# *Fortescue's path to Real Zero: policy strengths, weaknesses, and effectiveness*

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## 1. Executive summary

*Since being established in 2003, Fortescue (ASX: FMG) has grown to become the world's fourth-largest iron ore producer and an important supplier to the Chinese steel industry. Despite its deep reliance on iron ore, Fortescue has committed to a Real Zero emissions target. This is defined as eliminating Scope 1 and 2 emissions from its Australian iron ore operations by 2030 without relying on carbon offsets. This plan is supported by a highly favourable domestic policy environment, with strong Australian government incentives for renewables, and significant global investments into clean energy. However, Real Zero addresses only ~1% of Fortescue's total emissions. The remaining ~99%, classified as Scope 3, are generated by downstream steelmaking beyond the company's direct control. Fortescue will use carbon offsets in the attempt to combat Scope 3 emissions. This limitation presents a fundamental structural weakness, raising concerns over the plan's material impact on global emissions. This gap may expose Fortescue to greenwashing accusations and reputational risk if its climate action claims outpace tangible results. Overall, the Real Zero plan is technically and economically feasible, but limited in near-term climate impact. Its ultimate effectiveness will depend on broader adoption of decarbonisation efforts driven by activism and stakeholder engagement.*

## 2. Introduction

Fortescue is an important Australian iron ore producer that began in the Pilbara region. It derives its revenues from iron ore but has committed itself to decarbonisation through a Real Zero plan. This refers to the elimination of Scope 1 and 2 carbon emissions in its Australian iron ore operations by the end of 2030. It is an ambitious plan that relies on a favourable business and regulatory environment, technical innovation, and wider adoption of cleaner energy practices. Whilst commendable, its material effect on emissions is severely limited by the company's inability to directly control Scope 3 emissions. Activism and stakeholder engagement is therefore crucial to the long-term success of the plan. I will begin this paper by briefly describing Fortescue's business and the Real Zero plan. I will then analyse the strengths and weaknesses of the plan then end with a comment on its overall effectiveness.

## 3. Fortescue, Real Zero, and key terminology

Fortescue is one of Australia's largest mining and resource companies and an important exporter of iron ore. The company was established in 2003 in the remote Pilbara region of Western Australia with the development of its first mine, Cloudbreak (Fortescue, n.d.b). Now with a market capitalisation of approximately $AUD64.8 billion, Fortescue is a constituent of the ASX100 index, representing Australia's largest publicly listed firms. It is the fourth largest iron ore producer in the world (Burton, 2024) and owns assets across Africa, Latin America, and Australia, with its main facilities still remaining in Western Australia. The company has also invested heavily in infrastructure, now owning 760 kilometres of rail that connect Fortescue's two

major mining hubs to Port Hedland (Fortescue, n.d.b). Since inception, the company has shipped over two billion tonnes of iron ore, and Fortescue is 'a major supplier of iron ore to the Chinese steel industry' (Fortescue, n.d.a). Now exporting more than 190 million tonnes per year, its main revenue sources remain overwhelmingly concentrated in Australian iron ore production and exports. In the December 2024 half-year financial results, it was reported that a large majority of the company's revenue was earnt through the Metals operating segment. This segment is defined as the 'exploration, development, production, processing, sale and transportation of iron ore, the exploration for other minerals and investment in green iron metal' (Fortescue, 2025b). In other words, Fortescue is an iron ore company at heart, accounting for approximately 99% of consolidated revenue in that recent reporting period.

