



EXECUTIVE INSIGHTS

Carbon Competition – Strategy for Success Under the Revised Safeguard Mechanism

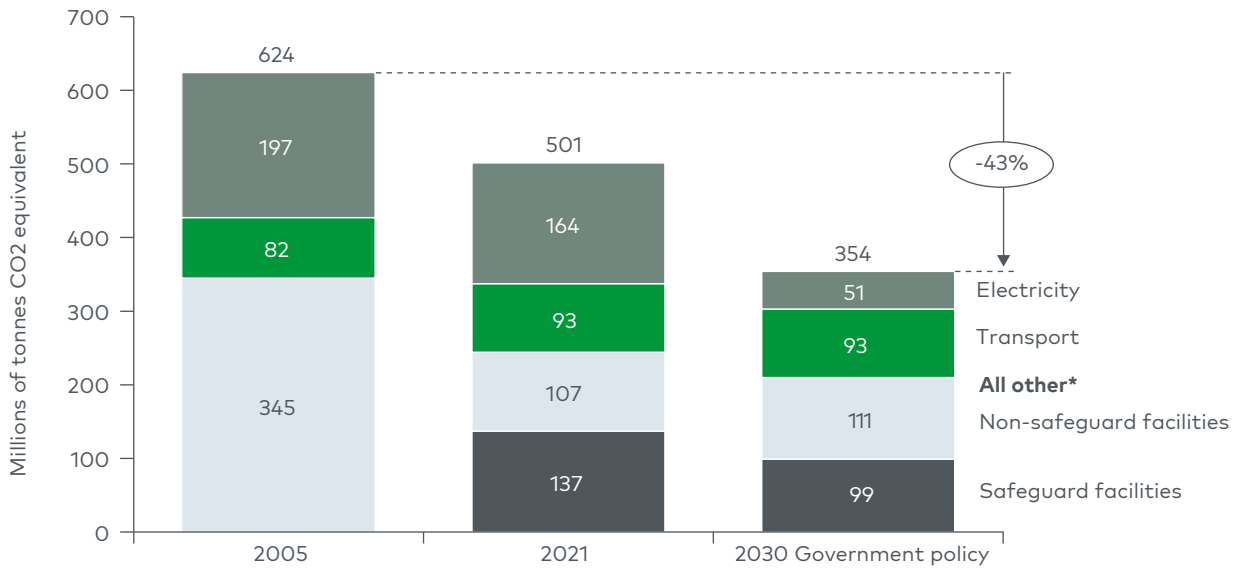
Introduction

As of 1 July 2023, Australia's revised Safeguard Mechanism¹ has ushered in a new era for the nation's major emitters. The regulatory framework captures 215 facilities with over 100 kilotons (kt) of Scope 1 emissions, including manufacturing sites, mine sites and gas fields, and is a significant step towards delivering Australia's 2050 net zero commitment. These facilities represent c.30% of Australia's emissions, and will make an important contribution to Australia's commitment to a 43% reduction in emissions by 2030 versus a 2005 baseline (see Figure 1).

The revised mechanism, effective from 1 July 2023, sets a 'baseline' emission level for facilities, which is a prescribed level of emissions per unit of production (also known as an emissions intensity). These baselines will be adjusted for production levels and will progressively decrease over time, setting a trajectory for industrial facilities to reach net zero by 2050.

Importantly, the revised mechanism also introduces financial incentives to drive compliance. For example, facilities that emit more than their baseline will incur costs to purchase and surrender Australian Carbon Credit Units (ACCUs), currently priced at c.AU\$30/t of CO₂. Similarly, facilities that emit less than their baseline will earn Safeguard Mechanism Credits (SMCs), which are tradeable between Safeguard facilities and can be surrendered in place of ACCUs to meet a facility owner's Safeguard obligations.

Figure 1
Australian carbon emissions by sector and policy to 2030 (2005-2030F)



* 'All other' is made up of the categories stationary energy, fugitives, agriculture, industrial processes, waste and LULUCF
 Note: CO2=carbon dioxide
 Source: Clean Energy Regulator; L.E.K. research and analysis

With different sources of emissions and starting baseline levels, the nature of the emissions reduction challenge for Safeguard facilities and the levers they have available to them will be different.

In this edition of *Executive Insights*, L.E.K. Consulting explores how Australian companies with substantial emissions can align their decarbonisation efforts with their broader competitive and corporate strategy.

