Analysis: BHP’s 2024 Climate Transition Action Plan (CTAP)

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Contents

Executive Summary

ACCR believes there is sufficient reason to vote against BHP's 2024 Climate Transition Action Plan (CTAP).

BHP's scope 3 emissions, dominated by the processing of its iron ore and metallurgical coal into steel, account for 97% of its total emissions footprint, and pose the most material risk and opportunity for investors to consider in this CTAP.

Addressing scope 3 emissions in the steel value chain and investing in green and low-carbon pathways is crucial for BHP's positioning as global demand shifts towards green steel. While the 2024 CTAP provides improved disclosures on scope 3, it falls short on ambition and does not have a capital allocation strategy to match the scale of the challenge.

ACCR analysis also finds that BHP's "1.5°C scenario", which it uses to assess the resilience of its assets, downplays the transition risks the company faces and does not provide a robust assessment of portfolio resilience for investors. There is also insufficient detail on how BHP's metallurgical coal expansion plans align with its decarbonisation strategy.

With BHP only providing a CTAP on a triennial basis, the 2024 CTAP charts the course for the next three critical years of the energy transition - underscoring the importance of ensuring that this climate plan positions BHP to remain resilient in the future low-carbon economy.

ACCR will be voting against BHP's 2024 CTAP

Key findings

- The 2024 CTAP improves disclosures on BHP's forward plans and investments for scope 3 emissions reductions from the steel value chain.
- Disclosed direct capital allocation towards steel decarbonisation is low: just US$75m between FY25 - FY29. Given the volume of associated scope 3 emissions and the risks it poses to BHP's iron ore business, shareholders would likely expect to see a more ambitious commitment.
- BHP's steel decarbonisation strategy shows a heavy reliance on blast furnace (BF-BOF) combined with CCUS, overstating the decarbonisation potential of this technology and underplaying the risks. This introduces long-term risk to BHP's ability to meet its scope 3 targets. EAF and electric smelting technologies, which are more technologically mature and offer greater decarbonisation potential, are given lesser priority.
- The CTAP provides scant detail about how BHP's metallurgical coal projects, particularly its expansions in Queensland, align with the company's decarbonisation strategy and scope 3 goals. ACCR analysis suggests BHP's forecast metallurgical coal production is significantly misaligned with the Paris Agreement.
- BHP's planning range forecasts 2°C of warming by 2100 - a failure of the Paris Agreement - yet the CTAP doesn't meaningfully acknowledge the material physical and financial risks of this temperature outcome, or the risks to shareholder value.
- BHP uses its own "1.5°C scenario" to assess the resilience of its assets under 1.5°C of warming. ACCR analysis of this scenario finds that it significantly overestimates the role of CCUS compared to more credible, industry-standard scenarios. This approach downplays the transition risks and does not provide investors a robust assessment of portfolio resilience.
- Climate lobbying is not well integrated into the CTAP - despite increasing investor recognition that policy engagement is a critical component of transition plans, and that transition plans should disclose interdependencies between net zero targets and the wider policy environment.

BHP against the CA100+ Net Zero Company Benchmark

Indicator	Latest CA100+ assessment (2023)	ACCR's assessment (2024 CTAP)
1. Net-zero GHG Emissions by 2050 (or sooner) ambition	Meets all criteria	Meets all criteria
2. Long-term (2036-2050) GHG reduction target(s)	Meets all criteria	Partial
3. Medium-term (2026-2035) GHG reduction target(s)	Partial	Partial
4. Short-term (up to 2025) GHG reduction target(s)	Partial	Does not meet any criteria
5. Decarbonisation strategy	Partial	Partial
6. Capital allocation alignment	Partial	Partial
7. Climate policy engagement	Partial	Partial
8. Climate Governance	Partial	Partial
9. Just Transition	Does not meet any criteria	Partial
10. TCFD Disclosure	Meets all criteria	Meets all criteria

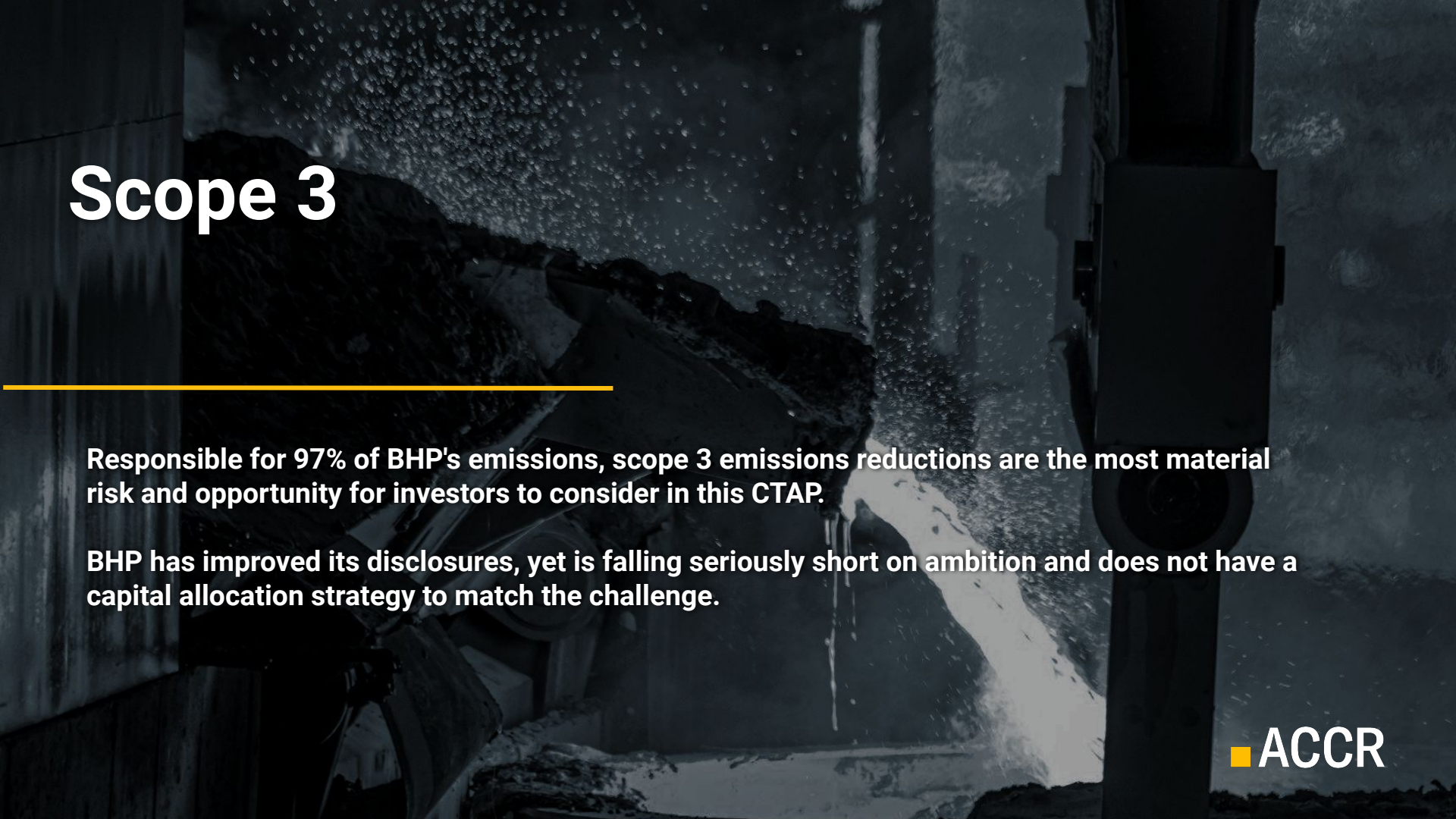
Source: CA100+, BHP Company Assessment.

BHP has not increased the ambition of its climate targets, despite significant advances in the decarbonisation landscape since 2021

BHP Group's medium and long-term climate commitments

Target	2030	2050
Scope 1 & 2 Target	**Target:** Reduce operational emissions by at least 30% from FY20 levels	**Goal:** Net zero operational emissions
Scope 3 Goals and Targets *Note: BHP defines goals as "ambitions to seek an outcome for which there is no current pathway"*	**Goal:** Support industry to develop technologies that are capable of a 30% emissions intensity reduction in integrated steelmaking (relative to conventional blast furnace steelmaking) **Goal:** Support a 40% emissions intensity reduction of the BHP-chartered shipping of its products	**Goal:** Net zero scope 3 emissions **Target:** Net zero by 2050 for the operational GHG emissions of direct suppliers, subject to the widespread availability of carbon neutral goods and services **Target:** Net zero by 2050 for the GHG emissions from all shipping of BHP products, subject to the widespread availability of carbon neutral solutions

Source: BHP, Climate Transition Action Plan 2024.



Scope 3

Responsible for 97% of BHP's emissions, scope 3 emissions reductions are the most material risk and opportunity for investors to consider in this CTAP.

BHP has improved its disclosures, yet is falling seriously short on ambition and does not have a capital allocation strategy to match the challenge.

