



Environmental Defenders Office

26 June 2023

Australian Securities and Investments Commission
Level 5, 100 Market Street
Sydney NSW 2000

By email: Jennifer.Balding@asic.gov.au

Dear Ms Balding

RE: Complaint regarding potential breaches of s 180(1) of the *Corporations Act 2001 (Cth)* by directors of Whitehaven Coal Limited

1. We act for Lock the Gate Alliance, a national grassroots organisation constituted of thousands of supporters and local groups who are concerned about coal mining, coal seam gas and fracking. These groups are located across Australia and include First Nations peoples, conservationists, farmers and urban residents.
2. We write on behalf of Lock the Gate to request an investigation into whether the directors of Whitehaven Coal Limited (**WHC**)¹ may be in breach of their duties of care, skill and diligence under s 180(1) of the *Corporations Act 2001 (Cth)* (**Corporations Act**) by:
 - a. failing to properly identify and manage material climate-related transition and physical risks in circumstances where such risks constitute reasonably foreseeable risks to the interests of WHC;
 - b. causing or permitting WHC to breach its disclosure obligations and/or engage in misleading or deceptive conduct in contravention of the Corporations Act in circumstances where it was reasonably foreseeable that the contraventions may expose WHC to sanctions, penalties and costs; and
 - c. causing or permitting WHC to repeatedly contravene environmental laws in circumstances where it was reasonably foreseeable that the contraventions may expose WHC to the foreseeable risk of sanctions, penalties, costs and significant reputational damage.
3. Our client also alleges that WHC may have engaged in misleading or deceptive conduct under s1041H of the Corporations Act in relation to its climate commitments and discussion of climate risks, and refers these matters as described below for investigation.

Whitehaven Coal's business

4. WHC is a "pure play" coal company listed on the ASX, whose business is solely focussed on coal mining. WHC operates four coal mines in the Gunnedah Basin in NSW: Maules Creek, Narrabri,

¹ In this letter, references to "WHC" includes any subsidiaries and/or related companies of Whitehaven Coal Limited.

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Tarrawonga and Werris Creek (**Operating Assets**). WHC produces thermal and metallurgical coal for export mostly to Asian markets.²

5. WHC plans to significantly expand its coal operations acquiring the Vickery Extension and the Winchester South projects in 2018 and currently expanding its existing Narrabri mine (**Expansion Projects**).³ It has been estimated that the Vickery Extension project will produce 130 million tonnes (M/t) of coal over its 26-year life span;⁴ that the Winchester South project will produce approximately 215 M/t of coal over its 30-year life span;⁵ and that the Narrabri extension project will produce an additional 105 M/t of coal to 2044.⁶ Together, the Expansion Projects are expected to produce an additional 450 M/t of coal to 2050.
6. The projected total scope 1 and 2 emissions to 2050 from WHC's Operational Assets and Expansion Projects is 57 M/t CO₂-e.⁷ When WHC's scope 3 emissions⁸ are added to its total emissions to 2050, that projection has been estimated at 1.14 billion tonnes of CO₂-e, which is the equivalent of more than twice Australia's annual emissions.⁹

Section 180(1): Duty of care, skill and diligence

7. Section 180(1) of the Corporations Act requires that directors perform their duties with a reasonable degree of care, skill and diligence. An act or omission constitutes a failure to exercise care, skill and diligence if it was reasonably foreseeable that the conduct might harm the interests of the company.¹⁰
8. In determining whether there has been a breach of s 180(1), the foreseeable risk of harm must be balanced against the potential benefits that could reasonably be expected to accrue from the conduct.¹¹ The scope of harm extends to reputational damage being an interest protected by s180(1).¹² The "balancing exercise" requires consideration of whether a reasonable person in the position of the director would have foreseen that their conduct involved a risk of harm to the company and what a reasonable person would do to respond to that risk.¹³
9. Where there is a contravention of the Corporations Act by the company, a director may be liable under s 180(1) by permitting or causing the company to contravene the Corporations Act where there was a reasonably foreseeable risk that the company may be exposed to harm as a result of its contraventions.¹⁴ Liability under s 180(1) does not automatically flow from a company's contravention; it is one factor relevant to a determination of whether a director failed to meet the standard imposed by s 180(1).¹⁵

² Whitehaven Coal Limited, *2022 Annual Report* (25 August 2022) (**2022 AR**), p1.

³ 2022 AR, p20.

⁴ Market Forces, Whitehaven Coal, available at: [Whitehaven Coal - Market Forces](#).

⁵ Market Forces, Whitehaven Coal, available at: [Whitehaven Coal - Market Forces](#).

⁶ Market Forces, Whitehaven Coal, available at: [Whitehaven Coal - Market Forces](#).

⁷ Whitehaven Coal Limited, *2022 Sustainability Report* (23 September 2022) (**2022 SR**), p44.

⁸ Scope 3 emissions are indirect emissions generated by the use of an entities' products, here the emissions generated by WHC's customers burning of coal for energy. Scope 3 emissions comprise approximately 80% of fossil fuel companies' total emissions.

⁹ Market Forces, Whitehaven Coal, available at: [Whitehaven Coal - Market Forces](#).

¹⁰ *Vrisakis v Australian Securities Commission* (1993) 11 ACSR 162, 211 (Ipp J); *Australian Securities and Investments Commission v Cassimatis (No 8)* [2016] FCA 1023 [465] and [479] (Edelman J) (**Cassimatis (No 8)**).

¹¹ *Vrisakis v Australian Securities Commission* (1993) 11 ACSR 162, 211 (Ipp J); *Australian Securities and Investments Commission v Cassimatis (No 8)* [2016] FCA 1023 [465] and [479] (Edelman J) (**Cassimatis (No 8)**).

¹² *Cassimatis (No 8)* [482] (Edelman J).

¹³ *Cassimatis No 8* [486] (Edelman J) quoting *Wyong Shire Council v Shirt* (1980) 146 CLR 40 [47]-[48] (Mason J).

¹⁴ *Australian Securities and Investment Commission v Maxwell* (2006) 59 ACSR 373 [104] (Brereton J).

¹⁵ *Cassimatis v Australian Securities and Investments Commission* [2020] FCAFC 52 [463] (Thawley J).

10. Causing or permitting the company to contravene laws other than the Corporations Act may also found a breach of s 180(1), including environmental laws.¹⁶
11. As such, our client considers that permitting or causing the company to contravene environmental laws may found a breach of s 180(1) where there was a foreseeable risk that the contravention may expose the company, not only to sanctions and penalties prescribed under the relevant environmental laws, but also reputational damage.
12. The business judgment rule may be invoked as a defence to alleged breaches of s 180(1), which may be implicit in s 180(1),¹⁷ the relevant question being what a reasonable person in the directors' position would have done in response to foreseeable risk.¹⁸

Duty to manage climate-related risk

13. We note that ASIC considers that disclosing and managing climate-related risk is a “key director responsibility,”¹⁹ and that “directors and officers of listed companies need to understand and continually reassess existing and emerging risks that may be applicable to the company’s business, including physical and transitional climate risk.”²⁰
14. We further note that the 2019 and 2021 updates to the 2016 legal opinion “Climate Change and Directors Duties”²¹ by Noel Hutley SC and Sebastian Hartford-Davis took the view that a Court would consider that climate-related risks represent foreseeable risks of harm to Australian businesses,²² and that s 180(1) of the Corporations Act requires directors to actively consider, disclose and manage climate-related risk, and design and implement business strategies accordingly. The authors also considered that, due to a number of developments, including by Australia’s financial regulators on climate risk disclosure, guidance on climate risk materiality issued by the AASB, industry-standard disclosure against TCFD Recommendations and decarbonisation commitments by global trading partners and investors,²³ the standard of care required of directors in relation to climate-related risk “has risen and continues to rise.”²⁴
15. Accordingly, our client considers that s 180(1) requires the directors of WHC to prepare the company for the transition to a low-carbon economy, which requires the directors to identify, consider and inform themselves of climate-related physical and transition risks to the business; to consider when and how those risks might materialise and the extent to which they may affect the business; to consider what steps should be taken to manage the risk of materialisation and take appropriate action. Given WHC’s status as an expanding pure play coal company facing

¹⁶ *ASIC v Cassimatis (No 8)* at (Edelman J) at [485]:

¹⁷ *ASIC v Mitchell (No 2)* [2020] FCA 1098[1433] (Beach J).