Despite this reliance on iron ore mining, Fortescue has ambitions to radically transform the carbon footprint of its operations. These ambitions are backed by a detailed plan and heavy investment – and Fortescue now describe themselves as 'a global green technology, energy and metals company that is working to accelerate commercial decarbonisation through heavy industry, rapidly, profitably and globally' (Fortescue, n.d.b). In 2020, Fortescue Future Industries was established to help realise this ambition by 'developing green electrons, green hydrogen and green technology at scale in order to replace fossil fuels forever' (Fortescue, n.d.b). This paper will focus on the specific policies that Fortescue have developed to achieve this transformation, evaluating the strengths, weaknesses, and overall effectiveness of the plan. It is an ambitious plan, but the central aim can be stated quite simply. Fortescue have identified three central objectives: 'reduce Fortescue's emissions rapidly and profitably…identify and respond to climate risk and opportunities…and develop solutions to drive economy-wide decarbonisation' (Fortescue, 2025a). In more specific, operational terms, this means forging a path towards Real Zero:

> 'Our Real Zero Target is an emissions reduction target that aims to eliminate Scope 1 and 2 emissions from our Australian terrestrial iron ore operations by the end of 2030' (Fortescue, 2025a).

In this context, the terminology used is important to understand the specifics of Fortescue's ambitions. Real Zero is distinct from net zero in that *it does not make use of carbon offsets* (Fortescue, 2025a). So Fortescue will achieve its goals *without relying on carbon offsets*. Fortescue emphasises this difference and explains why they are aiming for a Real Zero reductions target, saying that 'too often, these credits reduce emissions on paper – not in practice' (Fortescue, n.d.c). So whilst net zero is widely adopted by both governments and industry, *Real Zero* is distinct.

An emissions *Scope* is also important to understand in this context, and this key term clarifies the ultimate goal of Fortescue's plan. The definition for an emissions Scope is derived from a greenhouse gas emissions accounting framework that was developed by the GHG Protocol in partnership with the World Resources Institute and the World Business Council for Sustainable Development. This global framework is used 'to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions' (Greenhouse Gas Protocol, n.d.a). To clarify these definitions, I have tabulated them below in *Figure 1*:

| SCOPE | DEFINITION | EXAMPLE |
|---|---|---|
| Scope 1 | Direct GHG emissions. | Occurs from sources that are owned or controlled by the company. |
| Scope 2 | Electricity indirect GHG emissions. | Emissions from the generation of purchased electricity consumed by the company. |
| Scope 3 | Other indirect GHG emissions. | A consequence of the activities of the company, but occur from sources not owned or controlled by the company. |

**Figure 1:** Definition of Scope 1, 2, and 3 emissions as found in the Greenhouse Gas Protocol *Corporate Accounting and Reporting Standard (Revised Edition)* (Greenhouse Gas Protocol, n.d.b).

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So when Fortescue aims to eliminate Scope 1 and 2 emissions from across their Australian iron ore operations by the end of 2030, they are mostly referring to emissions that they have *direct control over*. Fortescue's Scope 1 and 2 emissions can be further broken down by source, and for each emissions source, Fortescue have identified levers for emissions reductions. As can be seen from the data in *Figure 3* below, technology is heavily relied upon to achieve emissions reductions across Scope 1 and 2. Battery powered vehicles will be used both on-site as heavy mining equipment and on rail infrastructure as battery-electric locomotives. Renewable energy is the other major contributor to emissions reductions, with both generation or purchase agreements put forward as possibilities. While the plan is comprehensive and commendable, one key factor to emphasise is that Scope 3 emissions, that is downstream emissions caused by customers, are excluded from the Real Zero calculation in favour of the more conventional net zero. This is a crucial detail when analysing the effectiveness of Real Zero because, as detailed in *Figure 2* below, Scope 3 emissions account for the large majority (~99%) of total emissions related to Fortescue's operations. I will later discuss the impact this has on the effectiveness of the policy, but I will now analyse the strengths and weaknesses of the plan.

| EMISSIONS TYPE | AMOUNT (mt) | TOTAL SHARE (%) |
|---|---|---|
| Scope 1 and 2 | 3.02 | 1.09% |
| Scope 3 | 274.78 | 98.91% |
| Total | 277.8 | 100% |

**Figure 2:** Total emission by Scope type, measured in megatonne. Data adapted from Fortescue's *Climate Transition Plan 2025* (Fortescue, 2025a).