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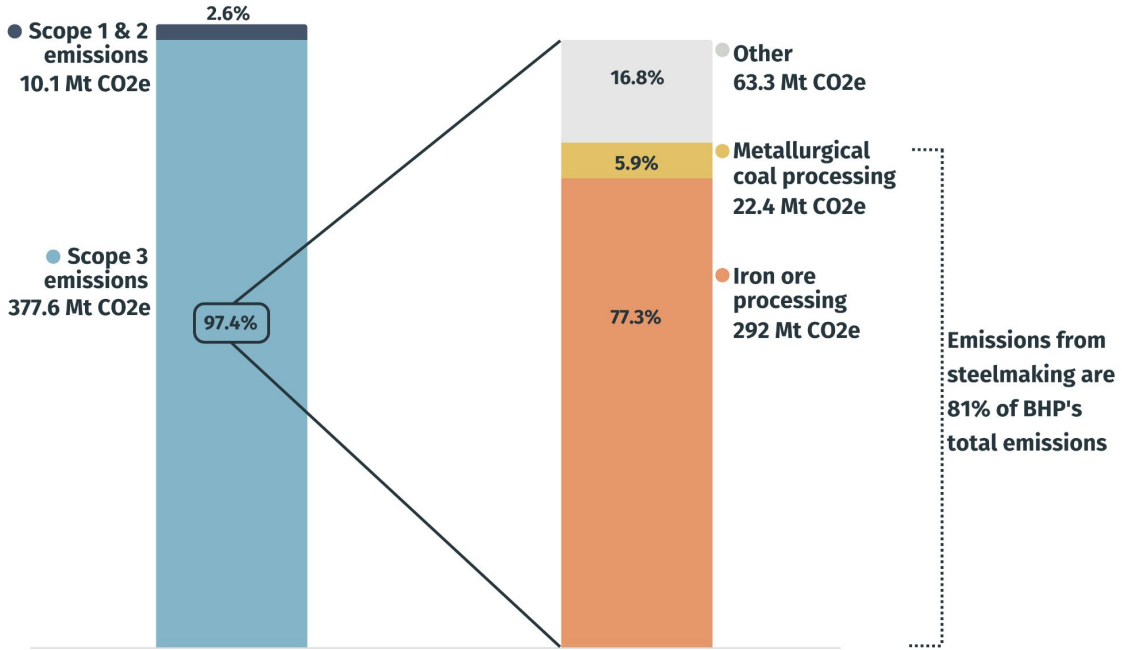
97% of BHP's total emissions are scope 3 - the vast majority from steelmaking

BHP's FY24 emissions breakdown by scope and source

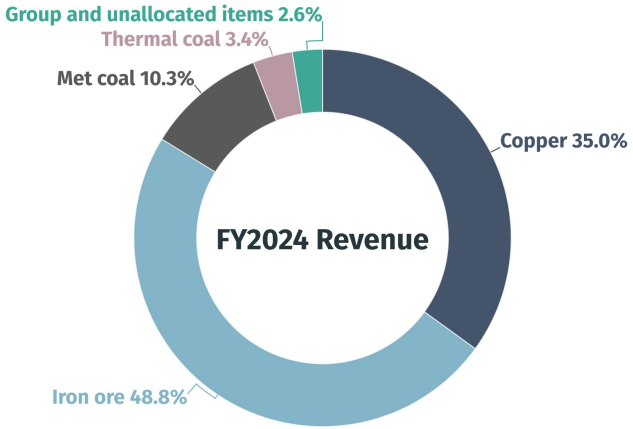


- Reducing scope 3 emissions is BHP's most significant opportunity to reduce its climate impact and associated transition risks.
- Prioritisation of addressing these emissions will ensure BHP remains competitive as demand for low-carbon steel grows.
- There are actions BHP can take to ensure its iron ore product is more compatible with green steel pathways for its customers.

Data: BHP ESG Standards & Databook 2024

Iron ore currently drives nearly 50% of BHP's revenue – as the steel industry transitions towards green production, BHP could protect future earnings by investing in the right technology pathways

BHP Group FY24 revenue by asset (left); iron ore asset grades by company (right)



Data: BHP FY2024 Annual Report, p. 217

Company	Asset	Grade
BHP	Western Australia Iron Ore	Mid
Rio Tinto	Australian Pilbara Operations	Mid
	Iron Ore Company of Canada	High
	Simandou	High
Fortescue	Chichester, Solomon and Western Hubs	Mid
	Iron Bridge	High
	Belinga Iron Ore Project	High
Vale	Northern system, Brazil	High
	Southern system, Brazil	Low - Mid
	Southeastern system, Brazil	Low - Mid

NB: Iron grades - Low: <50%; Mid: 50-65%; High: >65%

BHP's iron ore is mid-grade, which means significant processing is needed for it to meet the requirements of green steel production.

As the steel industry transitions to green production, BHP can invest in upgrading its iron ore quality through beneficiation and smelting techniques. Without these investments, BHP risks being locked out of the growing green steel market.

BHP's peers, such as Rio Tinto, Vale and Fortescue, have made tangible progress towards managing similar risks in their operations and already have access to high-grade ores. Without adapting, BHP risks losing market share to these competitors who are investing in scalable green iron and steel technologies.

BHP's steel decarbonisation spend is only a very minor part of its capital allocation strategy

BHP plans to spend US$75 million over five years on steel decarbonisation from 2025 to 2029.

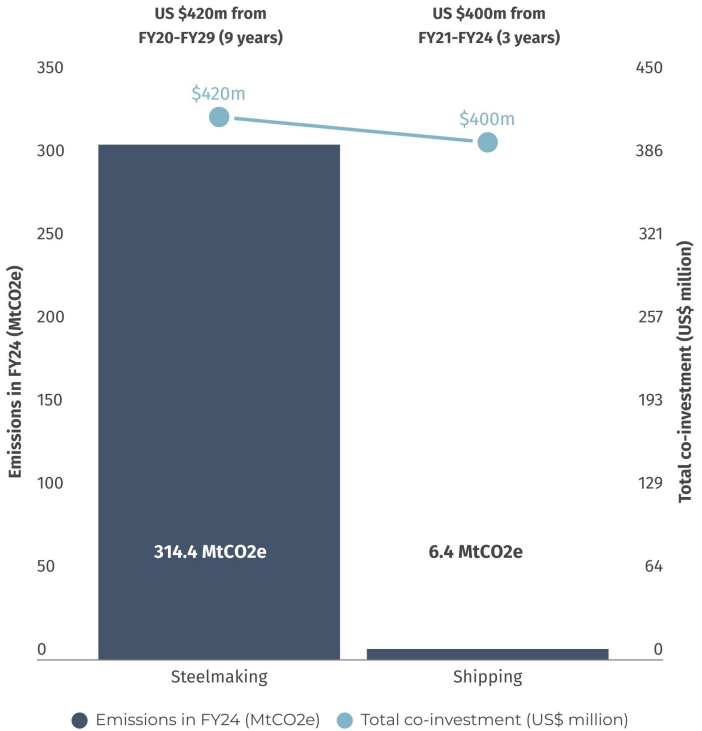
In contrast, **BHP spent US$700 million[1] on metallurgical coal** capital and exploration expenditure **in FY24 alone**.

Despite **emissions being 48 times higher for steelmaking**, BHP and its partners are co-investing similar amounts towards reducing scope 3 steelmaking and shipping emissions.

What are BHP's competitors spending?

- Rio Tinto's planned steel decarbonisation spend for 2024 alone totals US$100 million[2] -- more than BHP's entire five year commitment.

BHP & partners co-invest similar funds to steel and shipping scope 3



Source: BHP 2024 Climate Transition Action Plan, p.20

1. BHP, 2024, Financial results for the year ended 30 June 2024, p. 14.
2. Rio Tinto, 2023, Climate Change Report, p. 31.

The high abatement potential and compatibility of Electric Smelting Furnaces (ESF) with BHP's iron ores offers a pathway to help the company secure a footing in the green steel market.

An overview of four prominent steel decarbonisation options

	Reductant	Suitable for BHP's iron ore?	Ironmaking	Steelmaking	Technology readiness level (TRL)	Expected readiness	CO2 abatement potential*
H2-DRI-EAF	Hydrogen	No	Direct reduced iron (Shaft furnace)	Electric arc furnace	8-9	2025 - 2030	99%
H2-DRI-ESF-BOF	Hydrogen	Yes	Direct reduced iron (fluidised bed)	Electric smelting furnace → Basic oxygen furnace	8-9	2027 - 2030	98%
Electrolysis	Electricity	Yes	Electrolysis	Electric arc furnace	3-4	2035 - 2040	100%
BF-BOF + CCUS	Metallurgical coal	Yes	Blast furnace + CCUS	Basic oxygen furnace	3-4	2030- 2035	73%

*Compared to BF-BOF route

Source: ACCR; Source: Agora Industry, Wuppertal Institute and Lund University, 2024, Low carbon technologies for the global steel transformation.
NB: H2 - hydrogen; DRI - direct reduced iron; EAF - electric arc furnace; ESF - electric smelting furnace; MOE - molten oxide electrolysis; BF - blast furnace; BOF - basic oxygen furnace; TRL - technology readiness level ***(for detailed understanding of TRL, see slide 42)***

BHP overstates the decarbonisation potential of blast furnaces, relying on unproven and high-cost CCUS technology, while downplaying more mature solutions like EAF

BHP's potential steelmaking technology pathways

Figure 2.3: Potential ore-based (integrated) steelmaking technology pathways[a]