¹⁸ *ASIC v Drake (No 2)* (2016) 340 ALR 75 [394]–[400](Edelman J).

¹⁹ Cathie Armour, *Managing climate risk for directors* (February 2021) available at: [Managing climate risk for directors | ASIC](#).

²⁰ Sean Hughes, *Corporate governance update: climate risk and disclosure* (14 October 2021) available at: [Corporate governance update: climate change risk and disclosure | ASIC](#)

²¹ N. Hutley and S. Hartford-Davis, *Climate Change and Directors’ Duties*, Memorandum of Opinion (7 October 2016) available at: [Legal-Opinion-on-Climate-Change-and-Directors-Duties.pdf \(cpd.org.au\)](#); Noel Hutley and Sebastian Hartford-Davis, *Climate Change and Directors’ Duties*, Supplementary Memorandum of Opinion (26 March 2019) [2] available at: [Microsoft Word - CPB - Supplementary Opinion of Hutley and Hartford Davis 26.3.19 \(002\).docx \(cpd.org.au\)](#); Noel Hutley and Sebastian Hartford-Davis, *Climate Change and Directors’ Duties*, Further Supplementary Memorandum of Opinion (23 April 2021) (**2021 Opinion**) [4] available at: [Microsoft Word - Further Supplementary Opinion.docx \(cpd.org.au\)](#).

²² See also K. Dyon and S. Hartford-Davis, *Advice regarding potential liability of directors under the ISSB draft standards for forward looking statements* (16 December 2022) [12] (**2022 Advice**).

²³ 2022 Advice [8] – [9.5].

²⁴ 2021 Opinion, [7.1].

significant changes in its key markets, with operations in regional locations already susceptible to extreme weather events, our client considers that WHC is exposed to significant, foreseeable, climate-related risk, the management of which is a core responsibility of its directors.

Mismanagement of climate-related transition risk

Transition to low-carbon economy

16. The global transition to a low-carbon economy is necessary to limit the temperature increase to 1.5°C above pre-industrial levels.²⁵ Staying within an increase of 1.5°C requires global emissions to be net zero by 2050 at the latest²⁶ The global response to the transition is already underway: more than 70 countries including China and the US have set a net zero target, covering about 76% of global emissions;²⁷ more than 3000 businesses and financial institutions are working to set science-based emissions reductions targets; and in 2022, global investments in energy transition technology – renewable energy, energy efficiency, electrified transport and heat, energy storage, hydrogen and carbon capture and storage - was USD \$1.3 trillion.²⁸
17. The transition carries significant financial risk to the coal industry. The International Energy Agency (**IEA**) forecasts that, to achieve net zero emissions by 2050, coal demand will decline by 90%,²⁹ and no new coal-fired plants are needed.³⁰ As discussed at [21]-[32] below, that WHC's three largest export markets have each committed to achieving net zero emissions by 2050 presents a material risk to its business, in response to which, directors should prepare their companies for the transition, including by aligning the business strategy to achieving net zero emissions by 2050, in discharge of their obligations under s 180(1) of the Corporations Act.
18. Such is the significance of the projected decline in global coal demand that research conducted by the NSW Treasury predicted that it would impact New South Wales's fiscal outlook. In that regard, the research noted that "The heavy reliance of the NSW coal industry on exports of thermal coal means that future production will be largely determined by global demand"³¹ and that its largest thermal coal export destinations – Japan, South Korea and China – announced their commitment to net zero emissions by 2050 which is expected to weaken global demand "considerably".³²
19. Consistent with the IEA's forecast, and the NSW Treasury research in *Towards Net Zero: Implications for Australia Energy Policies in East Asia*, the Reserve Bank of Australia (**RBA**) found

²⁵ Paris Agreement, 12 December 2015, Art 1(a).

https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf 196 adopted the Paris Agreement.

²⁶ IPCC, 2018: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, Strengthening and implementing a global response*, 358 [SR15 Chapter 4 LR.pdf \(ipcc.ch\)](#)

²⁷ United Nations Net Zero Coalition, *For a liveable climate: Net zero commitments must be backed by credible action*, available at: [Net Zero Coalition | United Nations](#).

²⁸ International Renewable Energy Agency, *Global Landscape of Renewable Energy Finance* (2023), p.10, available at: [Global landscape of renewable energy finance 2023 \(azureedge.net\)](#)

²⁹ IEA, *World Energy Outlook* (2022) p 133 available at: [World Energy Outlook 2022 \(windows.net\)](#).

³⁰ Coal in Net Zero Transitions, p 59.

³¹ M. Beauman, N Wood and P Adams, 2021 Intergenerational Report, Treasury Technical Research Paper Series, *The sensitivity of the NSW economic and fiscal outlook to global coal demand and the broader energy transition for the 2021 NSW Intergenerational Report* (May 2021) (**NSW Treasury Report**) p18 available at: [2021 IGR TTRP - The sensitivity of the NSW economic and fiscal outlook to global coal demand and the broader energy transition for the 2021 NSW Intergenerational Report](#)

³² NSW Treasury Report, p9.

that, based on emissions scenarios consistent with net zero commitments made by China, Japan and South Korea, Australia's coal exports could fall by 80%, and that current reserves at operating mines in Australia exceed projected export demand to 2050.³³

WHC's exposure to climate-related transition risk

20. In its 2022 Sustainability Report (**2022 SR**), WHC identified material climate-related transition risks to the company, including relevantly:³⁴
 - a. shifting international policy, markets and technology away from coal leading to decrease price and demand; and
 - b. investors changing ESG policies leading to higher funding costs.
21. Whilst our client agrees that the risks identified by WHC are material, our client considers there are foreseeable material risks *not* identified about which reasonable directors *should* have known and taken responsive action. A claim that the directors of WHC did not know of the risks does not resolve the issue given that the relevant test under s 180(1) is objective.³⁵ Accordingly, our client considers that the following climate-related risks should have been identified by WHC's directors in WHC's 2022 SR:
 - a. net zero commitments by WHC's largest trading markets;
 - b. limited and costly access to finance; and
 - c. stranded assets.

Net zero commitments by WHC's largest trading markets

22. WHC's largest trading markets - Japan (68%), South Korea (11%) and Taiwan (8%)³⁶ - have all committed to achieving net zero emissions by 2050, with Japan and South Korea setting interim targets of 46% and 24% respectively.³⁷ As identified at [17] above the IEA forecasts that, if these commitments are to be achieved, global coal demand will decline by 90%,³⁸ and that no new unabated coal plants beyond those already under construction are built.³⁹
23. Recent research conducted by the Institute for Energy Economics and Financial Analysis (**IEEFA**) titled *Whitehaven Coal: assessing its claims about the long-term outlook (IEEFA Whitehaven Report)*⁴⁰ found that the long-term outlook for thermal coal exports to Asia is declining at an accelerating rate. The IEEFA Whitehaven Report is contained in **Annexure A**.
24. In relation to WHC's largest export markets, further research conducted by IEEFA titled *A Reality Check for Australian Thermal Coal Exporters: Coal's Role in Southeast Asia's Growth is Declining Further (IEEFA Coal Export Report)* found that that WHC's largest export markets are in decline

³³ RBA Report, p 35.

³⁴ 2022 SR, pp 33-35.

³⁵ *ASIC v Rich* (2009) 75 ACSR 1 622 [7237] (Austin J).

³⁶ Whitehaven Coal, Half Year Results Presentation (16 February 2023) p 5, available at: [ASX announcements - Whitehaven Coal](#).

³⁷ RBA Report, p 31.

³⁸ IEA, World Energy Outlook (2022) p 133 available at: [World Energy Outlook 2022 \(windows.net\)](#).

