Attachment 2**.

Finally, these requirements are mandated for projects conducted by the Queensland Transport and Main Roads[69] the Tasmanian Department of Transport[70] and the Western Australian Department of Main Roads[71].

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67 *South Australian Industry Participation Policy* (2021):9 https://www.industryadvocate.sa.gov.au/documents/20210921_Updated-South-Australian-Industry-Participation-Policy-A2036574.pdf

68 https://arp.nsw.gov.au/pbd-2016-03-construction-standards-and-conformance/

69 Department of Transport and Main Roads (2020) MRTS 78 *Fabrication of Structural Steelwork* (as published in July 2022): https://www.transport.tas.gov.au/roads_and_traffic_management/contractor_and_industry_information/specification_listings_-_standard_sections/accordion/standard_sections_-_600_series_-_bridgeworks

70 Mainroads Western Australia (2018) Specification 830 *Structural Steelwork:* https://www.mainroads.wa.gov.au/globalassets/technical-commercial/technical-library/specifications/800-series-bridge-major-structures/specification-830-structural-steelwork.pdf

RECOMMENDATIONS

The concept already applied within the NSW and South Australian procurement policy frameworks should be extended so that:

(a) All structural steel products should be sourced from mills with Australasian Certification Authority for Reinforcing and Structural Steel (ACRS) or comparable independent third-party certification;

(b) All fabricated steelwork products should be obtained from suppliers certified by Steelwork Compliance Australia third-party certification;

(c) All structural steel and fabricated products should be sourced from businesses accredited under the steel industry's Steel Sustainability Australia Certification Program; and

(d) Steelwork meeting Australian Standard AS/NZS 5131 should be used by all governments when entering into contracts for the construction of all forms of building. This should be a condition imposed by the Commonwealth for any jurisdiction receiving Commonwealth funds for infrastructure projects.

CONFIDENTIAL REPORTING

A programme called Confidential Reporting on Structural Safety – Australasia commenced operation in September 2018.[72]

Based on reporting techniques developed by NASA for the aviation industry, CROSS-AUS is a confidential reporting scheme that captures, and shares lessons learned in the construction industry with the aim of preventing future failures.

The ASI believes that to augment the existence of CROSS-AUS, Australian governments should establish a cell within the relevant Department with principal responsibility for procurement policy to allow 'whistle-blowers' to report the use of non-compliant product in government funded infrastructure in much the same way that reports of malpractice in other areas of administration can be reported.

For this to work, procurement documentation will need to contain provisions that requires suppliers and contractors to provide all reasonable assistance and all relevant documents necessary to determine whether non-compliant product has been used in government funded infrastructure.

RECOMMENDATION

Governments should establish statutory mechanisms to permit the confidential reporting of the use of non-compliant product in the construction of government funded infrastructure

MANDATORY THIRD-PARTY CERTIFICATION OF HIGH-RISK BUILDING PRODUCTS

Conformance will also be assisted if the use of identified high-risk building products materials certified by accredited third-parties as meeting standards set out in the National Construction Code be made mandatory.

Assessing the compliance of construction products is a complicated and difficult field with few in the supply chain adequately trained to properly assess compliance, regardless of whether they are registered or not.

RECOMMENDATION

Only high-risk building products certified by accredited third-parties as meeting standards prescribed in the NCC should be used in buildings.

HARMONISING BUILDING AND WHS LAWS

Finally, non-compliant construction products are a demonstrable risk to the health and safety of the community.

Workplace Health and Safety (WHS) laws prescribes a 'duty of care' for all persons conducting a business or undertaking that is involved in the construction of a building to ensure, so far as is reasonably practicable, that the health and safety of others is not put at risk from work carried out as part of the conduct of the business or undertaking.[73]

Codes of practice can be made for the purposes of WHS law. They have a special status because an approved code is automatically admissible as evidence in court proceedings under the WHS Act and Regulations.

72 https://www.cross-safety.org/aus

73 Subsection 19(2) of the model WHS law could be used as the basis of the laws in force in each Australian jurisdiction.

Courts may have regard to a code as evidence of what is known about a hazard, risk or control and may rely on the code in determining what is reasonably practicable in the circumstances to which the code relates.

Safety outcomes would be further enhanced if relevant WHS Regulations and the relevant Codes of Practice drew the connection between non-compliant building products and risk minimised WHS outcomes more definitively.