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| SOURCE | SHARE (%) | LEVERS FOR REDUCTION |
|---|---|---|
| Heavy mining equipment | 43% | Battery-electric trucks and ancillary HME; cable electric excavators and drills; electrify sites and install charging infrastructure. |
| Stationary power generation | 20% | Wind and solar energy generation or purchase; grid-scale battery systems; demand response and energy efficiency. |
| Purchased energy | 13% | Renewable power purchase agreements. |
| Shipping | 11% | Dual-fuel vessels with the capacity to run on green ammonia. |
| Rail | 9% | Battery-electric locomotives. |
| Other | 5% | Decarbonisation operating model; decarbonisation leads at operational sites. |

**Figure 3:** Emissions broken down by source and the levers Fortescue have identified to reduce the emissions from each source. Data adapted from Fortescue's *Climate Transition Plan 2025* (Fortescue, 2025a).

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## 4. Strengths: narrow focus, business and political landscape

The plan is clearly specific and actionable, and explicitly focusing only on Scope 1 and 2 emissions within Australian iron ore operations means that the company can achieve its goals. The vagueness of targets is replaced with a timeline and detailed plan. Another key strength of the plan is the current economic and political conditions in which it is being developed. In their *Climate Transition Plan*, Fortescue admits that 'government policies are critical to creating the conditions for rapid decarbonisation and addressing fossil fuel related externalities' (Fortescue, 2025a). And Fortescue's 'transition plan depends on continued government commitment to facilitate business-led decarbonisation efforts' (Fortescue, 2025a). So a favourable business and policy environment is a crucial factor in the execution of this plan. As I will discuss below, both globally and domestically, business conditions are enormously favourable to clean energy and decarbonisation. Given this current domestic policy environment, and the global capital flows into clean energy investments, depending upon a continued favourable business environment seems reasonable.

In 2024 alone, the total global capital flows into clean energy investments were estimated to be just over $US2 trillion. The category *clean energy* is interpreted relatively broadly in research undertaken by the International Energy Agency (2024). This may partly explain the significant investment levels. However, as shown in *Figure 4* below, clean energy investments have been rising over the last decade. In 2015, total investment in clean energy was approximately 56% of 2024 investment levels at $US1.125 trillion. So clean energy investments have almost doubled over the last decade, and this capital allocation has increased as fossil fuels investments have decreased. This reflects not only a healthy investment environment for clean energy projects, but a growing unease with fossil fuels. Recent research by the International Monetary Fund (IMF) supports this, saying that 'the global energy transition is

affecting fossil fuel exporters from multiple angles' (Mesa Puyo *et al.*, 2024). There are 'longstanding uncertainties on relative movements of fossil fuel demand and supply' (Mesa Puyo *et al.*, 2024), and 'policymakers…face expectations of a permanent decline in the long-run global demand for fossil fuels' (Mesa Puyo *et al.*, 2024). In other words, there are enormous economic opportunities for industries, companies, and individuals, who are at the heart of the energy transformation. Whilst, simultaneously, the appetite for fossil fuels is quickly waning. Fortescue is proactively reacting to this change in the basic economics of the global resource and energy markets. Such favourable economic conditions are a core strength of the plan because the execution of the plan is facilitated by these conditions.