³⁹ IEA, Coal in Net Zero Transitions (November 2022) p 59, available at: [Coal in Net Zero Transitions - Analysis - IEA](#)

⁴⁰ A. Gorringer and S. Nicholas, *Whitehaven Coal: Assessing its Claims About its Long-Term Outlook (May 2023) (IEEFA Whitehaven Report)* p 2.

because of the reduction of reliance on coal to meet their net zero targets and the transition to renewable energy sources.⁴¹ In that regard, IEEFA found that, even if short-term predictions suggest an increase in uptake of coal in Southeast Asia, such uptake will be short-lived and that the long-term decline in the Australian thermal coal export market is “inevitable.”⁴² This is consistent with the Australian government forecast that imports of thermal coal to all three export markets has already peaked.⁴³

25. According to the IEEFA Whitehaven Report, claims made by WHC in its 2022 SR that its “higher quality” high-CV coal will ensure gains in the market share even as overall demand for thermal coal declines,⁴⁴ is not supported by evidence. In fact, it notes that Asian countries that could provide an alternative market to Japan, South Korea and Taiwan do not import, and are unlikely ever to import, the high-CV coal that Whitehaven coal produces.⁴⁵
26. Detailed analysis of the status of coal-fired power in Japan, South Korea and Taiwan including their expansion in renewable energy to meet their net zero commitments is provided in the IEEFA Whitehaven Report.
27. Accordingly, the commitment by WHC’s largest trading partners to *decrease* emissions to net zero by 2050 presents a clear risk to WHC whose Expansion Projects will significantly *increase* its total production and emissions. As such, our client considers that the reasonable director of WHC should *at least* be considering diversifying the business in response to that risk, and that failure to do so demonstrates a failure to adequately prepare the company for the global transition to a low-carbon economy.

Access to finance

28. Investors are increasingly setting their own targets to achieve net zero emissions by 2050. In July 2022, the Australian Council of Superannuation Investors reported that in 2019, 14 ASX-listed companies had set such targets.⁴⁶ By 2022, 95 ASX-listed companies accounting for 70% of the ASX200’s collective market capitalisation had net zero targets. With respect to foreign investment, the Board of the RBA observed in June 2021 that, “...developments globally relating to the management and regulation of climate-related risk had become increasingly prominent in the asset allocation decisions of international investors”. This development could affect the cost and availability of finance for corporations and governments.”⁴⁷
29. In December 2020, the Net Zero Asset Managers Initiative (**NZAMI**) was launched. In order to be a signatory to the NZAMI, asset managers must commit to transitioning their investment portfolios to net zero emissions by 2050 or sooner in line with global efforts to limit warming to 1.5°C.⁴⁸ As at 31 May 2022, there were 273 signatories which collectively manage over USD \$61.3 trillion of

⁴¹ A Gorringer and S. Nichols, *A Reality Check for Australian Thermal Coal Exporters: Coal’s Role in Southeast Asia’s Growth is Declining Further* (27 February 2023) (**IEEFA Coal Export Report**) p 4, available at: [A reality check for Australian thermal coal exporters | IEEFA](#).

⁴² IEEFA Coal Export Report, p4.

⁴³ IEEFA Whitehaven Report, p 2-3 citing Department of Industry, Science and Resources, [Resources and Energy Quarterly](#) (March 2023).

⁴⁴ SR 2022, p4 and p22.

⁴⁵ IEEFA Whitehaven Report, p20.

⁴⁶ See <https://acsi.org.au/wp-content/uploads/2022/07/ACSI-Research-Climate-Change-Disclosure-in-ASX200-July-2022.pdf>.

⁴⁷ RBA, Minutes of the Monetary Policy Meeting of the Reserve Bank Board (1 June 2021) available at: [1 June 2021 | Minutes of the Monetary Policy Meeting of the Board | RBA](#)

⁴⁸ Net Zero Asset Managers Initiative, available at: [Commitment – The Net Zero Asset Managers initiative](#)

assets.⁴⁹ The signatories to the NZAMI include UBS Asset Management,⁵⁰ JP Morgan Chase & Co,⁵¹ Lazard Asset Management⁵², State Street Global Advisors, Mitsubishi UFJ Asset Management,⁵³ Fidelity International⁵⁴ and Invesco Ltd.⁵⁵ As at 6 April 2023, those signatories all held shares in WHC.⁵⁶ As such, asset managers factoring in a company's alignment with net zero by 2050 in their investment decision making process may result in decisions to divest high carbon assets, or not to allocate capital to high carbon investments such as WHC.

30. The risk to WHC is that, as investors adjust their portfolios to align with net zero by 2050, they abandon companies that are failing to manage their exposure to climate-related risk and increase investments in companies whose strategies align with achieving net zero by 2050. Given WHC's failure to adequately manage climate-related risk, our client considers that WHC is significantly exposed to more limited finance and the cost of finance will increase as investors pass on the cost of their risk to WHC. This will impact on WHC's future financial performance.

Stranded assets

31. Containing the global temperature to within 1.5°C requires a large proportion of existing fossil fuel reserves to remain in the ground. According to the IEA, if countries are to achieve their commitments to achieve net zero emissions by 2050, coal demand will decrease by 90%. Such a rapid shift will entail a reduction in the value of coal reserves, as well as an idling of coal-related infrastructure as these activities become uneconomical, creating 'stranded assets'. Investments in *new* mining production further weaken the economic viability of existing operations while being highly exposed to the risk of stranded assets, making investments in new coal mining increasingly risky. Estimates of potential stranded fossil fuel assets globally has been estimated at least USD \$1 trillion.⁵⁷ As such, stranded assets pose a clear financial risk to companies being unable to recoup their investment in assets as the underlying energy market transitions away from coal, and to investors being unable to recoup their investment.
32. As discussed at [3]-[4] WHC is a pure play coal company whose asset portfolio consists of its Operational Assets and Expansion Projects. As discussed above at [21], WHC's largest trading partners have committed to achieving net zero emissions by 2050, achievement of which requires a rapid shift away from using coal as an energy source. This carries the risk that WHC's mines will shut down before their predicted economic lifetime, that mine expansions will not come online, and that related infrastructure will be decommissioned early. In that regard, the RBA stated that "Australian coal-related investments are at risk of becoming stranded assets as lower export

⁴⁹ Net Zero Asset Managers Initiative, who are the signatories? available at [FAQ – The Net Zero Asset Managers initiative](#)

⁵⁰ UBS Asset Management, Climate and Nature Report 2022, 6 March 2023 available at: [ubs-climate-and-nature-report-2022-en-final.pdf](#)

⁵¹ JP Morgan Chase, 2022 Climate Report, December 2022 available at: [2022 Climate Report \(jpmorganchase.com\)](#)

⁵² Lazard Asset Management, media announcement available at: [lazard-asset-management-joins-net-zero-asset-managers-initiative-03-29-21.pdf](#)

⁵³ Mitsubishi UFJ Financial Group Asset Management, media announcement available at: [20221031_1.pdf \(mufg.jp\)](#)

⁵⁴ Fidelity International, Climate Investing, available at: [Climate investing | Fidelity Australia](#)

⁵⁵ Invesco Limited, Invesco joins forces with investment leaders to reach net-zero future, available at: [Invesco joins forces with investment leaders to reach a net-zero future](#)

⁵⁶ See [Whitehaven Coal Limited Insider Trading & Ownership Structure - Simply Wall St](#) and [ASX: WHC - WHITEHAVEN COAL LIMITED Share Price & Information - 61 Financial](#)

⁵⁷ [What are stranded assets? - Grantham Research Institute on climate change and the environment \(lse.ac.uk\)](#)

volumes and prices weigh on firm profitability.”⁵⁸ Further, the risk that WHC’s assets become stranded provides an incentive for investors to de-risk the stranding of *their* investments by divesting their interests in WHC, and instead investing in renewables. This, in turn, increases the risk that WHC will be unable to access capital to finance its operations, in particular its Expansion Projects.

WHC’s mismanagement of transition risks

33. Despite the vulnerability of WHC to climate-related transition risks identified above, our client considers that its directors may not be adequately managing this risk in the following two respects:
- a. WHC does not have a plan to achieve net zero emissions by 2050; and
 - b. WHC has not tested the resilience of its business against a 1.5°C scenario.

No net zero plan

34. Directors are under increasing shareholder and community pressure to adopt emissions reduction targets to convey that they understand that climate-related risk is a financial risk that requires management. To that end, net zero plans have become increasingly prevalent amongst ASX listed companies as a means to demonstrate that directors are managing the risk by aligning the business strategy with a net zero economy.⁵⁹ In the 2021 Opinion, the authors noted that the risk of not making a net zero plan is “profound”.⁶⁰ Accordingly, our client considers that the reasonable director of WHC should prepare the company for the transition by at least having a plan to reduce its emissions to net zero by 2050, especially given its largest export markets have net zero commitments. That WHC does not have a plan to achieve net zero emissions or a decarbonisation plan to transition out of coal to renewable resources demonstrates a failure by its directors to prepare the company for the transition to a low-carbon economy.
35. To the extent that WHC *has* considered emissions reduction, the 2022 SR included a section entitled ‘potential emissions reduction pathway’.⁶¹ This section primarily set out reasons for WHC not setting an emissions reduction pathway, including the cost and quality of offsets, the availability of technology and significant capital investment.⁶² Despite this, the 2022 SR identified ‘potential options’ for emissions reductions to include offsets and direct air capture technology (DAC).⁶³ Given that 66% of its scope 1 and 2 emissions are fugitive emissions which cannot be abated at source,⁶⁴ and the challenges associated with their removal by offsets DAC, our client considers that including offsets and DAC as ‘potential options’ to reduce fugitive emissions in its potential emissions reduction plan is apt to confuse. On the one hand, WHC claims that offsets and DAC are not viable options to reduce its emissions; on the other, WHC cites offsets and DAC as potential options to reduce its emissions.