One way of doing this would be through amending the Safe Design of Structures Code[74] to specifically address construction product compliance through the provision of guidance on the dangers of using non-conforming product and in failing to follow Australian Standards, as well as ensuring that relevant parties have a documented plan setting out how they will ensure products meeting relevant standards are used in construction.

Clearly identifying the link between non-compliant construction products and risk/safety in the manner will ensure conforming building materials are used in Australian buildings.

RECOMMENDATION

That the risks to health and safety posed by the use of non-conforming products in construction be identified in WHS regulations and Codes of Practice

74 https://www.safeworkaustralia.gov.au/system/files/documents/1810/model-cop-safe-design-of-structures.pdf

7. CONCLUSION

Image courtesy of InfraBuild.

I want to be the Prime Minister who helps Australia stand on our own two feet again. This is about sovereign capability.

Serious countries should make things. Serious countries can stand on their own two feet when it comes to manufacturing essentials.[75]

Hon Anthony Albanese, Prime Minister, 15 May 2022

The interruptions to supply chains resulting from COVID-19 and from wars in Europe have caused a rethink on the importance of having a sovereign manufacturing capacity in Australia.

The need for Australia to be capable to meet its net zero ambitions has been identified.

It is also clear that the Government is committed to 'building things' in Australia.

As Minister Husic told the Australian Steel Convention:

> The future of the steel sector will be strong by working together. Our focus is on speeding up the energy transition, hitting our emissions targets which will provide a huge opportunity for industry and I do want to help you take full advantage of that.
>
> Our policy levers should help develop industry-specific plans to boost local production capacity for that energy transition. Steel, locally made steel, more importantly, can become the backbone of offshore wind infrastructure.
>
> An emphasis on creating jobs, boosting skills, bringing industry expertise back on shore, supercharging national productivity is good news for all of us. We are eager to continue working with you all across the steel sector as we build a future made right here in Australia.[76]

A sustainable Australian steel industry with the technical capacity to provide low emissions steel products to markets throughout the world, and so support the net zero aspirations of the Australian community should be regarded as a significant policy outcome for the Australian Government.

The recommendations contained in this Plan for Building a Sovereign and Sustainable Australian Steel Industry and Supporting a Net Zero Australia should be adopted.

Australian Steel Institute
February 2023

75 ALP media release *Labor's $1 billion Investment in Advanced Manufacturing,* 15 May 2022: https://anthonyalbanese.com.au/media-centre/labors-1-billion-investment-in-advanced-manufacturing-marles-husic

76 https://www.minister.industry.gov.au/ministers/husic/speeches/address-australian-steel-convention