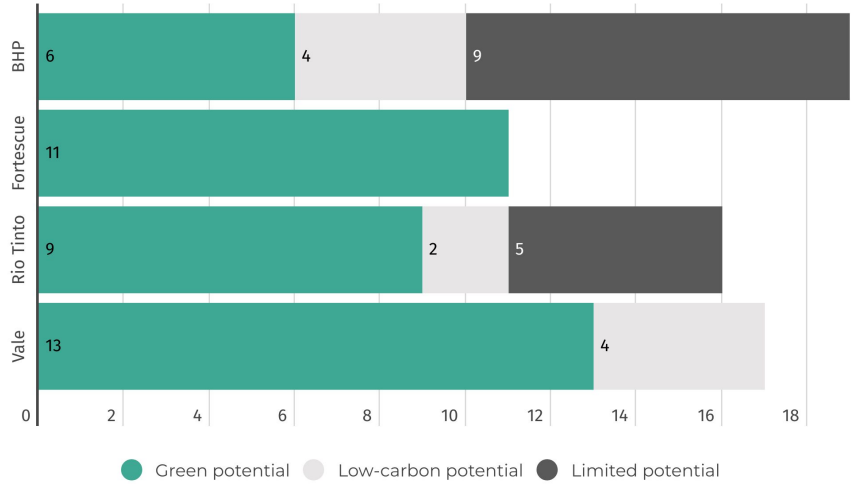
Process routes Sequence of furnaces or reactors used for process	1 **Blast furnace** Blast furnace – basic oxygen furnace	2 **Electric arc furnace** Direct reduced iron – electric arc furnace	3 **Electric smelting furnace** Direct reduced iron – electric smelting furnace – basic oxygen furnace	4 **Electrolysis** Electrolysis cell (molten oxide or low temperature)
Primary reactor technology readiness				
Raw material flexibility				 Unknown
Steel grade flexibility				Unknown
Integration with existing plants				
Primary reductant source	Steelmaking coal	**Now:** Natural gas or coal (any) **Future:** Hydrogen	**Now:** Natural gas or coal (any) **Future:** Hydrogen	Electricity
GHG emission intensity (tCO_2 per tonne of steel)				
End state enablers	• CCUS • Top gas recycling • Low to zero GHG emission hydrogen • Biomass	• Low to zero GHG emission hydrogen • Abundant renewable electricity	• Low to zero GHG emission hydrogen • Abundant renewable electricity	• Abundant renewable electricity

- BHP presents the blast furnace pathway as achieving significant emissions reductions (0.4t/tCO_2e), but this is based on the simultaneous deployment of several unproven technologies - CCUS, top gas recycling, and low-zero GHG hydrogen[1] - all of which are still in development.
- BHP's figure doesn't show that CCUS faces major challenges in steelmaking: there are currently no commercial-scale projects for blast furnaces[2], and existing pilot projects capture only a fraction of the emissions.
- The transportation and storage infrastructure for CO_2 is underdeveloped for CCUS, adding further barriers to its deployment.
- EAF and electric smelting technologies, which are more technologically mature[3], offer greater decarbonisation potential but do not appear to be prioritised in BHP's plans.
- The figure also lacks uncertainty ranges for emissions reductions, making it difficult for investors to assess the true feasibility and risks of these pathways.

1. BHP, 2024, 2024 CTAP, p. 64.
2. IEEFA, 2024, Carbon Capture for Steel Factsheet.
3. Agora Industry, Wuppertal Institute and Lund University, 2024, Low-carbon technologies for the global steel transformation.

BHP's steel decarbonisation strategy focuses on limited potential solutions, lagging behind competitors who prioritise green technologies

Iron ore miners steel decarbonisation projects, by green potential [1]



Green potential of steel technology solutions

Category	Description	Technology Examples
Green potential	Steel production methods that have the potential to eliminate the use of fossil fuels entirely	• Renewable-powered EAF • Green H2-based DRI • Electrolysis
Low carbon potential	Processes that significantly reduce emissions but may still utilise fossil fuels or emit carbon to some extent	• Gas-based DRI • Hydrogen injection in BFs • Biomass use
Limited potential	Technology solutions that offer minimal decarbonisation capabilities on their own	• CCUS • Mass balance • BF optimisation

- ACCR's *Forging Pathways* report found that BHP's steel decarbonisation strategy prioritises limited potential solutions, including CCUS and blast furnace optimisation, which offer minimal emissions reductions and maintain a reliance on fossil fuels.
- In contrast, Vale and Fortescue lead with green potential technologies, such as renewable-powered EAF and green hydrogen-based DRI, both of which aim to eliminate fossil fuel use entirely in steel production.
- BHP's continued reliance on metallurgical coal mining may further hinder its decarbonisation goals.

> ***BlueScope's view is that due to technical limitations, CCS alone is not a viable pathway to achieve net zero emissions.***
>
> BlueScope FY24 Climate Action Report, p. 25

1. Data accurate as of 22 Dec 2023.

BHP risks missing global momentum towards net zero steelmaking as fossil-free steel readies for commercialisation

The global iron and steel industry made major strides towards net zero goals in 2023[1]:

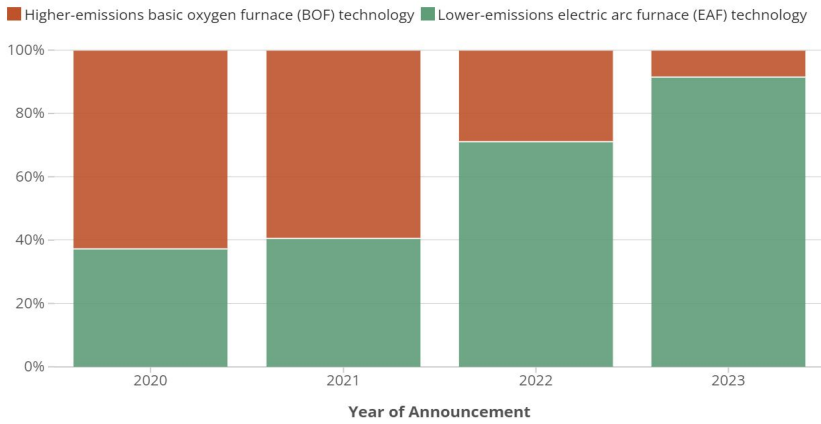
- 93% of newly-announced steelmaking capacity was EAF
- more BF-BOF capacity was retired than added
- the IEA net zero steelmaking target could be within reach, with EAF steelmaking capacity on track to hit 2030 milestone.

Primary steel made without metallurgical coal is now in the final stages of commercialisation with:

- semi-industrial scale trials complete and reported successful
- large-scale production scheduled to begin in 2026 after receiving funding of €6.5 billion.

See ACCR's Steel Decarbonisation Announcement Tracker

The majority of newly announced global steelmaking capacity does not rely on metallurgical coal



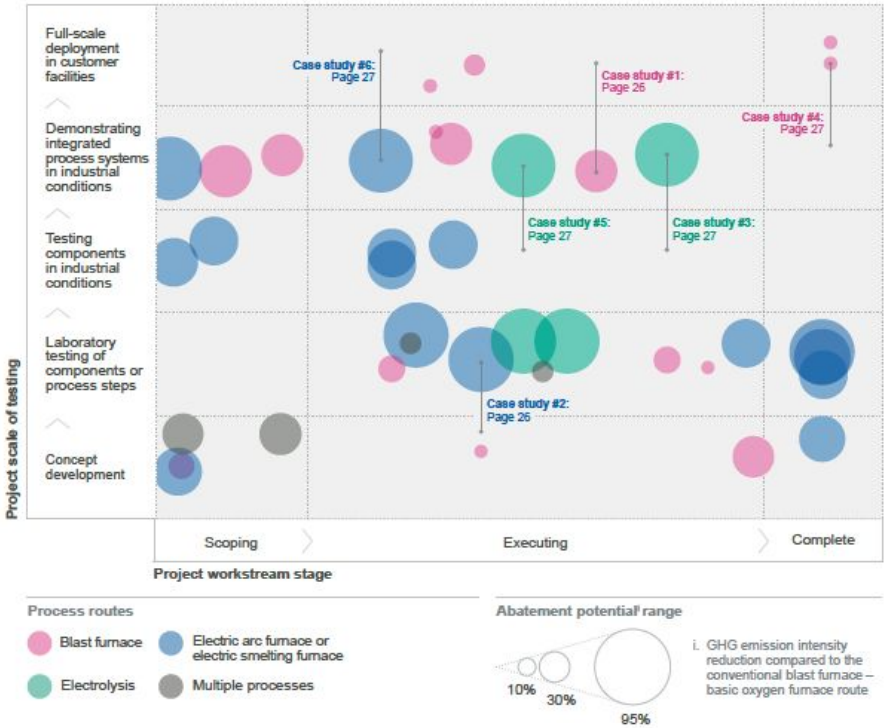
Source: Global Steel Plant Tracker, Global Blast Furnace Tracker, Global Energy Monitor

1. Global Energy Monitor. 2024, Pedal to the Metal 2024.

While BHP is disclosing more information about its scope 3 strategy, the lack of detail and timelines leaves investors with insufficient information to gauge progress towards a comprehensive steel decarbonisation plan

BHP's decarbonisation projects for steelmaking

Figure 2.4: Our project workstreams for steelmaking GHG emissions intensity reduction[16]
Project workstreams (not all project workstreams are shown)



- BHP's CTAP provides detailed case studies (p. 26-27) of six short-term steel decarbonisation projects, giving useful insights into the activities planned for the next 1-2 years. However, no long-term strategy is provided.
- BHP's figure on GHG emissions intensity reductions (left) outlines additional projects, yet provides no specific timelines or measurable objectives for the majority. Most projects are unnamed, making it hard to assess progress.
- Despite their small abatement potential, blast furnace projects are prioritised for full-scale deployment.
- There is no framework to track if and when these projects are achieving intended emissions reductions.

Metallurgical coal

- BHP's CTAP does not sufficiently disclose the company's metallurgical coal business plans.
- The future of BHP's metallurgical coal business is not aligned with the goals of the Paris Agreement and it is unclear how the company's continuation and expansion plans fit into its decarbonisation strategy.
- BHP should improve its CTAP by clearly outlining its future plans for its metallurgical coal business and how these plans align with its decarbonisation plan and scope 3 goals.