⁵⁸ RBA, *Towards Net Zero: implications for Australia of Energy Policies in East Asia* (16 September 2021) (**RBA Report**) p35, available at: [Towards Net Zero: Implications for Australia of Energy Policies in East Asia | Bulletin – September 2021 | RBA](#)

⁵⁹ 2021 Opinion, [3].

⁶⁰ 2021 Opinion, [40].

⁶¹ 2022 SR, p.44

⁶² 2022 SR, p44.

⁶³ 2022 SR, p42.

⁶⁴ 2022 SR, p44.

36. In any event, our client considers that WHC’s directors’ failure to respond to the risks associated with WHC’s largest trading markets’ net zero commitments (and the associated risk of limited and costly finance and stranded assets) by not having a net zero plan or a decarbonisation or transition plan may constitute a failure to act with care, skill and diligence in breach of s 180(1) of the Corporations Act.

WHC’s scenario analysis

37. The purpose of scenario analysis is to test the resilience of a business against a low-carbon future, to understand the associated medium and long-term risks and adapt the business strategy accordingly. Because the time horizon over which climate risks may materialise are uncertain, and extend beyond typical business planning cycles, a company should test resilience against various scenarios, both favourable and unfavourable. Given the commitment by countries, investors and businesses to achieve net zero by 2050, companies should conduct scenario analysis that assumes a temperature rise of no more than 1.5°C, particularly high-emitting companies that are particularly vulnerable to climate-related risk. In relation to a 1.5°C scenario, the TCFD stated that:⁶⁵

A 1.5°C scenario would provide stronger diversity in assumptions about future policies and technologies. In combination with a scenario that models policy and technology as an outcome... a company could better highlight key transition risk uncertainties and their possible implications for the company.

1.5°C scenario also aligns with the latest scientific research from the IPCC, the growing momentum of pledges to limit emissions to net-zero by 2050, and the spirit of the Paris Agreement, demonstrating a company’s alignment to recognized temperature targets.

38. As such, directors have a duty to assess the resilience of their company against a 1.5°C scenario, such as the IEA’s Net Zero Emissions by 2050 scenario (NZE2050), to inform themselves of risk, even if the directors deem a 1.5°C scenario unlikely. A director’s duty is to assess and demonstrate to the market that they have assessed the risk to the company associated with a 1.5°C scenario in the event that they are wrong. Chevron undertook detailed scenario analysis under the NZE2050 despite stating that its “likelihood is remote”.⁶⁶ In relation to the financial impact on its portfolio under the NZE2050 scenario, Chevron stated that, “...we would expect to experience substantial reductions in projected cash flow as we evolve from a company focused primarily on hydrocarbon extraction and refining to one also focused on new energies, CCUS, and petrochemicals.”⁶⁷ Accordingly, the directors of WHC should have undertaken scenario analysis against a 1.5°C pathway to be transparent about the associated risks to the business.
39. The IEA has three scenarios which it recommends companies use: the Stated Policies Scenario (**STEPS**), the Announced Pledges Scenario (**APS**) and NZE2050.⁶⁸ The STEPS scenario assumes that current policies are retained but does not assume that net zero targets are met in full and on time unless supported by details of how this will be achieved. STEPS indicates a temperature rise

⁶⁵ TCFD, *Recommendations of the Task Force on Climate-Related Financial Disclosures* (June 2017), p.26 available at: [FINAL-2017-TCFD-Report.pdf \(bbhub.io\)](https://www.bbhuh.io/FINAL-2017-TCFD-Report.pdf)

⁶⁶ Chevron, *Climate Change Resilience: advancing a lower carbon future* (October 2021) available at: [2021-executive-summary-climate-resiliency-report.pdf \(chevron.com\)](https://www.chevron.com/2021-executive-summary-climate-resiliency-report.pdf)

⁶⁷ Ibid.

⁶⁸ IEA, *World Economic Outlook 2022* (November 2022) (**IEA WEO**) p.20 available at: [World Energy Outlook 2022 \(windows.net\)](https://www.iea.org/publications/World-Energy-Outlook-2022)

of 2.5°C by 2100.⁶⁹ The APS assumes that climate commitments by governments are met in full and on time regardless of whether they are supported by detailed laws, policies and regulations. The NZE2050 scenario sets out a pathway for the global energy sector to achieve net zero emissions by 2050. It assumes that all regions achieve rapid reductions in emissions in order for the global energy sector to reach net zero by 2050.⁷⁰

40. In its 2022 SR, WHC did not conduct scenario analysis against NZE2050, or any other 1.5°C pathway. Instead, it focussed primarily on STEPS and partially on the (now outdated) IEA Sustainable Development Scenario (SDS), which indicates a 1.7°C rise. In that regard, it appears that WHC excluded the Expansion Projects from analysis under SDS in the 2022 SR. There, WHC stated that its “operating assets would have positive valuations and economic lives” under the SDS but does not disclose whether its Expansion Projects also have positive valuations and economic lives under SDS.⁷¹ As such, the whole of WHC’s business, comprising the Operating Assets and Expansion Projects was only assessed against STEPS. Therefore, our client’s view is that WHC’s directors have failed to inform themselves of the resilience of WHC’s strategy against a 1.5°C pathway and pursued a strategy that assumes a temperature rise of 2.5°C, which is inconsistent with the net zero targets set by its largest export markets.
41. By contrast, under NZ2050, the IEA sees global coal demand decrease by 45% to 2030 and 90% to 2050, and by 2040 there is no use of unabated coal for electricity generation anywhere in the world.⁷² Under the Net Zero 2050 (Net Zero) scenario used by the RBA, coal exports fall by 80% by 2050, with declining demand from China, Japan and South Korea accounting for 66% of that fall.⁷³ The RBA sees current coal reserves at operating mines in Australia exceed export demand to 2050 which it says suggests stranding of assets even without investment in new mines.
42. Given the net zero commitments made by WHC’s export markets, our client considers that the reasonable director of WHC should test its business resilience against NZ2050 (or any other 1.5°C pathway) to inform themselves of the associated risks to WHC’s Operating Assets and Expansion Projects and lack of alternative incomes from other resources. As such, our client considers that the failure of WHC’s directors to adequately assess the financial risks facing the company under a 1.5°C pathway may amount to a breach of their duties under s 180(1) of the Corporations Act. Our client considers that the reasonable director of WHC should have demonstrated *at least* as much focus on the NZE2050 scenario as the STEPS scenario to properly inform themselves of the risk to the company under all possible pathways.
43. We note that the business judgment rule may be invoked in relation to the above potential breaches. Based on the public information available, our client considers that it would not apply: the reasonable director would have aligned the business strategy with achieving net zero emissions by 2050 in circumstances where its largest investors, and trading partners, have made net zero emissions commitments in response to the foreseeable climate-related risks discussed at [20ff.] above.

⁶⁹ IEA WEO, p.63

⁷⁰ IEA, Coal in Net Zero Transitions: Strategies for rapid, secure and people-centred change (November 2022) (**IEA Coal in NZ Transitions**), p36-37 available at: [Coal in Net Zero Transitions: Strategies for rapid, secure and people-centred change \(windows.net\)](#)

⁷¹ 2022 SR, p.38.

⁷² IEA WEO, p54

⁷³ F. Wang, J Kemp and M McCowage, RBA, *Towards Net Zero: Implications for Australia of Energy Policies in East Asia* (16 September 2021), p35.