ATTACHMENTS

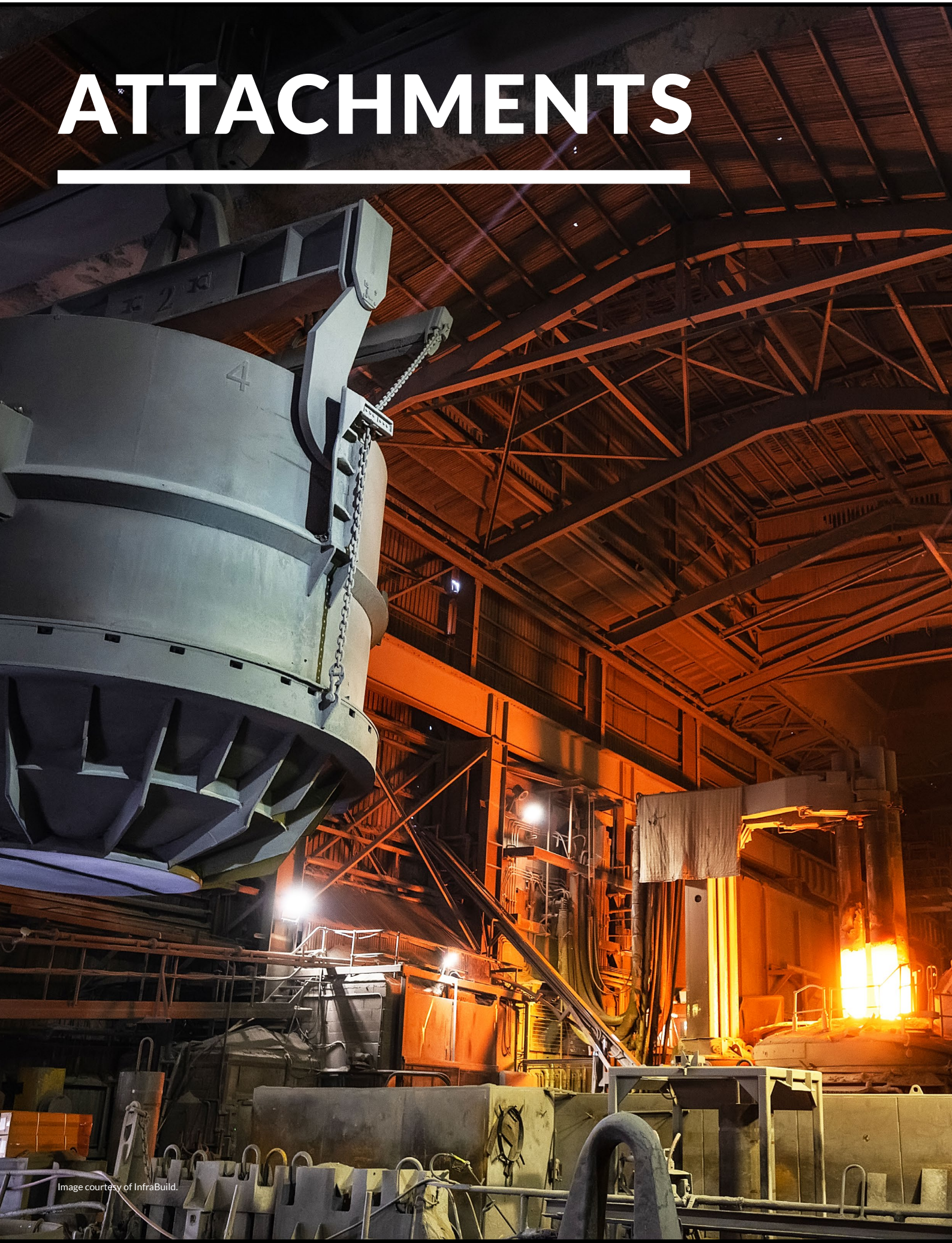

Image courtesy of InfraBuild.

ATTACHMENT 1:
PRINCIPLES CONTAINED IN THE *PROCUREMENT OF CONSTRUCTION PRODUCTS: A GUIDE TO ACHIEVING COMPLIANCE*

PRINCIPLE 1:

All relevant legislation must be complied with including, but not limited to, building, workplace health and safety, and consumer laws.

PRINCIPLE 2:

Contract documentation should clearly specify product standards and the required evidence of conformity.

Product standards should refer to relevant Australian Standards. Where there are no relevant Australian Standards, relevant international standards or authoritative industry sources should be utilised.

PRINCIPLE 3:

All construction products procured should conform to the requirements in the contract documentation.

PRINCIPLE 4:

The selection of the required evidence of conformity should be based on the intended use and risk exposure (likelihood and consequence of failure) of each construction product.

PRINCIPLE 5:

Construction product conformity requirements should refer to relevant Australian Standards. Where there are no relevant Australian Standards, appropriate international standards or authoritative industry sources should be utilised.

PRINCIPLE 6:

Evidence of construction products meeting specified standards should be demonstrated by conformity assessment including, but not limited to, product certification, testing or inspection, as set out in the contract documents.

PRINCIPLE 7:

Evidence of the source of construction products and their authenticity should be obtained and retained.

PRINCIPLE 8:

Project managers should obtain and retain contemporary and credible documentary evidence to demonstrate conformity of all construction products.

PRINCIPLE 9:

Responsibility for managing conformity assessment outcomes at each stage of the project should be appropriately allocated in the contract documentation.

PRINCIPLE 10:

Where third party conformity assessment bodies are relied upon to provide evidence of conformity, they should be accredited by:

- Joint Accreditation System of Australia and New Zealand (JAS-ANZ) – for product certification, management systems, certification and inspection bodies
- National Association of Testing Authorities, Australia (NATA) – for testing and calibration laboratories and inspection bodies
- Accreditation bodies that are signatories to relevant international multilateral/mutual recognition arrangements and have the relevant scope associated with the conformity assessment activity.

PRINCIPLE 11:

Where construction products are supplied without required evidence of conformity, or where doubt exists about product conformity, product testing to an appropriate level may assist in ascertaining construction product quality.

PRINCIPLE 12:

Without adequate evidence of product conformity, the product should not be used in construction.