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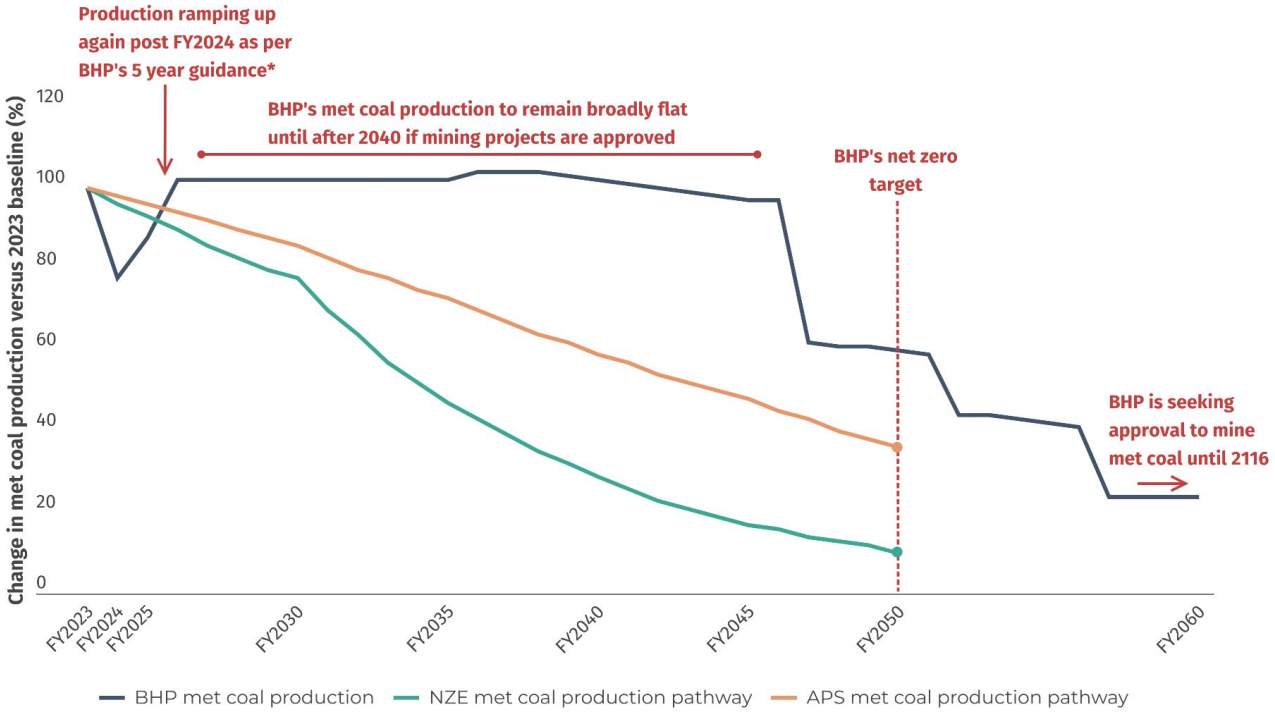
BHP's forecast metallurgical coal production is misaligned with the Paris Agreement

ACCR analysis of BHP's future metallurgical coal production, including proposed mine extensions and expansions



*** BHP Financial results for the year ended 30 June 2024, p. 15**

Source: ACCR analysis, company disclosures, WEO 2023.
Note: Full list of company disclosures and assumptions are detailed in appendix.

The future of BHP's metallurgical coal expansion and extension plans are unclear, and the CTAP does not sufficiently address the climate and transition risks of metallurgical coal

BHP's proposed metallurgical coal mine extensions/expansions

	Proposed mine life	Proposed production
Peak Downs, continuation project	93 years until 2116[1]	18 Mtpa
Saraji East, proposed expansion	Additional 25-30 years until 2050s[2]	15 Mtpa
Caval Ridge, Horse pit expansion	Additional 20 years until 2056[3]	11 Mtpa

A global survey of 500 investors commissioned by ACCR, found that the majority of investors (68%) foresee a transition away from metallurgical coal in steelmaking, and 80% believe the metallurgical coal risk profile will increase in the next decade.

While BHP's CTAP acknowledges potential shifts in coal demand, there is no clear plan for transitioning away from metallurgical coal, or adapting to the expected decline in demand as the steel industry moves towards coal-free, green steel production.

This leaves investors without a clear understanding of how BHP plans to navigate the changing market dynamics.

1. EPBC Business Portal, 2022, Peak Downs Mine Continuation Project referral document.
2. Queensland Government, 2024 Proposed Saraji East Mining Lease Project.
3. BHP, 2024, BMA Preliminary Documentation, p. 18.

Paris alignment and resilience testing

- BHP's planning range forecasts a 2°C world, where the physical impacts of climate change and the risk of breaching irreversible tipping points significantly increase compared to other scenarios.
- Investors are getting an incomplete view of BHP's 1.5°C resilience, as its scenario downplays risks and emphasises ‘business-as-usual’ compared to other scenarios.

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BHP is planning for a world where the Paris Agreement has failed, with 2°C of warming above pre-industrial times

> **"The modelled outputs of our planning range result in global CO_2 emission pathways implying a projected global temperature increase of around 2°C by CY2100."**
>
> BHP
> 2024 CTAP, p32

Climate change is a compounding risk to all portfolios. Reaching 2°C by 2100 materially increases physical risk, economic loss, the cost of the transition and the risk of reaching tipping points

Widespread adverse physical impacts, and economic losses and damages, are already experienced at <1.2°C warming above pre-industrial levels.[1] The total economic losses from climate change-induced hazards are increasing in the US and Europe.[2]

Overshoot of 1.5°C, which is now inevitable, materially increases the physical and financial impacts of climate change, and increases the risk of tipping points - irreversible and self-perpetuating changes to climate systems.

According to the best available climate science, the focus now needs to be on limiting overshoot to 1.6°C, so that returning to below 1.5°C by the end of the century remains physically, technically and financially possible.

A fast transition is cheaper than a slow transition, even without factoring in tipping points.

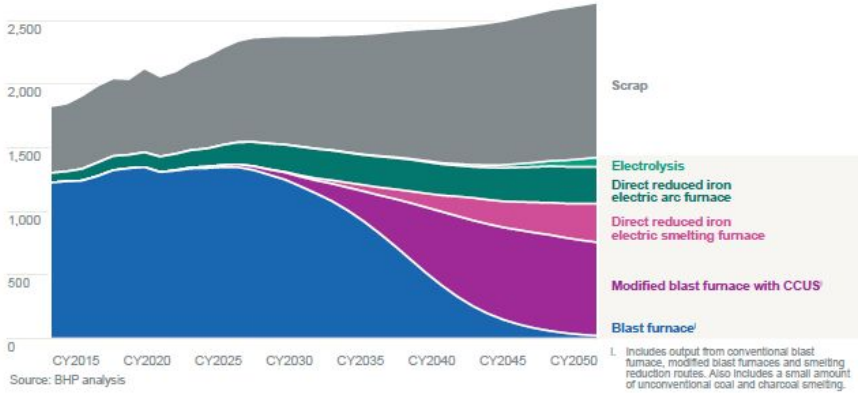
1. IPCC, 2023, *Climate Change 2023: Synthesis Report*, https://www.ipcc.ch/report/ar6/syr/.
2. Swiss Re, 2024, Sigma No.1: Natural catastrophes in 2023.

BHP's 1.5°C scenario, used to assess the resilience of its assets, downplays risks compared to other credible scenarios

BHP's 1.5°C scenario shows minimal downside for its lower-grade iron ore and metallurgical coal assets, because it:

- reflects price-only sensitivity based on commodity and carbon pricing, with unchanged production and sales from its 2°C planning range[1].
- is based on a scenario which sees a continued reliance on blast furnaces and modified blast furnaces over EAFs and electric smelting furnaces, driving higher demand for metallurgical coal and lower-grade iron ore,[2] therefore impacting the pricing outputs from scenario modelling.

BHP's lower-grade iron ore and metallurgical coal assets face minimal downside in its "1.5°C scenario" (left chart) due to a continued reliance on blast furnaces and electric smelting driving higher demand for metallurgical coal and lower-grade iron ore (right chart, million tonnes)[2]



1. BHP, 2024 CTAP, p34.
2. BHP, 2024 CTAP, pp. 34, 38.

For its metallurgical coal and iron ore assets, BHP's 1.5°C scenario reflects a business-as-usual approach rather than a pathway to Paris alignment

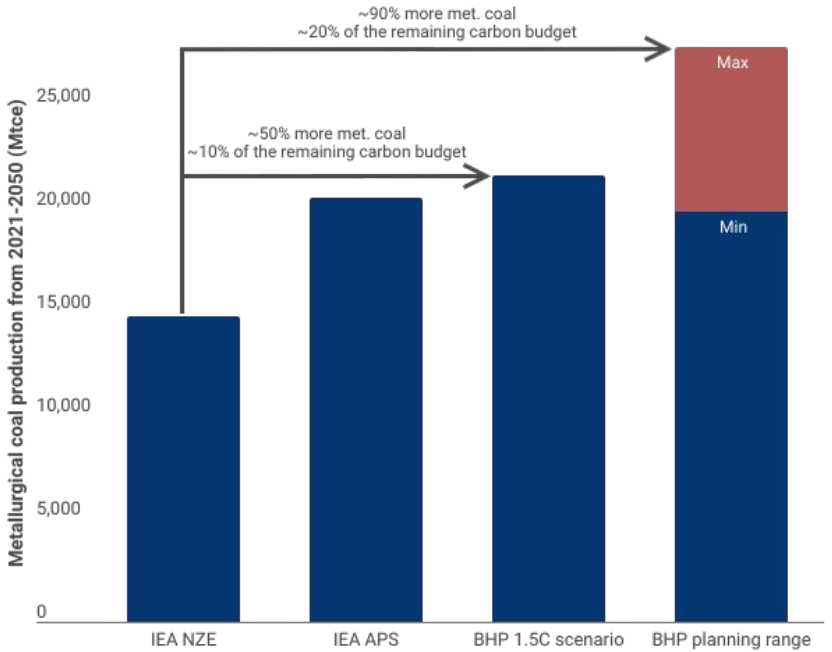
BHP's 1.5°C scenario:

- projects around 50% higher metallurgical coal demand than the IEA's NZE[1]
- favours business as usual at its metallurgical coal mines and lower-grade iron ore operations.