Mismanagement of climate-related physical risk

44. Climate-related physical risks are those related to the physical impacts of climate change. These risks can be driven by extreme weather events such as drought, flooding, bushfires and cyclones (acute risks) or associated with longer-term shifts in climate patterns including temperature rise, sea level rise and changing precipitation patterns (chronic risks).
45. Physical risks have financial implications for companies including reduced revenue from decreased production capacity due to interruptions in the supply chain or access to operations being cut; increased operating costs as a result of inadequate water supply and reduced revenue and higher costs from negative impacts on the workforce.
46. As such, directors have a duty to identify climate-related physical risks in discharge of their obligations under s 180(1) of the Corporations Act. In that regard, our client considers that the directors of WHC failed to adequately identify and manage climate-related physical risks, in particular associated with the impact that flooding and drought events have on WHC's operations, in circumstances where those risks are *already* present.

WHC's exposure to climate-related physical risk

2017-2019 drought

47. From 2017 to 2019 NSW was in drought, which affected coal operations in the Gunnedah Basin. Due to the lack of water in 2019, trains transported 725,000 litres of water per day to coal operations in the area, without which, production would have ceased.⁷⁴
48. In its Q2 FY20 Report,⁷⁵ WHC reported that dust and smoke from drought conditions and bushfires had affected its operations and that its December 2019 quarter coal production was down 58% on the previous year. In its 2020 Annual Report, WHC reported that Maules Creek ROM production decreased by 8% as a result of labour shortages and smoke events associated with drought conditions and bushfires.⁷⁶

2021 flooding

49. In November and December 2021, heavy rainfall and flooding significantly affected WHC's operations at the Gunnedah, Tarrawonga and Maules Creek open cut mines. In that regard, in its Q1 FY22 Report, WHC disclosed the following:⁷⁷
 - a. the Tarrawonga mine September quarter Run-of-Mine (ROM) production was 11% below the previous corresponding period (**pcp**), reflecting the impact of rain delays in July.
50. In its Q2 FY22 Report WHC disclosed the following:⁷⁸
 - a. saleable coal production was down 24% on pcp;

⁷⁴ ABC, Trains deliver water to drought-affected NSW coal mines to keep production going and save jobs (8 August 2019) available at: [Trains deliver water to drought-affected NSW coal mines to keep production going and save jobs - ABC News](#)

⁷⁵ Whitehaven Coal, Quarterly Report (16 January 2020) available at: [200116-December-2019-Quarterly-Report-FINAL.pdf \(whitehavencoal.com.au\)](#)

⁷⁶ Whitehaven Coal, Quarterly Report (16 January 2020) p.1.

⁷⁷ Whitehaven Coal, Annual Report () p29 available at: [Whitehaven-Coal-Annual-Report-2020.pdf \(whitehavencoal.com.au\)](#)
[WHC September 2021 Quarterly Report.pdf \(whitehavencoal.com.au\)](#)

⁷⁸ Whitehaven Coal, Quarterly Report (21 January 2022) available at: [WHC Dec 21 Quarterly FY22 guidance La Nina COVID impacts.pdf \(whitehavencoal.com.au\)](#)

- b. coal haulage between the Gunnedah mine and the coal handling and preparation plant (**CHPP**) was restricted;
 - c. flooding cut road access to mines for two weeks, causing WHC to defer 600,000 to 700,000 of production at Maules Creek and 100,000 to 200,000 of production at Gunnedah;
 - d. heavy rain caused local flooding that cut off road access to the mines and Gunnedah CHPP for two weeks;
 - e. heavy rainfall cut access to the Maules Creek mine on a number of occasions affecting production, processing and train loading; and
 - f. port movements were impacted by high winds and swell on multiple occasions in the quarter. In addition, the harbour operated under freshwater conditions from 29 November to 22 December due to flood waters, which restricted vessel movements.
51. After the release of the Q2 report and outlook, WHC shares fell more than 6% on the Friday after the announcement, and more than 4% on the following Monday.⁷⁹
52. In its 2022 Annual Report, WHC reported that saleable coal production was 14% lower than FY21 due to various factors, including restricted access during the December flooding and lower road haulage volumes as a result of weather impacts,⁸⁰ and that the rail network was significantly impacted by a number of flooding events⁸¹

2022 flooding

53. Throughout 2022, heavy rainfall and flooding further affected WHC's operations. In its Q1 FY23 Report, WHC reported that:⁸²
- a. Overall Q1 managed ROM production was down 22% on pcp;
 - b. flooding caused mine access to be cut off at Maules Creek for 7 days;
 - c. access was cut off for two days and haulage roads were closed for 14 days at Tarrawonga;
 - d. rainfall in the Gunnedah Basin catchment area caused flooding which impacted railings from all Whitehaven loadpoints on a number of occasions; and
 - e. port movements were impacted on multiple occasions by high winds and swell.
54. In its Q2 FY23 Report,⁸³ WHC reported that:
- a. localised flooding cut off mine access for 17 days (versus 7 days for the previous quarter). The use of helicopters to access site allowed mining operations, CHPP production and train loading to continue but at a limited rate.
 - b. heavy rain and flooding resulted in Tarrawonga mine access being cut off for 15 days and 22 days for coal haulage to the CHPP in Gunnedah.

⁷⁹ <https://www.sharecafe.com.au/2022/01/24/whitehaven-coal-blames-it-on-the-rain>

⁸⁰ WHC, 2022 Annual Report (DATE), p19 available at: [Whitehaven Coal Annual Report 2022.pdf \(whitehavencoal.com.au\)](#)

⁸¹ WHC, 2022 Annual Report (DATE), p20.

⁸² [WHC September-2022 Quarter Production Report.pdf \(whitehavencoal.com.au\)](#)

⁸³ [WHC December 2022 Quarterly Report.pdf \(whitehavencoal.com.au\)](#)

55. In relation to the impact of the floods on production, WHC announced to the ASX in November 2022 that:⁸⁴

ROM production was lower than planned across all three open cut mines primarily as a result of disruption caused by rain and flooding impacts in September. ... access roads and haulage roads continued to be impacted. Wet weather has persisted into November with soil moisture profiles, dams and river systems at capacity in the Gunnedah Basin.

56. WHC's share price dropped 7.1% after the release of the Q1 FY2021 Report and dropped 9.35% after the ASX announcement.⁸⁵
57. The expert report of Dr Karl Mallon (**Expert Report**) concluded that climate-related physical risks to WHC are material and the impacts of these are likely to worsen based on projected increases in their frequency and severity.⁸⁶ The Expert Report is contained in **Annexure B**.

2019, 2020 and 2021 Sustainability Reports

58. In September 2019, WHC published its first sustainability report, prior to which climate change was incorporated into WHC's annual reports. There was no mention of drought in WHC's 2017⁸⁷ or 2018⁸⁸ annual reports, despite NSW having already experienced two years of drought.
59. In its 2019 Sustainability Report (**2019 SR**),⁸⁹ WHC identified the following material physical risks and mitigation measures, reproduced in identical terms in its 2020 Sustainability Report (**2020 SR**)⁹⁰ and 2021 Sustainability Report (**2021 SR**):⁹¹
- a. Increased frequency and severity of extreme weather events such as tropical cyclones, floods and fires, resulting in increased costs and disruption to supply. Mitigation measures are to design infrastructure to better withstand such events and to monitor contractual arrangements to ensure appropriate mitigation is in place.
 - b. Changes in precipitation patterns resulting in a material increase or decrease in water balances, resulting in production loss due to an over or under supply of water. Mitigation measures are to monitor water balances at each mine site and investigate opportunities to minimise water usage and secure alternate, reliable water sources.
60. None of the Reports identified drought as a physical risk, despite all being published either during, or after, the 2017-2019 drought, and none of the Reports described the impacts of *any* climate-related physical risk on the company's business, strategy or financial planning.

2022 Sustainability Report

⁸⁴ Whitehaven Coal, La Nina impacts FY23 guidance (9 November 2022) available at: [ASX announcements - Whitehaven Coal](#)

⁸⁵ <https://www.listcorp.com/asx/whc/whitehaven-coal/news/la-nina-impacts-fy23-guidance-2795826.html>.

⁸⁶ Dr Karl Mallon, Expert Report (9 May 2023) p4 and p6.