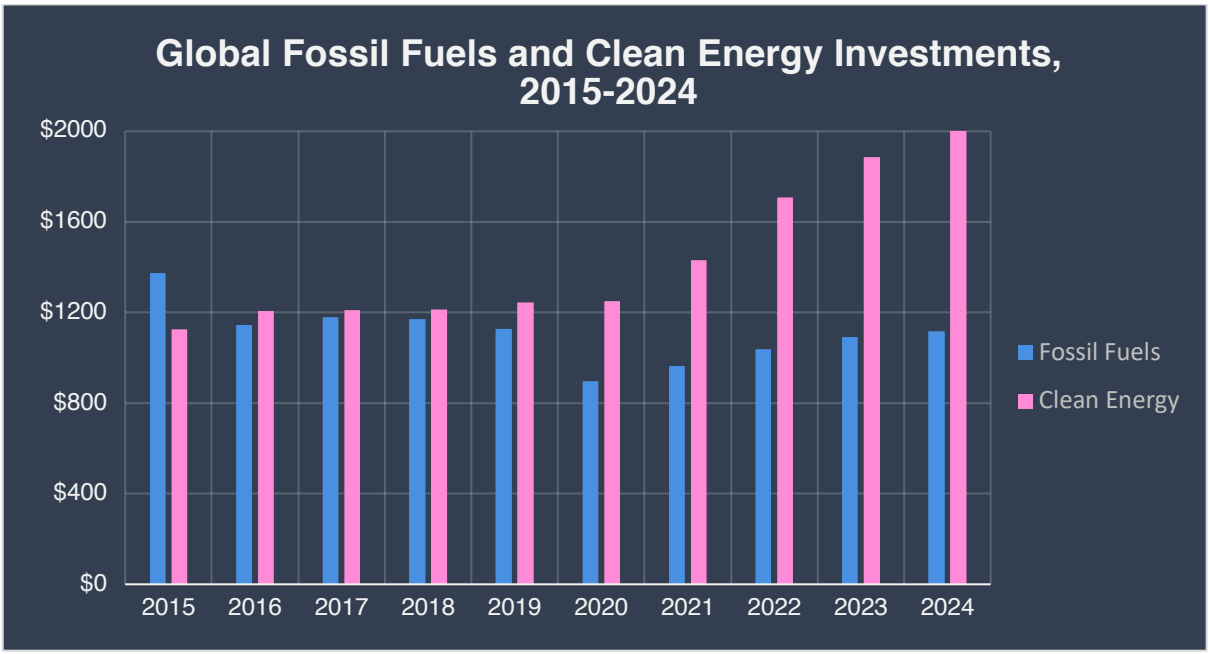


**Figure 4:** All values quoted in $USD billions. Clean energy comprises of: renewable power, grids and storage, energy efficiency and end-use, nuclear and other clean power, and low-emissions fuels. Data adapted from research released by the International Energy Agency (2024).

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Domestically, the decarbonisation of the Australian economy is 'enshrined in law' (Australian Trade and Investment Commission, n.d.), with requirements to reach net zero emissions by 2050. However, Australia's vision extends beyond reducing emissions. Australia has ambitions to become a 'renewable energy superpower' (Australian Trade and Investment Commission, 2024) by driving innovation, job creation, and research across the sector. The Australian Government 'will also provide financial incentives, regulatory changes and other enablers to help crowd in private investment' (Australian Trade and Investment Commission, 2024). These financial incentives are significant, with 'up to A$3 billion of the…National Reconstruction Fund…set aside to finance renewables and low-emissions technologies' (Australian Trade and Investment Commission, 2024). This is further underscored by various sources of funding such as the Australian Renewable Energy Agency and the Clean Energy Finance Corporation. These government policies and practices relate specifically to Fortescue's plan - as 'the Australian Government's Future Made in

Australia plan identifies green metals (which includes green steel) as a priority sector for Australia's investment in becoming a renewable energy superpower' (Australian Trade and Investment Commission, 2024). As domestic policy prioritises the sector that Fortescue is investing heavily into, such favourable regulation is another external factor that helps facilitate Real Zero execution and thereby makes the plan more feasible.

This political and economic context is an enormous strength of Fortescue's ambitions. At its most basic level, it means that government regulation will be favourable and investments funds will be easier access. This economic and political environment is not intrinsic to the policy itself, but it is the conditions within which the policy exists, and a healthy environment leads to a stronger, more resilient, and ultimately more feasible Real Zero policy.