Concerningly, its planning range (aligned with 2°C of warming in 2100):

- envisions up to 90% greater metallurgical coal demand than the NZE,[1] consuming around 20% of the remaining carbon budget[2]
- projects higher metallurgical coal demand than the IEA's APS, which reflects current government pledges.

In BHP's "1.5°C scenario," metallurgical coal demand is 50% higher than the IEA's NZE, while BHP's planning range is up to 90% greater



1. Estimated based on Figure 3.3 in BHP 2024 CTAP (p. 34). Historical data calculated from World Mining Data 2024 (section 6.1.7.2). IEA NZE and APS data derived from the WEO23 extended dataset and interpolated using CAGR.
2. Lamboll, R.D., Nicholls, Z.R.J., Smith, C.J. et al. Assessing the size and uncertainty of remaining carbon budgets. Nat. Clim. Chang. 13, 1360–1367 (2023). https://doi.org/10.1038/s41558-023-01848-5. RCB adjusted to be current. Emissions calculated using NGER factors.

The assumptions in BHP's 1.5°C scenario that see a bullish future for its metallurgical coal and lower grade iron ore assets are contestable

BHP's 1.5°C scenario anticipates a significant ongoing role for blast furnace - basic oxygen furnace (BF-BOF) with CCUS, which contributes to a bullish outlook and lower downside risk for its metallurgical coal and lower grade iron ore assets in resilience testing.

The assumption underlying this projection is that BF-BOFs remain essential for producing high-quality steel, particularly for the automotive industry.[1]

However, this assumption is increasingly contestable due to advancements in EAF technology. Modern EAFs, operated by major steel producers, have demonstrated the ability to manufacture high-quality steel, with casting, rolling and finishing playing a greater role in determining quality rather than furnace types.[2] For example:

- ArcelorMittal's XCarb steel, produced using recycled steel and EAFs, will supply General Motors with automotive steel[3]
- ArcelorMittal Dofasco facility is set to produce 2.4 million tonnes of high quality steel using DRI-EAF steelmaking.[4]

Investors would benefit from BHP providing more insights into the pace and scale of change that is now likely to emerge across the steel value chain.

1. BHP, 2024 CTAP, p38. "Even when using higher-grade ores, electric arc furnaces are currently unsuitable for producing the best grades of steel (e.g. auto sheets for car manufacture)".
2. Price, A., & Brackemyre, T, 2024, Blast furnaces aren't necessary to make most advanced steel products. Steel Market Update.
3. ArcelorMittal, 2023, ArcelorMittal North America Announces Supply Agreement with General Motors for North American-Sourced Sustainable XCarb™ Steel.
4. ArcelorMittal, 2022, Transition to DRI-EAF steelmaking set to reduce carbon emissions at ArcelorMittal Dofasco in Canada by 3 million tonnes and remove coal from the Company's North American flat steel franchise.

BHP's 1.5°C scenario downplays transition risks by allowing slower decarbonisation of fossil fuels and relying on excessive carbon removals

BHP's 1.5°C scenario downplays the transition risks the company faces, as it:

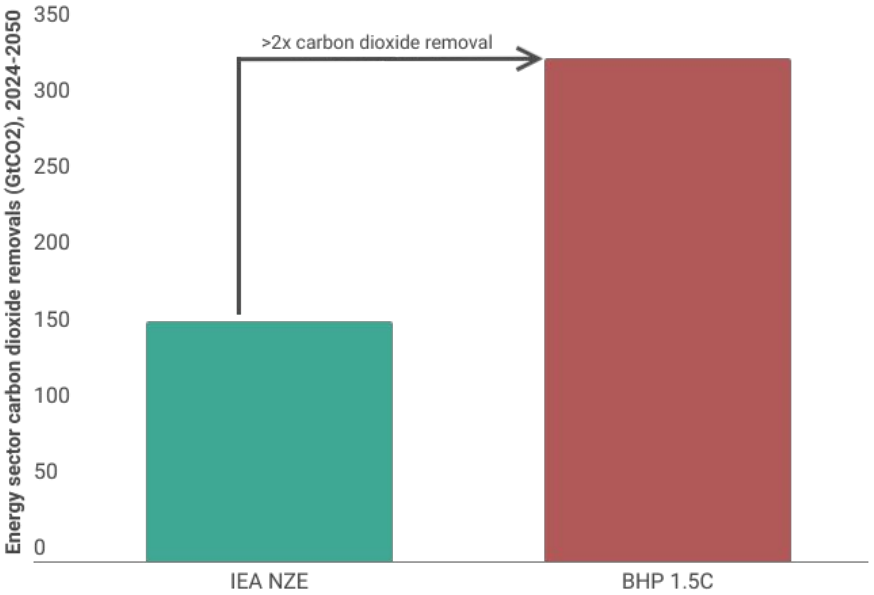
- allows for significantly slower rates of decarbonisation in fossil fuels, with 2.3 times more energy coming from fossil fuels in 2050 compared to the IEA's NZE[1]
- relies on more than double the cumulative CO_2 removal (CDR) of the NZE, given the greater ongoing fossil fuel use.[2]

The IPCC has noted that large-scale CDR is unproven and poses significant risks to limiting warming to 1.5°C.[4] Research suggests the most realistic scale-up of CCUS, including BECCS and DAC, would achieve 6Gt/yr of sequestration by 2050.[5] In comparison:

- BHP's scenario relies on 8Gt/yr of CCS. It is unclear if this includes or is additional to the 2.2Gt from BECCS and DAC, potentially bringing the total CCS BHP requires to 10.2Gt/yr.[6]

This raises important questions about the limitations of BHP's 1.5°C scenario and the conclusions drawn from its resilience testing.

BHP's 1.5°C scenario requires more than double the CO_2 removals from the energy sector than the IEA's NZE



1. BHP, 2024 CTAP, p62.
2. Based on cumulative emissions from IEA NZE pathway interpolated based on CAGR.
3. Lamboll, R.D., Nicholls, Z.R.J., Smith, C.J. et al. Assessing the size and uncertainty of remaining carbon budgets. Nat. Clim. Chang. 13, 1360–1367 (2023). https://doi.org/10.1038/s41558-023-01848-5. RCB adjusted to be current.
4. IPCC, 2018, Special Report: Global Warming of 1.5 ºC – Chapter 2.
5. Zhang, Y., Jackson, C. & Krevor, S. The feasibility of reaching gigatonne scale CO2 storage by mid-century. Nat Commun 15, 6913 (2024). https://doi.org/10.1038/s41467-024-51226-8.
6. BHP, 2024 CTAP, p62.

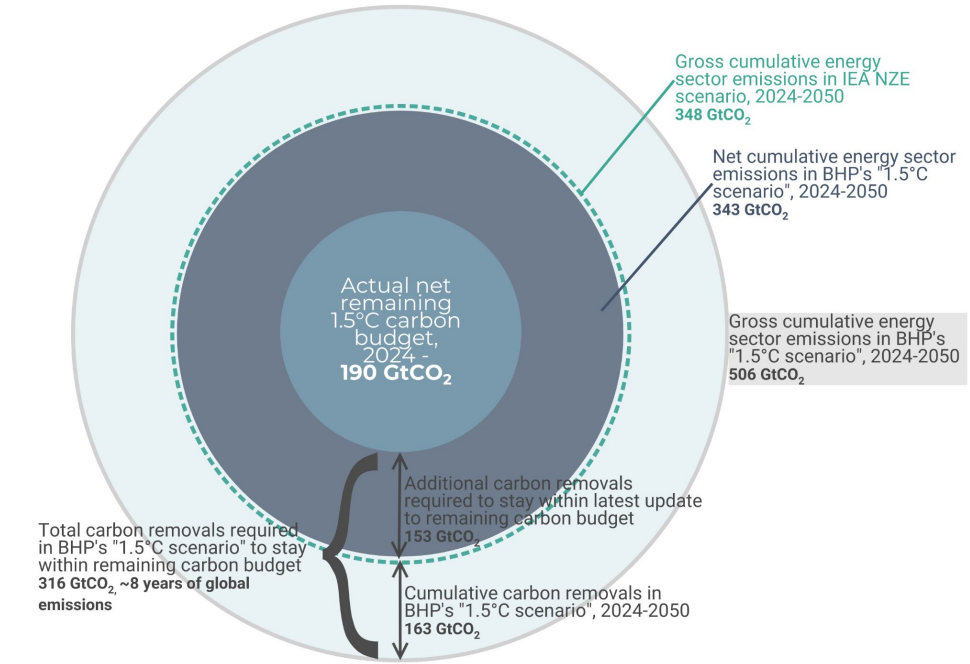
Gross energy sector emissions in BHP's 1.5°C scenario exceed the total remaining carbon budget by over 2.5 times, which means an incredibly ambitious - and currently speculative - level of carbon removals is required to align with the remaining 1.5°C budget

BHP's 1.5°C scenario factors in 506 $GtCO_2$ of energy sector emissions from 2024 to 2050, 1.5 times higher than the IEA's NZE scenario. After accounting for 163 $GtCO_2$ in carbon removals, BHP's net emissions total 343 $GtCO_2$ — similar to the IEA's NZE gross energy sector emissions.

The latest science estimates that the total remaining net carbon budget is 190 $GtCO_2$,[1] which implies that BHP would require an additional 153 $GtCO_2$ of carbon removals - **totalling 316 $GtCO_2$ in carbon removals -** to align with the remaining 1.5° C budget.

316 $GtCO_2$ in carbon removals is an incredibly ambitious target given the speculative nature of carbon capture at such a scale.

BHP's 1.5°C scenario significantly exceeds the remaining carbon budget, requiring double the disclosed carbon removals to align



Carbon budgets and other details for BHP's scenario were derived from Table 8.8 of BHP's 2024 CTAP (p62) and adjusted to account for historic emissions from 2021-2023 based on Lamboll et al.. IEA emissions and budgets were estimated using WEO data and interpolation.