⁸⁷ Whitehaven Coal, Annual Report 2017(17 August 2017) available at: [Whitehaven-Coal-Annual-Report-2017.pdf \(whitehavencoal.com.au\)](#)

⁸⁸ Whitehaven Coal, Annual Report 2018 (14 August 2018) available at: [WVN_224754_Annual-Report-2018_LR_FA-3.pdf \(whitehavencoal.com.au\)](#)

⁸⁹ Whitehaven Coal, Sustainability Report (11 September 2019), p.19 available at: [Whitehaven-Coal-Sustainability-Report-2019.pdf \(whitehavencoal.com.au\)](#)

⁹⁰ Whitehaven Coal, Sustainability Report (17 September 2020) p.22 available at: [Whitehaven-Coal-Sustainability-Report-2020-1.pdf \(whitehavencoal.com.au\)](#)

⁹¹ Whitehaven Coal, Sustainability Report (24 September 2021), p.26 available at: [Whitehaven Coal Sustainability Report 2021.pdf \(whitehavencoal.com.au\)](#)

61. The 2022 SR identifies three climate-related physical risks but does not provide any information as to how the risks were identified, quantified or assessed, neither does it describe the impacts on WHC's business, strategy or financial planning. A detailed analysis of WHC's disclosure of physical risk in the 2022 SR is contained in the Expert Report.

WHC's mismanagement of climate-related physical risk

62. In relation to the risk of drought, our client considers that the directors of WHC repeatedly failed to manage material climate-related physical risk by failing to identify drought as a material risk in its 2017 and 2018 Annual Reports despite NSW having been affected by drought throughout 2017 and 2018; by failing to identify drought in the 2019 SR despite drought affecting coal operations in the Gunnedah Basin from 2017-2019; by reproducing in the 2020 SR and 2021 SR the 'physical risk' section of the 2019 SR in identical terms, despite drought causing disruption to its operations; and by failing to identify drought as a physical risk in the 2022 SR.
63. In relation to the risk of flooding, we refer to the above paragraph and to the Expert Report at **Annexure X**.
64. As such, our client considers that the directors of WHC may be in breach of their duties under s 180(1) of the Corporations Act for failing to adequately identify and manage climate-related physical risk. In relation to the business judgment rule, on the basis of information available, our client considers that it would not apply: the reasonable director of WHC would properly identify with sufficient granularity, the material risk that drought and flooding present to the business and implement a detailed mitigation strategy to manage those risks in circumstances where those risks have already materialised.

WHC's contravention of the Corporations Act

65. As discussed at [8] above, where there is a contravention of the Corporations Act by the company, a director may be in breach of their duties of care, skill and diligence under s 180(1) of the Corporations Act by permitting or causing the company to contravene the Corporations Act. In that regard, our client considers that the directors of WHC may be in breach of their duties under s 180(1) by causing WHC to contravene its disclosure obligations, and by causing WHC to engage in misleading or deceptive conduct. Remind ASIC about its view about what should be included in s 299A.

Disclosure obligations

66. We refer to the climate-related transition and physical risks identified at [19]-[36] and [48]-[61] to which our client considers WHC exposed. To the extent that WHC failed to properly identify those risks, WHC may be in breach of its disclosure obligations under Part 2M.3 of the Corporations Act, in particular:
- a. failing to comply with the requirements of the Australian Accounting Standards published by the Australian Accounting Standards Board (**AASB**) by not adequately disclosing in its 2022 Financial Report (**2022 FR**) material climate-related risks;⁹²

⁹² *Corporations Act 2001 (Cth) (Corporations Act)* ss 296(1) and 334; AASB, *AASB 101: Presentation of Financial Statements* (Compiled AASB Standard, 30 June 2021) [125]

- b. failing to adequately disclose in its 2022 Operating and Financial Review (**2022 OFR**) climate-related risks required by its members to make an informed assessment of WHC’s operations, financial position and business strategies and future financial prospects.⁹³

AASB Standards

67. Paragraph 125 of AASB 101 requires a reporting entity to “disclose information about the assumptions it makes about the future, and other major sources of estimation uncertainty at the end of the reporting period, that have a significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next financial year”. In relation to omissions or misstatements, “materiality” is defined as those which “could individually or collectively influence the economic decisions that users make on the basis of financial statements”.
68. In relation to whether climate-related risks are “material”, in the Joint Bulletin on climate risk disclosures,⁹⁴ the AASB and the Auditing and Assurance Standards Board stated that “investors have specifically identified climate-related risks as being used in their decision making, but not being adequately addressed in annual reports,”⁹⁵ and that, “Given investor statements about the importance of climate-related risks to their decision-making, the impact of the materiality definition ... is that entities can no longer treat climate-related risks as merely a matter of corporate social responsibility and may need to consider them also in the context of their financial statements.”⁹⁶ This is so regardless of the numerical impact of those risks.⁹⁷ As such, our client considers that climate-related risks are likely to be “material” within the meaning of AASB 101,⁹⁸ and therefore should be disclosed in companies’ financial reports.

WHC’s compliance with AASB Standards

69. WHC does not make any reference to climate-related risks in its 2022 FR. In relation to the materiality of the climate-related risks identified, our client considers that those omissions contain information that could influence the economic decisions that users of WHC’s 2022 FR would make, based on that Report.
70. WHC is a pure play coal company, the largest trading markets of which have all committed to achieving net zero emissions by 2050. Accordingly, users of the 2022 FR would expect that information about the recoverability of assets and coal price forecasts would be based on scenario analyses that include at least one scenario consistent with achieving net zero emissions by 2050. However, the ‘Resource assets and liabilities’ section of the 2022 FR stated that the recoverability of assets and the coal price forecast was determined on the basis of scenario analysis “including the IEA’s STEPS and SDS scenarios,”⁹⁹ with no indication of an assessment based on a scenario consistent with achieving net zero emissions by 2050.
71. In light of the above, an assessment of the recoverability of assets and the coal price forecast based on achieving net zero emissions by 2050 is information that is capable of influencing the

⁹³ Corporations Act s 299A(1)(c); see also ASIC, *Regulatory Guide 247: Effective disclosure in an operating and financial review* (August 2019) (**RG 247**) 6, 247.14

⁹⁴ AASB and AUSB, *Climate-related and other emerging risks disclosures: assessing financial statement materiality using AASB/IASB Practice Statement 2* (April 2019) available at: [AASB AUASB Joint Bulletin Finished.pdf \(Joint Bulletin\)](#)

⁹⁵ Joint Bulletin, p.3

⁹⁶ Joint Bulletin, p.3

⁹⁷ Joint Bulletin, p.3

⁹⁸ 2022 Advice [9].

⁹⁹ 2022 AR, p76.

economic decision of a user of the 2022 FR and should have been disclosed. That WHC did not disclose that net zero commitments by its largest trading partners carries the risk that coal demand will decrease may constitute a contravention of s 296(1) of the Corporations Act as a result of WHC's non-compliance with the AASB Standards.

Disclosure of climate-related risks in OFRs

72. A company's OFR must include information required by its members to make an informed assessment of the company's operations, financial position and business strategies, and future financial prospects.¹⁰⁰ In that regard, we note that Cathie Armour of ASIC said in February 2021 that an OFR must provide the market with information on the company's exposure to material climate-related risks that could "affect the company's achievement of its financial performance".¹⁰¹ We also note ASIC Guidance 247, *Effective Disclosure in an Operating and Financial Review* at RG 247.66 which provides that "climate change is a systemic risk that could have a material impact on the future financial position, performance or prospects of entities" and that ASIC's Corporate Finance Update – Issue 4 reminded companies to "comply with the law where it requires disclosure of material climate risk".¹⁰²
73. We further note that information required under s 299A(1) of the Corporations Act must be included in the body of the OFR, and that it cannot be incorporated by reference to other documents (other than the Financial Report) to satisfy the requirements of s 299A(1). As such, WHC cannot satisfy the requirements of s299A(1) by reference to the 2022 SR.

WHC's climate-related risk disclosure

Transition risks

74. In relation to climate-related risk disclosure, WHC's 2022 OFR stated that the impacts of climate change may affect its "assets, production and the markets where its products are sold" and that these impacts "may include severity and frequency of weather patterns, policy and regulatory change and coal demand responses."[*insert reference] It also stated that the IEA has outlined that "coal demand will remain in Asia beyond 2040" under its STEPS and SDS scenarios.¹⁰³ We further note that WHC refers the user to its 2022 SR for "Further details in relation to climate change risks."¹⁰⁴
75. However, WHC has not disclosed in a specific manner information about the impact that the climate-related risks identified would have on WHC's future financial position, performance or prospects. According to the Australian Council of Superannuation Investors, the lack of quantification as to how the energy will impact a company's financial position and performance is a regular complaint of investors.¹⁰⁵
76. For example, WHC has not disclosed in sufficient detail material climate-related transition risks, in particular that its largest trading markets have made commitments to achieve net zero

¹⁰⁰ Corporations Act s 299A(1); see also ASIC, *Regulatory Guide 247: Effective disclosure in an operating and financial review* (August 2019) (RG 247) 6, 247.14

¹⁰¹ Cathie Armour, *Managing climate risk for directors* (February 2021) available at: [Managing climate risk for directors | ASIC](#)

¹⁰² ASIC, Corporate Finance Update, Issue 4 (March 2021) available at: [Corporate Finance Update – Issue 4 | ASIC](#)

¹⁰³ 2022 AR, p24.