Understanding pathways to decarbonisation

For any organisation seeking to reduce their emissions, the starting point is to understand the sources of their facilities emissions and the levers available to reduce them.

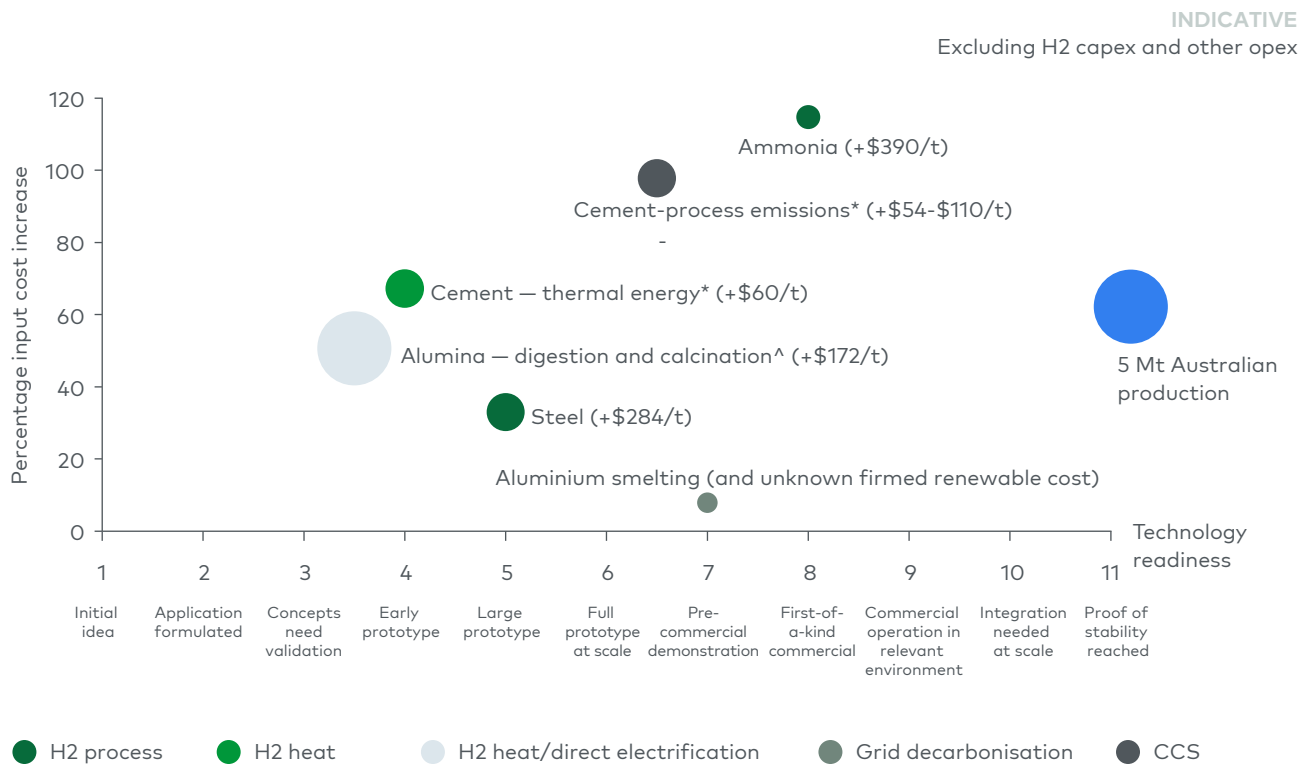
By virtue of their size and reporting obligations under the "National Greenhouse and Energy Reporting Act 2007" ("the Act"), Safeguard facilities tend to have a good understanding of their emissions footprint and what these levers are likely to be.

However, the economics and strategic implications of reduction strategies can be complex, and are typically not well understood by organisations and their stakeholders. For example, they can involve significant capital investments, the deployment of immature or emerging technologies or site-specific risks, all of which generate different economics and can have implications for the strategic and competitive industry landscape. In our special

report for Manufacturing Australia in 2022,² we delved into the potential decarbonisation pathways for four commodities – steel, aluminium and alumina, ammonia, and cement – and the economics of those pathways. This demonstrated that there are often multiple decarbonisation pathways, that many are promising but pre-commercial, and will result in material cost increases for these fundamental products (see Figure 2).