## 5. Weaknesses: limited emissions reductions and reputational risk

Whilst the pragmatic and specific focus is a strength, the lack of material effect on overall emissions could be a considered a major weakness for several reasons. As detailed above in *Figure 2*, Fortescue are affecting only ~1% of emissions through their Real Zero plan whilst Scope 3 emissions remain untouched. Essentially all of Scope 3 emissions come from the 'processing of iron ore into crude steel' (Fortescue, 2025a). Fortescue is primarily an iron ore exporter, not a steelmaker. So Scope 3 carbon emissions are only indirectly related to their operations, they are embedded in downstream steelmaking. However, these emissions are *enabled* by Fortescue's products, so the company seems to bear *some* responsibility. It is true that Fortescue have a long-term plan to affect Scope 3 emissions, but they are taking a *net zero* approach to Scope 3 emissions. This means that carbon offsets will be utilised, and the company has admitted that carbon offsets cannot be relied upon to deliver the deep and lasting change that Fortescue needs to succeed. This weakness, a lack of material effect on emissions reductions, is not intrinsic to the policy though. It is a pragmatic realisation that Scope 3 emissions are indirect and by definition mostly out of Fortescue's control. However, it highlights the structural limitations that Fortescue is operating within when exporting iron ore. These structural limitations suggest the need for activism and stakeholder engagement to encourage adoption of technologies and practices such as green steel. Ultimately, this means that even if Real Zero succeeds, global emissions barely shift unless customers decarbonise too.

So even as Fortescue are positioning themselves as a green company, ~99% of their emissions remain untouched by the Real Zero plan. One interpretation of this immateriality would be to accuse the company not only of greenwashing, but of capitalising on the financial risks and opportunities arising from the climate crisis. This may make *business sense*, and Fortescue's adaptability may pay financial dividends. However, as the company is presenting themselves as a leader in the shift to a cleaner economy, this lack of Scope 3 reductions may pose a serious reputational risk. Fortescue knows this, saying that the 'failure to decarbonise carries significant reputational risks' (Fortescue, 2023). Research echoes this sentiment, and it was found that 'in a sample of highly polluting companies…reputation risk materialises if their climate talk is perceived as not coherent with their action-taking' (Guastella *et al.*, 2022:1). This research focused on the financial impacts of reputational risks, but our interest is more subtle. Fortescue's reputation is important because the long-term viability of the plan relies on a wider adoption of green technologies, which relies on

activism and stakeholder engagement by Fortescue and Andrew Forest. Put simply, the bulk of the emissions reductions is in the *future possibilities for economy-wide decarbonisation,* and this adoption relies partly on Fortescue's ability to affect change. Anything that risks Fortescue's standing in the market can affect this wider stakeholder engagement, and their reputation as a leader is central to the deep and lasting changes Fortescue is working towards.

## 6. Effectiveness and feasibility

The immediate reductions in global emissions from Fortescue's Real Zero transition *for now* are limited. However, the longer-term effectiveness of this plan is promising but somewhat ambiguous. As stated, focusing on Scope 1 and 2 is a strength because it means that a pragmatic, actionable, specific plan can be developed. However, since Scope 3 emissions will be offset using carbon markets, and Scope 3 emissions account for ~99% of total emissions, this complicates how we can evaluate the effectiveness of the policy. In the immediate term, the plan seems feasible. However, Fortescue's longer-term ambitions are beyond their control because they are reliant on wider decarbonisation adoption to affect economy-wide change. This means that Fortescue must engage deeply in activism and stakeholder engagement if the broader long-term goals are to be realised. Even the most powerful statesmen falter, and social change is beyond the grasp of any one person or organisation. So in the immediate term, with respect to eliminating Scope 1 and 2 emissions, we can evaluate the plan as ambitious but feasible. Over the longer term, the aim of affecting economy-wide change and reducing Scope 3 emissions cannot be reliably evaluated right now. We can only hope that Fortescue's pioneering efforts succeed.