¹⁰⁴ 2022 AR, p24.

¹⁰⁵ Australian Council of Superannuation Investors, *Promises, pathways & performance: Climate change disclosure in the ASX200* (July 2022) p28 available at: [ACSI-Research-Climate-Change-Disclosure-in-ASX200-July-2022.pdf](#)

emissions by 2050.¹⁰⁶ Similarly, WHC has not disclosed that a decline in coal demand carries the risk that its coal operations, in particular its expansion projects, may become stranded assets. Neither has WHC disclosed that the cost and availability of finance may be affected by its largest institutional investors making net zero commitments, which carries the risk of impacting WHC's future performance.

Physical risk

77. In relation to material climate-related physical risks, we note that WHC has not disclosed in sufficient detail that risk of flooding and drought, both of which have already materialised and have impacted WHC's operations.
78. In that regard, we refer to the Expert Report which concludes that WHC's disclosure of material physical risk is inadequate and "may leave the company at risk of inadequately informing investors".¹⁰⁷
79. Accordingly, our client considers that WHC has potentially breached its disclosure obligations under the Corporations Act by failing to adequately disclose climate-related risks in its 2022 FR and its 2022 OFR.

Misleading or deceptive conduct

80. Our client considers that WHC potentially engaged in misleading or deceptive conduct by:
 - a. failing to disclose its exposure to material climate-related risks in circumstances where WHC is exposed to material climate-related risks;
 - b. stating in its 2022 SR that WHC "supports the aims of the Paris Agreement"¹⁰⁸ in circumstances where the total cumulative scope 1, 2 and 3 emissions to 2050 from WHC's existing and planned operations has been estimated at 1.14 billion tonnes CO₂-e;
 - c. stating in its 2022 SR that WHC's business "continues to be resilient under a Paris-aligned scenario"¹⁰⁹ in circumstances where WHC only assessed its operational assets under a Paris-aligned scenario;¹¹⁰ and
 - d. stating in its 2022 SR that WHC is "reducing emissions today" by making financial contributions to Low Emissions Technology Australia's (**LETA**) in circumstances where LETA invests in Enhanced Oil Recovery (**EOR**).

(collectively '**the Statements**').

Inadequate disclosure of climate-related risk

81. As discussed at [X], our client considers that WHC failed to adequately disclose its exposure to material climate-related transition and physical risks (**Omission**). As such, our client considers that the Omission conveyed the representation that WHC is not exposed to material climate-related risk.
82. As discussed, our client considers that WHC, being a pure play coal company with significant expansion plans, is exposed to material climate-related risk. By representing that WHC is not

¹⁰⁶ See further IEEFA Whitehaven Report at **Annexure A**.

¹⁰⁷ Expert Report, p 11.

¹⁰⁸ 2022 SR, p.3

¹⁰⁹ 2022 SR, p.32

¹¹⁰ 2022 SR, p.38

exposed to climate-related risk, our client considers that WHC potentially engaged in misleading or deceptive conduct.

Supporting the aims of the Paris Agreement

83. In its 2022 SR, WHC stated that it “supports the aims of the Paris Agreement” which is to limit global warming to well below 2°C, preferably 1.5°C, compared to pre-industrial levels. As discussed above at [X], staying within an increase of 1.5°C requires global emissions to be net zero by 2050,¹¹¹ and a rapid decline in the use of fossil fuels. As such, our client considers that that this statement arguably conveys the representation that WHC is taking action that is consistent with the Paris Agreement or, at least, that WHC is not taking action that is inconsistent with the Paris Agreement.
84. Further, in its 2022 SR, WHC reported a 9% increase in total scope 1 and 2 emissions in FY22 from FY21 which it stated is “predominantly due to increase production at Narrabri”.¹¹² We note that its reported FY21 58.5% reduction in scope 1 emissions was not due to an actual reduction in emissions, rather a change in calculation methodology to report fugitive emissions. Given the projected additional coal production at its expansion projects is 450 million tonnes of coal to 2044, it is reasonable to assume that WHC’s emissions will continue to materially increase to 2050.
85. Accordingly, our client considers that the representation that WHC is taking action that is consistent with the Paris Agreement or, at least, that WHC is *not* taking action that is *inconsistent* with the Paris Agreement, may amount to misleading or deceptive conduct: that WHC’s business strategy is to significantly *expand* coal production to 2050, thereby significantly *increasing* its scope 1, 2 and 3 emissions to 2050, is entirely *inconsistent* with limiting global warming to 1.5°C.

Resilient under a Paris-aligned scenario

86. The 2022 SR stated that WHC’s business “continues to be resilient under a Paris-aligned scenario.”¹¹³ Our client considers that this statement conveys the representation that WHC’s short, medium and long-term business strategy is resilient when tested against a ‘well below’ 2°C pathway.
87. As discussed at [41]-[47], in the 2022 SR, WHC’s business resilience was tested primarily against the IEA’s STEPS scenario, which indicates a temperate rise of 2.6°C and the SDS scenario, which indicates a temperature rise of 1.7°C. To the extent that a 1.7°C rise is considered to be “well below” 2°C, the SDS scenario is ‘Paris-aligned’. However, the 2022 SR indicates that WHC excluded all of its planned expansion projects from its SDS scenario analysis, meaning that it only tested the resilience of its *current* operating assets against a ‘well below’ 2°C scenario and not its *expansion* projects. In that regard, WHC stated that:

*Under the <2°C scenario, all of Whitehaven’s **operating** assets would continue to have positive valuations and economic lives, consistent with current life-of-mine planning.*¹¹⁴

¹¹¹ IPCC, 2018: *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, Strengthening and implementing a global response*, 358 [SR15 Chapter 4 LR.pdf \(ipcc.ch\)](#)

¹¹² 2022 SR p41.

¹¹³ 2022 SR, p.32

¹¹⁴ 2022 SR, p.38.

[Emphasis added]

88. Our client considers that WHC’s ‘business’ includes WHC’s expansion projects which will significantly increase coal production and WHC’s total scope 1, 2 and 3 emissions. As such, our client considers that the representation that WHC’s short, medium and long-term business strategy is resilient when tested against a ‘well below’ 2°C pathway is potentially misleading given that the resilience of WHC’s long-term expansion strategy was excluded from the SDS scenario analysis.¹¹⁵

Investing in Enhanced Oil Recovery

89. WHC stated in the section of the 2022 SR titled “Reducing emissions today” that it has:

...invested in carbon capture technologies through funding for LETA. Over the past five years, Whitehaven contributed a total of \$4.06 million to LETA. In 2022 LETA-backed projects received \$80 million in federal funding. These projects included:

...

- *Up to \$20 million for the Carbon Transport and Storage Company (CTSCo) Surat Basin Hub Scale Storage Appraisal and Development Project, with a total project value of \$50 million*
- *Up to \$15 million for CTSCo’s Surat Basin Test Injection Project, with a total project value of \$50.3 million*
- *Up to \$15 million for Bridgeport (Surat Basin) Pty Ltd’s Moonie CCUS Project, with a total project value of \$42.5 million.*

...

90. LETA works with government and industry to develop “low emissions technology” for the resources industry, including coal.¹¹⁶ One of the projects that LETA invests in is the Carbon Transport and Storage Corporation project in the Surat Basin (**CTSCo Project**). CTSCo Pty Ltd is wholly owned by Glencore Plc. The purpose of the CTSCo Project is to test the viability of industrial scale CCS in the Surat Basin over three years. It involves capturing the CO₂ emitted at the Millmerran coal fired power plant and transporting it to a CCS facility for testing for permanent storage.
91. However, not all of the CO₂ produced at Millmerran will be stored at the CCS facility. Glencore plans to sell a portion of the captured CO₂ to New Hope Corporation Limited (**New Hope**) for the purpose of EOR at the Moonie Oil Field.¹¹⁷ EOR is a process by which CO₂ is injected into a depleted oil field to extract more crude oil, a fossil fuel that emits significant greenhouse gases when combusted. As such, because EOR *increases* oil production, our client considers that it should not be described as an emissions reductions technology. In that regard, an Expert Panel

¹¹⁵ See further IEEFA Whitehaven Coal Report.