1. Lamboll, R.D., Nicholls, Z.R.J., Smith, C.J. et al. Assessing the size and uncertainty of remaining carbon budgets. Nat. Clim. Chang. 13, 1360–1367 (2023). https://doi.org/10.1038/s41558-023-01848-5. RCB adjusted to be current. Total budget includes AFOLU emissions.

The limitations of BHP's approach to resilience testing underscores the need for a more robust approach, which would provide investors with clearer insight into potential risks

BHP's current resilience testing approach:

Recommended resilience testing approach:

Scope 1 & 2

- While BHP has achieved its scope 1 & 2 targets early, it has limited ambition towards 2030.
- BHP should prioritise structural reductions over offsets to strengthen its long-term net zero target.

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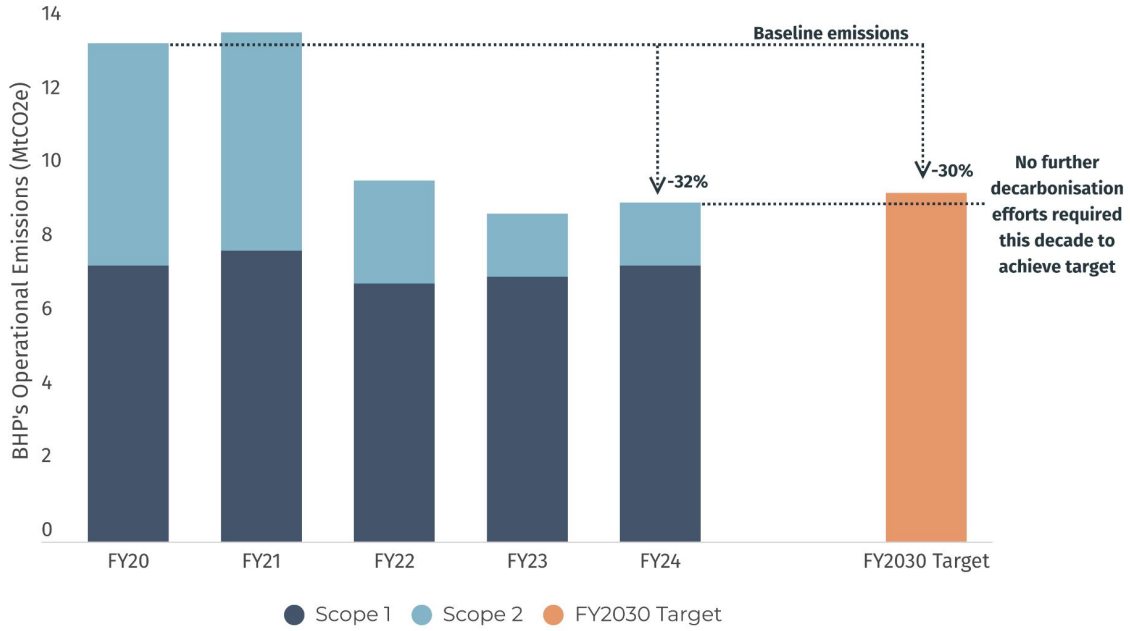
BHP has reached its operational emissions targets early, but shows limited ambition towards 2030

BHP's operational emissions FY20-24, by emissions scope



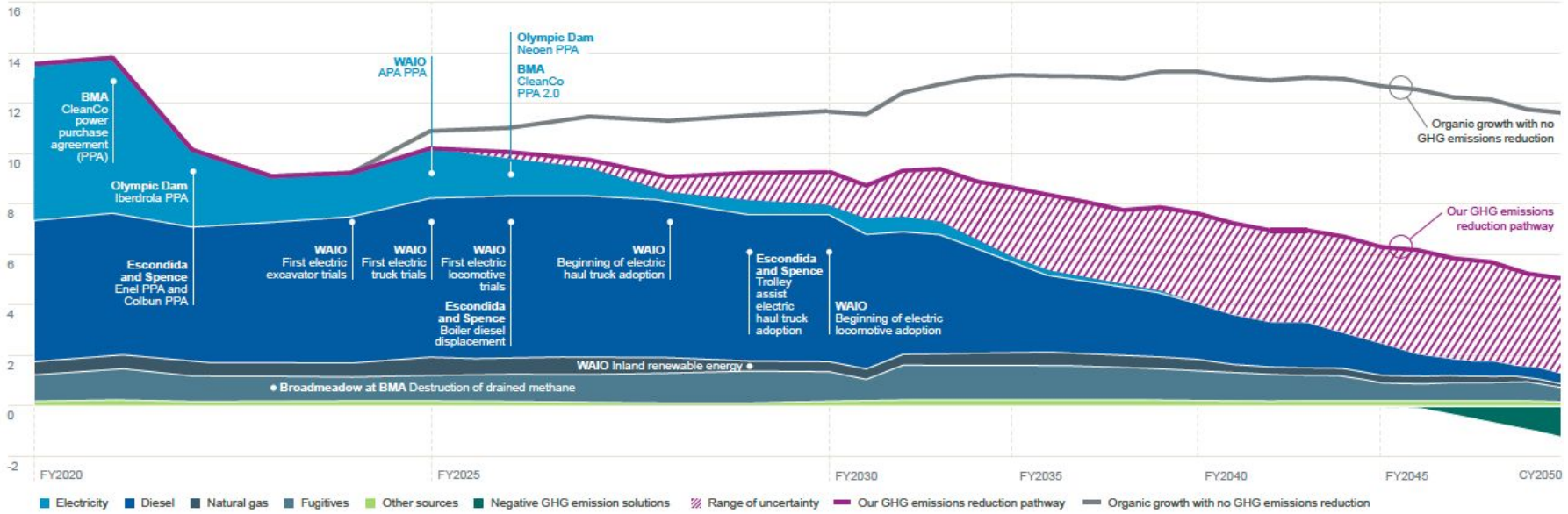
Data: BHP ESG Standards & Databook 2024, emissions are adjusted for divestments

- BHP has achieved its 2030 target of *at least* a 30% reduction in operational emissions early, primarily driven by reductions in scope 2 emissions (renewable PPAs[1] at copper operations). Its emissions increased between FY23 and FY24.
- There is no significant reduction in scope 1 emissions (e.g. diesel and fugitive emissions), which represent a substantial portion of BHP's operational footprint.
- PPAs may not lower real-world emissions if they involve purchasing credits for renewable energy that doesn't directly displace fossil fuel use.[2]
- The language in the CTAP indicates BHP could "do more" but it has not committed to a higher reduction target, signalling a potential lack of ambition.

1. Power Purchase Agreements (PPAs).
2. Greenhouse Gas Management Institute and the Stockholm Environment Institute, Carbon Offset Guide.

BHP's "non-linear" decarbonisation pathway: delay now, risk later

BHP's projected 2030 and 2050 pathways to net zero goal



- **Continuous reductions are crucial to limit cumulative emissions**, which drive global warming. Allowing emissions to rise now and drop later increases the risk of overshooting climate targets, making the 1.5°C goal harder to achieve.
- BHP's model shows up to 50% of emissions may not be fully abated by 2050, creating huge business and climate risks. The lack of clear pathways signals a likely reliance on offsets.

BHP should prioritise structural reductions over offsets to strengthen its long-term net zero target

> ***Our plan is to meet our medium term [operational] target through structural GHG emissions abatement instead of offsetting.***
>
> CTAP, p. 11

> **On long-term goal -**
> ***Offsetting: planned, to close the performance gap beyond our current estimate of up to around an 85% gross operational GHG emissions reduction against FY2020 levels by CY2050 without the use of carbon credits for offsetting.***
>
> CTAP, p. 57

BHP's commitment to achieving its 2030 medium-term target through structural abatement without relying on offsets is a positive step.

For its 2050 net zero target, BHP plans to reduce 85% of its operational emissions through abatement, but acknowledges that offsets will be used to cover the final 15%. **This reliance on carbon credits for the long-term goal raises concerns about delayed operational reductions**.

Both the IEA and the Science Based Targets initiative (SBTi) recommend that companies should achieve at least 90-95% of emissions reductions through direct abatement, and only rely on offsets for 5-10% of emissions. **Offsets should be used as a last resort**.

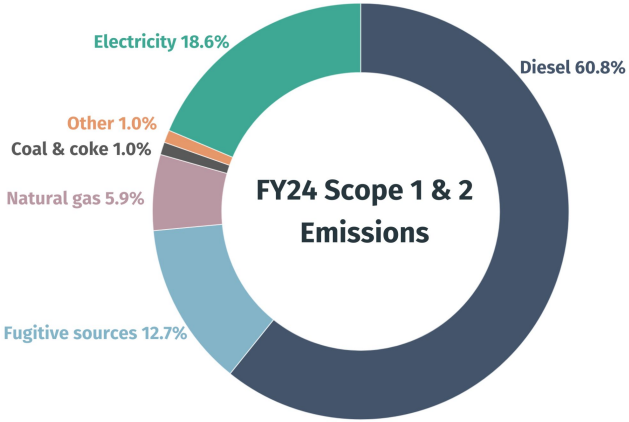
BHP's path to 2030 and 2050: Key challenges and opportunities in operational emissions

1. **Diesel replacement (60.8% operational emissions)**
   a. *Challenge:* The reliance on slow-moving electrification trials allows BHP to avoid near-term commitments, even though proven electric vehicle technologies are becoming more widely available in other industries.
   b. *Opportunity:* Alongside faster deployment, BHP could advocate for decarbonisation policies that accelerate the switch from diesel to electric mining equipment, like reallocating the current diesel tax rebate.