## 7. Conclusion

Fortescue's plan is promising but dependent upon multiple, sometimes uncertain, variables. They are operating within a highly favourable business and policy environment, which is subject to dramatic changes, and are relying on wider adoption of decarbonisation efforts to affect deeper change. Their commitment to eliminating Scope 1 and 2 emissions seems feasible. However, the climate-related impact of even a well-executed plan is severely limited by their inability to directly control Scope 3 emissions. With the many issues that plague the global carbon markets, the risk is greenwashing and prioritising financial opportunities rather than real climate impact. However, the symbolic affect alone of one of the world's largest iron ore company's transitioning its primary operations to zero emissions would be immense. Even with the best policy design and execution though, Fortescue is operating within a market economy. Supply chain dependencies, uncertain financial variables such as interest rates and carbon prices, and potential policy changes are all significant risks that cannot be ignored. They are also a listed entity, accountable to investors that demand consistent profitability, and under constant scrutiny by stakeholders with competing values. Only time will tell if their ambitions can be realised amidst such an environment.

**References:**


Australian Trade and Investment Commission 2024, *Australia forges a future made from green steel*, viewed 4 November 2025, https://international.austrade.gov.au/en/news-and-analysis/news/australia-forges-a-future-made-from-green-steel

Australian Trade and Investment Commission n.d., *Go green with Australia*, viewed 6 November 2025, https://international.austrade.gov.au/en/why-australia/go-green-with-australia

Burton, M. 2024, 'Australia risks losing its iron ore dominance, Fortescue CEO says', *Reuters*, 29 October, viewed 7 November 2025, https://www.reuters.com/markets/commodities/australia-risks-losing-top-spot-global-steel-supply-chain-fortescue-says-2024-10-29/

Fortescue 2023, *Climate Change Report FY23*, viewed 5 October 2025, https://cdn.fortescue.com/docs/default-source/sustainability-publications/fy23-climate-change-report.pdf

Fortescue 2025a, *Climate Transition Plan 2025*, viewed 5 October 2025, https://content.fortescue.com/fortescue17114-fortescueeb60-productionbbdb-8be5/media/project/fortescueportal/shared/documents/publications/reports/fy25-climate-transition-plan.pdf

Fortescue 2025b, *Half Year Report for the half year ended 31 December 2024*, viewed 4 November 2025, https://content.fortescue.com/fortescue17114-fortescueeb60-productionbbdb-8be5/media/project/fortescueportal/shared/documents/regulatory/asx-announcements/2852167-fy25-half-year-financial-report.pdf

Fortescue n.d.a, *Our Operations*, viewed 4 November 2025, https://www.fortescue.com/en/what-we-do/our-operations

Fortescue n.d.b, *Our Story*, viewed 4 November 2025, https://www.fortescue.com/en/about-fortescue/our-story

Fortescue n.d.c, *What is Real Zero*, viewed 5 October 2025, https://www.fortescue.com/en/real-zero

Greenhouse Gas Protocol n.d.a, *About Us*, viewed 4 November 2025, https://ghgprotocol.org/about-us

Greenhouse Gas Protocol n.d.b, *A Corporate Accounting and Reporting Standard (Revised Edition)*, viewed 4 November 2025, https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf

Guastella, G., Mazzarano, M., Pareglio, S. and Xepapadeas, A., 2022. Climate reputation risk and abnormal returns in the stock markets: A focus on large emitters, *International Review of Financial Analysis*, 84: 102365, doi.org/10.1016/j.irfa.2022.102365

International Energy Agency 2024, *Global investment in clean energy and fossil fuels, 2015–2024*, viewed 6 November 2025, https://www.iea.org/data-and-statistics/charts/global-investment-in-clean-energy-and-fossil-fuels-2015-2024

Mesa Puyo, D., Panton, A. J., Sridhar, T., Stuermer, M., Ungerer, C., and Zhang, A. T., 2024. Key Challenges Faced by Fossil Fuel Exporters during the Energy Transition, *IMF Staff Climate Notes*, *2024*(1): doi.org/10.5089/9798400270147.066

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