Sydney's award-winning Allianz Stadium was made possible with steel, supplied by BlueScope. Image courtesy of Aurecon. Credit: Damien Ford Photography

ATTACHMENT 2:
NSW PBD-2016-03: CONSTRUCTION STANDARDS AND CONFORMANCE

DESCRIPTION

NSW Government agencies must ensure that construction materials and processes are fit for purpose when procuring construction goods and services. This includes requiring compliance with relevant Australian or international standards.

DETAILED OUTLINE

This Direction applies to the procurement of construction goods and services by a government agency within the meaning of the Public Works and Procurement Act 1912. It replaces Procurement Board Direction *PBD 2015-01C Use of recognised industry standards when planning and delivering infrastructure*.

The NSW Procurement Board supports the use of open and recognised industry standards wherever practicable when planning and delivering infrastructure as a way of enabling Australian and international suppliers to compete fairly for opportunities. These standards and processes must be capable of recognising domestic and international suppliers in a way which complies with Australia's Free Trade Agreement commitments. The Board also acknowledges the role that recognised independent testing and certification bodies play in delivering assurance about the quality of materials used in infrastructure. Agencies are encouraged to disclose publicly the source of major components and materials on infrastructure projects valued at $10 million or above.

The Board is concerned that non-conforming and non-compliant building products and construction materials are potentially affecting the quality, safety and whole of life-time performance of buildings and structures constructed for the NSW community. Government agencies are responsible for ensuring that they achieve value for money when procuring construction goods and services. This includes ensuring that a building or structure procured by an agency is fit for its planned purpose and, where relevant, that construction materials and processes used in construction are fit for purpose.

DIRECTION

The Board **directs** government agencies to take the following actions when procuring construction goods and services:

1. Identify and document the intended purpose or purposes of the procurement, including the anticipated uses and period of use.
2. Identify and assess risks arising from non-conforming or non-compliant building products and construction materials, taking account of the intended purpose or purposes of the procurement.
3. Ensure these risks are managed as far as practicable, taking into account:
    - legal obligations relating to workplace health and safety, public safety and environmental protection
    - compliance with the relevant design and performance standards in the National Construction Code
    - other relevant international and Australian Standards and technical specifications.
4. Contractually require compliance with relevant standards for building products, construction materials and construction or manufacturing processes. This includes but is not limited to standards specified by the Board in the attachment to this Direction.
5. Ensure compliance with relevant standards is assured by contractors, including where relevant by third party independent certification.

The Board authorises the NSW Chief Procurement Officer to amend the attached list of contractually required standards and to publish standard contractual provisions dealing with compliance and assurance. The authority of the NSW Chief Procurement Officer is subject to approval by the Construction Leadership Group established by the Board.

AS/NZS 5131

The Board is aware that Standards Australia released a draft of AS/NZS 5131 *Structural steelwork— Fabrication and erection* for public comment in March 2016. This Standard when finalised will set out minimum requirements for the construction of structural steelwork. It will form an important benchmark for NSW government construction projects.

The Board will require compliance with AS/NZS 5131 when it is finalised where it is relevant to the construction project and will specify the use of certified steel fabricators and erectors, wherever practicable. The Board's Construction Leadership Group is authorised to:

- set a timetable for steel fabricators and erectors to demonstrate that they can achieve *compliance with AS/NZS 5131
- recognise certification schemes or other arrangements which will be taken as evidence of compliance capability.

Note: Standards Australia published AS/NZS 5131:2016 *Structural steelwork - fabrication and erection* on 8 December 2016. The NSW Government requires that contractors be able to demonstrate compliance with this standard by 1st October 2017.

ATTACHMENT

Government agencies must specify and contractually require compliance with a standard in this table where the standard is relevant to a construction project. An agency can accept certification assurance identified in this table as evidence of compliance.

STANDARD	RECOGNISED COMPLIANCE ASSURANCE
AS/NZS 1163: 2006 Cold formed structural steel hollow sections	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 1594:2002 Hot rolled steel flat products	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 3678: Structural steel - Hot rolled plates, floor plates and slabs	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 3679.1: Structural steel - Hot rolled bars and sections	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 3679.2: Structural steel – Welded I sections	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 4671: Steel reinforcing materials	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 4672: Steel prestressing materials	Certification by Australasian Certification Authority for Reinforcing and Structural Steel
AS/NZS 5131 Structural steelwork - fabrication and erection*	None specified

* Inserted 26 April 2017

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Construction of the Flinders Link Rail Project in South Australia.
Image courtesy of InfraBuild.

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