Figure 2

Key emission reduction pathways – cost impact and technology readiness (\$70/MWh delivered electricity)



*Cement cost increases will result from both thermal energy and process emissions cumulatively, and cement thermal cost increases are a 'best case' based on East Coast gas rather than coal

^Alumina digestion and calcination are combined given similar technology readiness, and are a 'best case' based on digestion and calcination using West Coast gas rather than coal; analysis as of July 2021

Note: MWh=megawatt hour; H2=hydrogen gas; CCS=carbon capture and storage

Source: L.E.K. Industrial Net Zero model; L.E.K./Manufacturing Australia, Special Report – Low Emissions Manufacturing: Australia's Opportunities, 2022

If an organisation is to formulate a commercially viable and actionable plan to reduce emissions, they will need to understand their decarbonisation options and the associated economics.

Without this knowledge and understanding, organisations risk pursuing higher cost or higher risk emissions reduction pathways that may put the organisation at a competitive disadvantage.

Competitive dynamics of decarbonisation

Once organisations understand their decarbonisation options, they need to consider the dynamics facing their peer competitors. Competitors may have lower input costs, such as electricity or gas prices, have access to low carbon inputs, have more carbon-efficient facilities, or even have access to greater government support – all of which could impact their economics and shape their strategic choices.

As an example, in glass manufacturing, incorporation of more recycled content (cullet) into the final product lowers the emissions intensity of the bottle more than reducing the proportion of natural gas used to operate the furnace. Therefore, participants who can access recycled content more economically can reduce their carbon footprint more than, say, those who seek only to substitute lower carbon energy inputs. Similarly, offshore competitors with access to cheap electricity and gas could potentially deliver lower-cost products to Australia, displacing locally manufactured products – particularly if they do not face carbon costs like the Safeguard Mechanism, and in the absence of carbon border adjustment regulations.

Different emissions reduction policies and carbon pricing across countries present a particular challenge for both businesses and governments. Businesses facing domestic carbon costs that do not apply to imports are disadvantaged, which can ultimately result in imported products displacing domestic production and may even result in an increase in global emissions ('carbon leakage').

A Carbon Border Adjustment Mechanism (CBAM) is an emerging solution to apply equivalent carbon pricing to domestic and imported products. The European Union's CBAM is scheduled to take effect in 2026 for aluminium, cement, iron and steel, electricity, hydrogen, and fertiliser commodities and products, and CBAMs are under investigation and in development around the world, including in Australia.³ Given the many complex policy design choices that must be made to implement a CBAM – some of which are not neutral in application across market participants – CBAMs should not be viewed as a panacea, particularly as a CBAM does not address other competitiveness challenges for domestic manufacturers that are related to carbon policy but not directly reflecting carbon pricing (for example, ability to secure cost-competitive natural gas).

The implication of a careful competitive carbon analysis is often that competitors have different emission reduction economics-based variances in options, inputs or policy environment. Understanding the relative advantages that you and your competitors face can give you and your organisations greater confidence around the pathways those competitors are likely to take, and therefore help shape your own choices to successfully compete in a carbon-constrained future.

Achieving a balance: passing on decarbonisation costs

Organisations then need to consider to what extent their decarbonisation costs can be passed through to customers.

The customer willingness to pay will be one factor. Some customer segments may be willing to pay premiums for environmentally friendly products ('green premiums'), while others less so. For example, recent work we have undertaken in various markets has shown that stated willingness to pay for lower carbon products is greater in premium products where the decarbonisation costs represent a relatively immaterial increase on the overall product cost. Segments where end consumers are younger and more affluent also tend to experience this. Luxury motor vehicles are an example of this dynamic, where the costs of low-emission inputs are small relative to the final price of the vehicle, and environmental responsibility is an important part of the value proposition to customers.

However, green premiums remain elusive in practice and stated intentions do not necessarily flow through to purchasing behaviour.

One example of this is sustainable aviation fuels. While there has been an observable premium of 2-4x for sustainable aviation fuel (SAF) over conventional jet fuel (driven by substantially higher production costs), adoption remains low in the competitive aviation industry. Part of the challenge for SAF adoption is the increased cost of SAF, where many airlines offer carbon offsets at low cost that represent a 'good enough' solution for some customers.⁴ The implication of this is that organisations need to understand nuances at the segment level (e.g. including potential early adopters) when considering whether and how to pass on decarbonisation costs.