2. **Electricity (18.6% operational emissions)**
   a. *Challenge:* There is limited progress in addressing key energy demands at more isolated sites, and the company still faces challenges in stabilising seasonal generation. More transparency is needed around whether PPA agreements displace fossil-based power or merely offset it.
   b. *Opportunity:* BHP could focus on direct investment in renewable energy projects that actively displace fossil fuels, and prioritise renewable capacity at isolated locations like the Pilbara, where reliance on carbon-heavy electricity remains high.

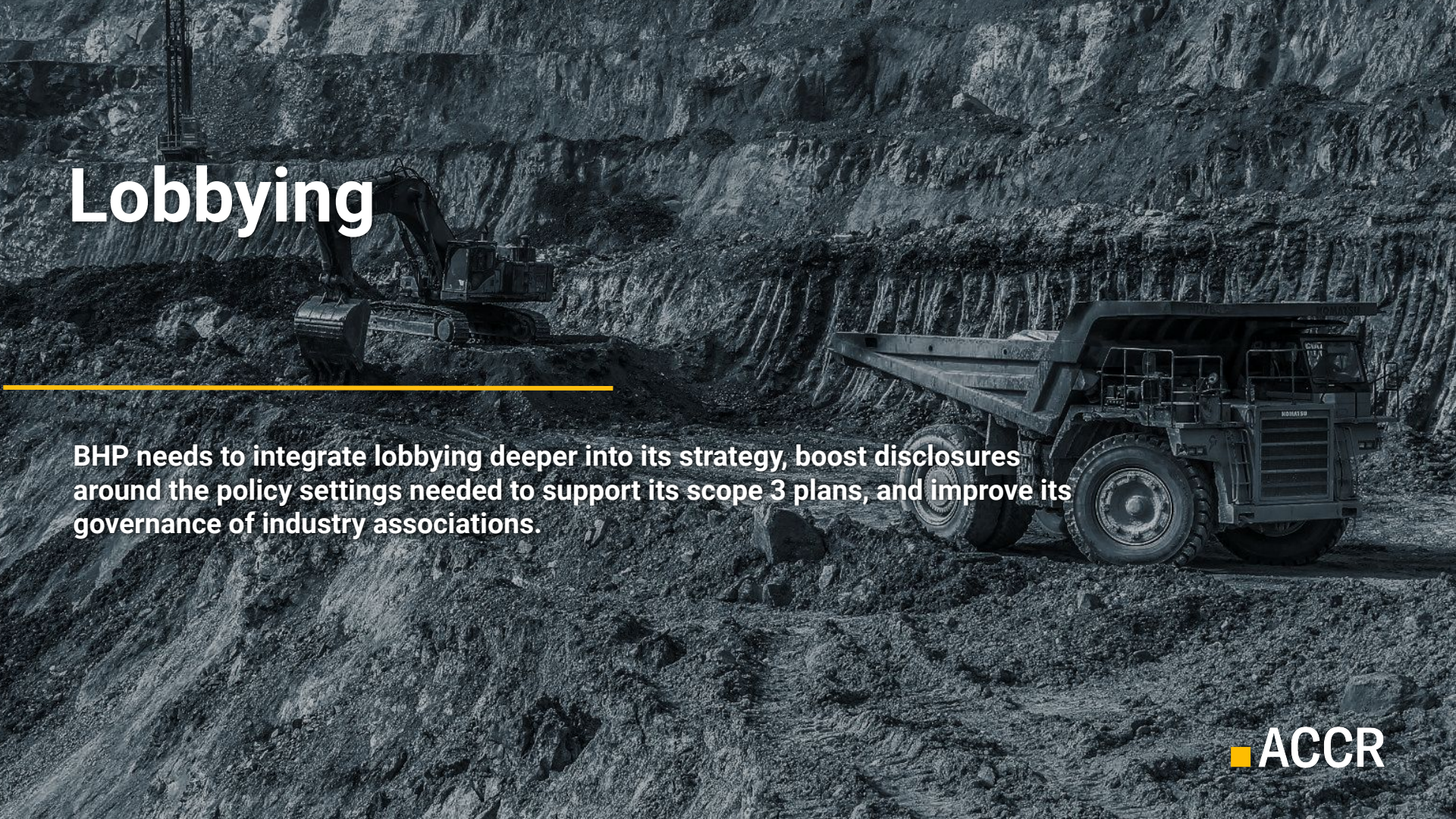
3. **Fugitive methane emissions (12.7% operational emissions)**
   a. *Challenge:* By positioning methane mitigation as a future issue, BHP delays necessary action on this potent GHG. The current focus on pilot projects and inconclusive monitoring technologies allows emissions to persist without clear near-term solutions.
   b. *Opportunity:* BHP is an early mover in updating its method for estimating its methane emissions in line with new Government legislation. BHP could now move beyond the "investigate and collaborate" phase to implement available technologies to accurately measure actual on-site methane emissions and pre-drain methane from mine sites.

Figure: BHP's operational emissions by source (FY2024)



Data: BHP ESG Standards & Databook 2024

Lobbying



BHP needs to integrate lobbying deeper into its strategy, boost disclosures around the policy settings needed to support its scope 3 plans, and improve its governance of industry associations.

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The strategic integration of climate lobbying into BHP's CTAP needs to be deeper

BHP needs to embed lobbying deeper into its CTAP. The company's current disclosures largely sit separately, and lack detail on their strategic relevance.

- The *Net Zero Investment Framework 2.0* says "**policy engagement** is becoming increasingly recognised as a **critical component** of net zero strategies and **transition plans**".
- It also recommends "**disclos[ing] within a transition plan the interdependencies between net zero targets and the wider policy environment**."

"In order to enhance market confidence, [future Scope 3 disclosures] should address optimal policy settings that would promote emissions reductions across the steel value chain" – *Excerpt from withdrawn shareholder resolution to BHP. Co-filers with ~US$110 billion AUM look forward to further clarity in this regard.*

CTAP lacks detail on how BHP strategically integrates advocacy

Our planned climate policy engagements to support our CTAP

The current and proposed decarbonisation approaches of governments and climate resilience initiatives in our core operating jurisdictions of Australia, Canada and Chile

Our direct activities
Participating in government consultation processes and sharing our views in public forums, where relevant.

Our indirect activities
- Helping to shape the positions adopted by industry associations of which we are a member
- Working with other member companies to evolve and advance the initial three-year Climate Action Plan of the Minerals Council of Australia
- Working with civil society and other industry stakeholders to design and implement a program aimed at strengthening the climate resilience of communities near our operations in Chile, including engagement with relevant communal and regional authorities

Expected principal contribution
- Providing an industry view on decarbonisation pathways should help ensure relevant policy frameworks are as effective and efficient as possible
- Knowledge sharing to maximise the effectiveness of adaptation measures to contribute to the knowledge bank available to build broad-based climate resilience in society

Source: BHP, 2024 CTAP, p.41.

BHP's insufficient governance of lobbying materially drags on its Paris alignment

- BHP's own lobbying is only partially Paris-aligned (InfluenceMap org. score = 66%) and has limited advocacy targeted at scope 3. It needs to assess and boost the overall Paris alignment, as per the *Global Standard on Responsible Climate Lobbying*
- BHP has not effectively used its review process to assess its own lobbying or materially improve its industry associations. The lobbying activities of BHP's industry associations are misaligned with both the Paris goals and BHP's own advocacy.

BHP's insufficient governance of industry associations limits its positive lobbying impact

6/14 (43%) **BHP's *Disclosure Scorecard* (InfluenceMap)**

Review Process

Monitor & Review	● +
Alignment Assessment Method	● +
Framework for Addressing Misalignment	● +

Review Assessment (Direct - Company)

Identify & Assess (Direct Misalignment)	● +
Act (Direct Misalignment)	● +

Review Assessment (Indirect - Industry Associations)

Identify & Assess (Indirect Misalignment)	● +
Act (Indirect Misalignment)	● +

"BHP does not appear to have shown evidence of action to address specific cases of misalignment and partial misalignment with delivering the 1.5°C goal of the Paris Agreement" - IM Disclosure Scorecard

Chart: ACCR | Source: InfluenceMap LobbyMap profile and Disclosure Scorecard for BHP.

BHP's association governance is misaligned with earlier shareholder requests

2021: 98.92% of shareholders supported a resolution for BHP to:

- "strengthen its review of industry associations to ensure that it identifies areas of inconsistency with the Paris Agreement"
- suspend membership "where an industry association's record of advocacy is, on balance, inconsistent with the Paris Agreement's goals."

BHP's lobbying governance still doesn't meet these asks.

For example:

- BHP found only "some, non-material misalignment" with the NSW Minerals Council, Minerals Council of Australia and Queensland Resource Council in its 2023 review, despite InfluenceMap finding significant Paris misalignment. Despite BHP's satisfaction with their "progress" in its September 2024 update, the changes the associations have made don't appear to have altered the real-world impact of their lobbying.
- Canadian and US Chambers of Commerce: BHP found "non-material misalignment" with both orgs, contrary to InfluenceMap's assessment, but remained because of the "sufficient benefit" of each membership – only to leave both in 2024. BHP didn't explain why the associations no longer provide sufficient benefit or reference climate concerns.

BHP found no material misalignment with associations whose lobbying is misaligned with the Paris goals

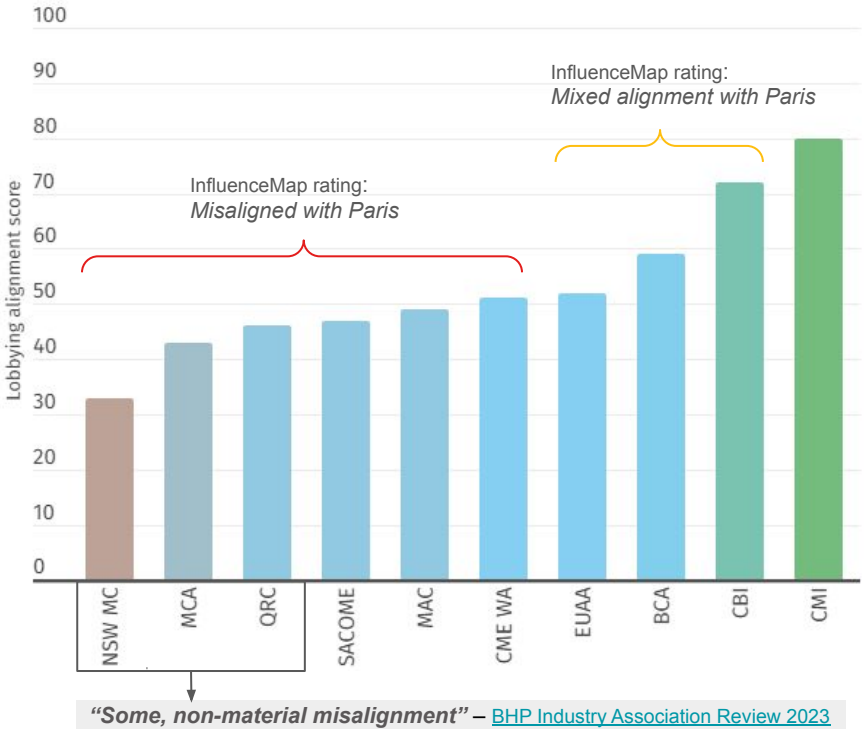

Chart: ACCR | Source: InfluenceMap, BHP 2023 Industry Association Review, and BHP 2023 industry association review: Update.

Appendix

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Shareholder Resolution on Scope 3 disclosures withdrawn prior to 2024 AGM

Major institutional investors representing nearly US$110 billion of assets under management filed a shareholder resolution with BHP requesting that the company provide additional disclosures about its forward plans and investments for scope 3 emissions from the steel value chain.

The resolution was co-filed by Denmark's largest pension fund, PFA Pension Fund, and Vision Super, along with ACCR. The resolution sought additional disclosures on:

- capital allocation for steel decarbonisation investments over the next three years
- detailed plans for achieving net zero Scope 3 emissions from iron ore processing by 2050, including clear timelines and governance
- optimal policy frameworks to support emissions reductions across the steel value chain

The group withdrew the resolution, following improved disclosures made by BHP in response to this engagement within its 2024 CTAP.

Methodology: Metallurgical coal analysis and sources

For BHP's future metallurgical coal production, it was assumed that:

- unless otherwise specified, production at each mine remains steady over its life until marketable reserves (as reported by BHP[1]) are depleted
- the mining proposals at Caval Ridge, Peak Downs and Saraji East are all approved.

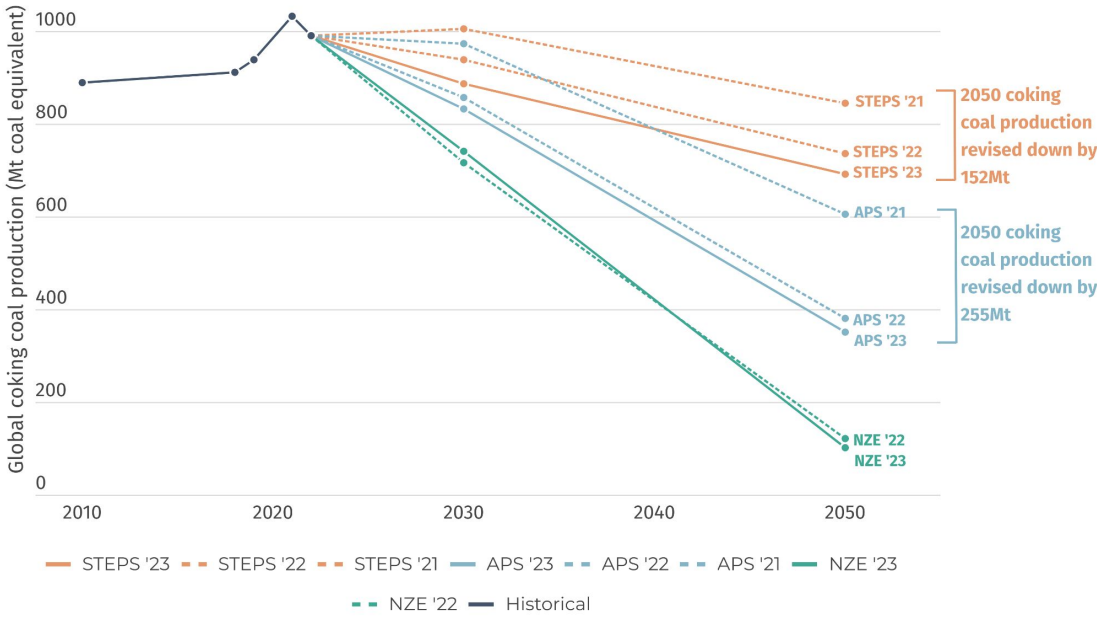
Operation details of proposed mines

- Caval Ridge Horse Pit extension operates at 15 Mtpa ROM coal beginning in 2036, before steadily declining in production from 2038 until operations cease in 2056, as outlined in the preliminary documentation.[2]
- Peak Downs operates at 18 Mtpa ROM coal and operates for an additional 93 years until 2116.[3]
- Saraji East operates at 11 Mtpa ROM coal and operates for 25 years from 2026 to 2051.[4]
- For each proposed mine, the relevant mine recovery rates (%), as reported by BHP,[1] were used to convert ROM coal figures to saleable coal figures.

1. BHP, 2024 Annual Report, p. 228, 231.
2. BHP, 2024, Caval Ridge Mine - Horsepit Extension Preliminary Documentation p.18, 23.
3. BHP, 2022, Peak Downs Mine Continuation Project - Initial Advice Statement p. ES-1.
4. Queensland Government, 2024, Saraji East Mining Lease Project Overview.

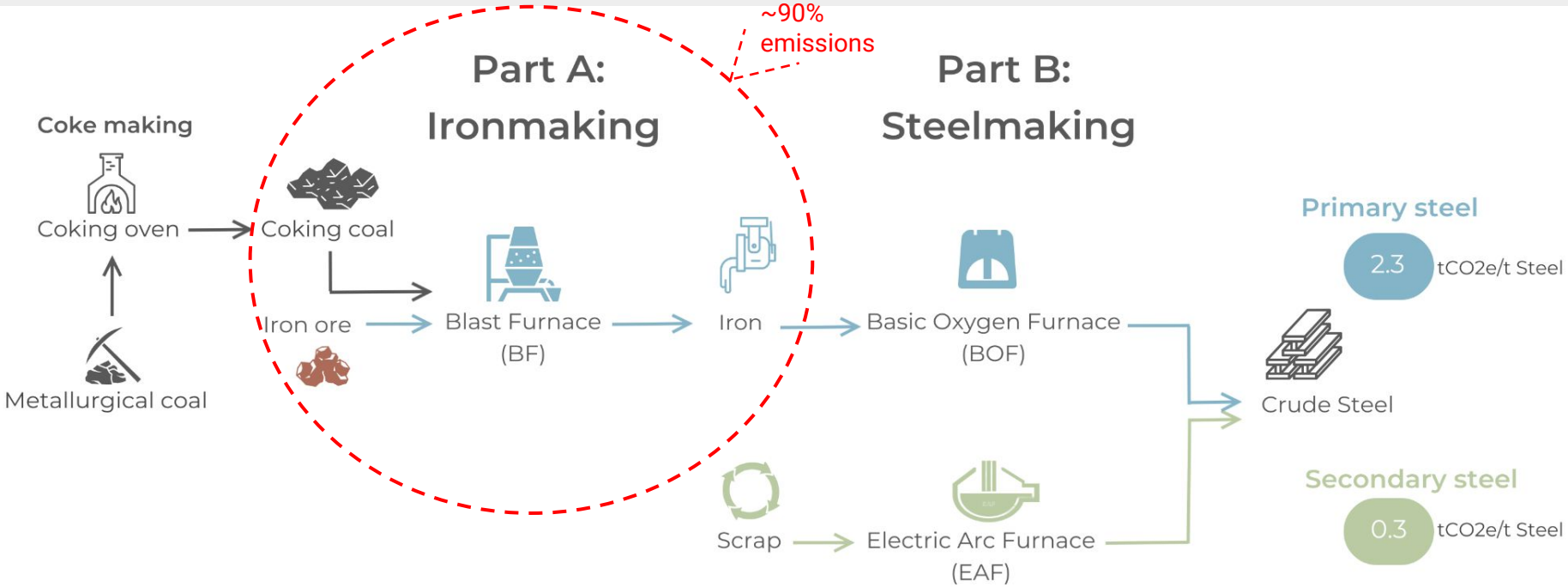
While BHP's metallurgical coal production trajectory remains flat, the ambition of the IEA's APS and STEPS pathways has materially increased

Global metallurgical (coking) coal production in the Announced Pledges Scenario (APS), Stated Policies Scenario (STEPS) and Net Zero Emissions (NZE) scenario



Source: IEA, World Energy Outlook, 2021-2023.
Note: Metallurgical coal is a type of coal used primarily in steelmaking. Coking coal, a subset of metallurgical coal, is specifically used to produce coke — a crucial input in the blast furnace process. While all coking coal is metallurgical coal, not all metallurgical coal is suitable for coking.

Process overview of primary and secondary steelmaking: Primary ironmaking is the emissions hotspot with ~90% of emissions coming from this process



Source: ACCR; Carbon intensities from World Steel Association, 2023.

Technology readiness levels (TRL): Explanations of each stage

Note, figure is linked to slide 11

Figure: ACCR; Source: Agora Industry, Wuppertal Institute and Lund University, 2024, Low carbon technologies for the global steel transformation.

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