Figure 3
Price premium of sustainable aviation fuel over conventional jet fuel



Source: S&P Platts; Wall Street Journal⁵

Policy is a second factor influencing cost pass-through. For example, the introduction of a CBAM will effectively result in increased prices to reflect carbon costs to create a level playing field between domestically manufactured and imported product. With all participants paying carbon costs, this should create the incentive (all else being equal) for businesses to pass those costs through. However, these CBAMs remain early stage, with the EU only looking to implement its scheme from 2026 and Australia only in a consultation phase. The Safeguard Mechanism, on the other hand, imposes costs on domestic emitters now.

This could mean that some participants have more capacity to pass on or absorb costs than others. The implication of all of this is that many organisations are going to have to absorb these costs for some time, but there will be pockets where there are exceptions.

Navigating future scenarios

The decarbonisation landscape is both dynamic and full of uncertainties, both within and outside of an organisation's control.

The range of scenarios that organisations could be confronted with is broad:

- Firstly, policies are likely to evolve as government targets approach and their achievability becomes more challenging. This is likely to result in higher carbon costs, faster regulated emission decline rates, potentially the extension of the Safeguard Mechanism to smaller facilities (i.e. less than 100kt Scope 1), the acceleration of a CBAM, or even greater government intervention and investment in particular sectors.
- Secondly, we are likely to see consumers become more accepting of the costs of decarbonisation and their role in paying for it, subject to the macroeconomic environment, as consumer wealth and prosperity is linked to willingness to pay for altruistic outcomes.
- Thirdly, we are likely to see global competitors learn from experiences in other markets (e.g. technological solutions) and use those learnings and a broader facility footprint to test and learn to plot their entry into the Australian market.

Organisations therefore need to think carefully about what these scenarios look like for them, understand how their competitive position will be impacted, and the opportunities to shape and strengthen it.

This is something that L.E.K. is supporting our clients with. For example, in a recent project in building materials, we worked with our client to build a scenario-based valuation model which assessed the impacts of both the revised Safeguard Mechanism and a potential CBAM so they had a robust view of their competitive position as carbon costs increase,

how market pricing is likely to evolve, the returns on abatement investments, and the resulting enterprise value to drive corporate strategy for the business.

In our experience, organisations increasingly need a robust view of how their plans and choices are delivering both emissions reduction and value to shareholders.

Conclusion

Decarbonisation is not a choice but a strategic imperative. Regardless of whether your business is currently affected by the Safeguard Mechanism or is merely considering whether to make voluntary commitments to emissions reduction, formulating a strategic roadmap that considers competitive and commercial dynamics is crucial for a sustainable future.

Your roadmap needs to be realistic, both flexible and actionable, and commercial. To start confidently competing in a rapidly changing, carbon-constrained world, contact L.E.K. today at strategy@lekinsights.com.

Endnotes

¹ The "Safeguard Mechanism" is created by the "National Greenhouse & Energy Reporting (NGER) Act 2007", as amended by the "Safeguard Mechanism (Crediting) Amendment 2023" and the "National Greenhouse & Energy Reporting (Safeguard Mechanism) Amendment (Reforms) Rules 2023"

² "Low Emissions Manufacturing: Australia's Opportunities", available here: <https://www.lek.com/insights/sr/low-emissions-manufacturing-australias-opportunities>

³ The Australian Government is consulting on a potential Australian CBAM as part of its "Carbon Leakage Review" – consultation paper available here: <https://consult.dcccew.gov.au/consultation-proposed-approach-carbon-leakage-risk-as-part-of-the-carbon-leakage-review>

⁴ With an emissions factor of Jet A1 approximately 2.5kg of CO₂e per litre and a current cost per litre of around AU\$0.80, a \$1.60 to \$2.40 SAF premium appears expensive if a quality offset can be purchased for \$50/ton – equivalent to \$0.125 per litre or a 15% premium on standard fuel cost.

⁵ Wall Street Journal Sustainable Business Article "Sustainable Aviation Fuel Leader Talks Green Premiums and Impact of Tax Incentives": <https://www.wsj.com/articles/sustainable-aviation-fuel-leader-talks-green-premiums-and-impact-of-tax-incentives-22f77d81>

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About L.E.K. Consulting

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