¹¹⁶ LETA website: [About Us | LETA \(letaaustralia.com.au\)](https://www.leta.com.au)

¹¹⁷ Bridgeport Energy, Application to amend an environmental authority, supporting information, Moonie Oil Field CO₂ EOR Project, Initial Injection Plan 2021, 10.3 available at: [a-aemd-100128724-supporting-information.pdf](#)

appointed by the Australian Government to consider low-cost carbon abatement opportunities described EOR as a technology that “does not tend to reduce emissions”.¹¹⁸

92. Accordingly, our client considers that WHC’s statements reproduced at [90] together convey the representation that WHC is currently reducing its emissions by making financial contributions to LETA. Given that LETA invests in the CTSCo Project which intends to supply New Hope with CO₂ for EOR, and the purpose of EOR is to *increase* oil production, our client considers that the representation is potentially misleading since WHC’s indirect investment in projects that increase emissions cannot contribute to WHC currently reducing emissions.

Potential contraventions

93. Section 1014H of the Corporations Act provides that:

A person must not, in this jurisdiction, engage in conduct, in relation to a financial product or a financial service, that is misleading or deceptive or is likely to mislead or deceive.

94. When determining whether conduct is misleading or deceptive, the central question is whether the impugned conduct, viewed as a whole, has a sufficient tendency to lead a person exposed to the conduct into error.¹¹⁹ In making this assessment, it is unnecessary to prove that the conduct in question actually deceived or misled anyone.¹²⁰ Additionally, if the conduct in question is directed to the public (or a section of the public), the Court will consider the likely effect on an ordinary and reasonable person in the relevant class to whom the conduct is directed.¹²¹
95. The relevant class to whom the Statements are directed are actual or potential investors in WHC who are concerned about climate change and the impact on climate change by fossil fuel companies, including WHC.
96. For the reasons set out at [81]-[93], our client considers that the representations are likely to mislead the relevant class of person. Further, our client considers that the Statements were made “in relation to a financial product or financial service” because the SR 2022 was announced to the ASX on 23 September 2022.¹²²

Repeated failure to comply with environmental laws

97. WHC has been investigated or found in contravention of environmental laws or conditions on more than 20 occasions since 2012. Over that time, WHC has incurred fines of over \$1.5 million.¹²³ These include:
- a. three instances of polluting water;
 - b. unlawfully taking 1 billion litres of surface water at the Maules Creek mine during the 2017-2019 drought in NSW;
 - c. allowing toxic blast fumes to leave the mine site and drift over neighbouring properties;

¹¹⁸ Australian Government, *Report of the Expert Panel examining additional sources of low cost carbon abatement* (14 February 2020), p54 available at: [Report of the Expert Panel examining additional sources of low cost abatement \(dcccew.gov.au\)](https://www.dcccew.gov.au/report-of-the-expert-panel-examining-additional-sources-of-low-cost-abatement)

¹¹⁹ *Australian Competition and Consumer Commission v TPG Internet Pty Ltd* (2020) 278 FCR 450, 458 (the Court).

¹²⁰ *Taco Co of Australia Inc v Taco Bell Pty Ltd* (1982) 42 ALR 177, 202 (Deane and Fitzgerald JJ).

¹²¹ *Campomar Sociedad, Limitada v Nike International Ltd* (2000) 202 CLR 45, 85 (the Court).

¹²² *Australian Securities and Investments Commission v Narain* (2008) 169 FCR 211, 215 [12].

¹²³ See also 2022 SR, p65.

- d. illegal dumping of waste; and
- a. illegal clearing of bushland.

A table setting out WHC's non-compliance with environmental laws is contained at **Annexure C**.

- 98. WHC's non-compliance is not limited to isolated cases but involves conduct in breach of WHC's obligations under four pieces of legislation over an 11-year period dating back to 2012. Our client considers that the conduct is serious in substance and pattern of behaviour and is on an increasing trajectory rather than one of improvement.
- 99. Given the repeated and serious contraventions of environmental laws, our client considers that by permitting WHC to contravene environmental laws, its directors exposed it to the foreseeable risk of legal proceedings, criminal sanctions and civil penalties, and risk of damage to WHC's reputation and market perceptions by being subject to legal proceedings, criminal sanctions and civil penalties. In relation to the "balancing exercise" undertaken by directors, we note the comments of Edelman J in *ASIC v Cassimatis (No 8)* at [485]:

[The] director might not avoid liability merely because he or she proved that a balancing exercise showed that the likely financial cost of a penalty was exceeded by the likely profit from a serious contravention of the law.

- 100. Further, our client considers that a decision by directors to cause or permit a company to repeatedly contravene the law is not a 'business judgment'. As such, our client considers that the business judgment rule would not be available to as a defence to a potential breach of s 180(1) in respect of WHC's non-compliance with environmental laws.

Request to investigate

- 101. For the reasons set out above, our client considers that the directors of WHC may be in breach of their duties under s 180(1), and requests that ASIC investigate the concerns raised, and take such compliance action as is deemed appropriate.
- 102. We look forward to your response to the matters raised above.

Yours sincerely



Elaine Johnson

Director, Legal Strategy

Environmental Defenders Office Ltd

Annexure A

IEEFA Whitehaven Report dated May 2023

Whitehaven Coal

Assessing its Claims About its Long-Term Outlook

Simon Nicholas – Lead Energy Finance Analyst, Australian Coal Mining
Andrew Gorringe – Energy Finance Analyst, Australian Coal Mining

May 2023

Introduction

Despite increasing acceptance within Australia¹ that the outlook for the seaborne thermal coal market is one of declining demand and dwindling volumes in the long term, Whitehaven Coal continues to maintain that future demand for its product is strong.

This report examines what Whitehaven has stated about its outlook in its recent disclosures – its 2022 Annual Report, Sustainability Report and AGM and its recent FY23 Half-Year Results announcement. We find that many of the statements being made by the company about the demand outlook for its product are not supported by what is actually happening with the Asian seaborne coal market.

Demand for Thermal Coal

In key publications including its 2022 Annual Report and 2022 Sustainability Report, Whitehaven Coal claims that the outlook for thermal coal demand is positive for the company:

“Looking ahead, high-quality, high-CV thermal coal is set to remain in strong demand” - Annual Report 2022, page 4

“Overall global demand is expected to remain relatively constant until 2030, with growth across emerging economies in Asia. This creates a significant opportunity for Whitehaven” - Sustainability Report 2022, page 17

These statements fail to acknowledge that the long-term outlook for seaborne thermal coal in Asia is declining at an accelerating rate. In its most recent Resources and Energy Quarterly report, the Australian government’s Department of Industry, Science and Resources forecast that world trade in thermal coal is already in decline and that total Asian imports will peak in 2026. Similarly, it forecast that Australian thermal coal exports will peak in 2026 and then go into decline.²

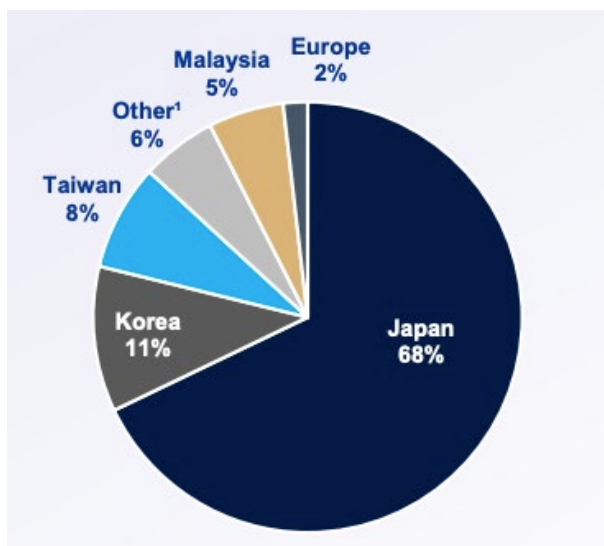
Demand for high-calorific value (high-CV) coal of the type Whitehaven Coal produces is concentrated in just a few importing nations and emerging economies in Asia such as India and Vietnam import cheaper, lower-CV coal. Whitehaven Coal’s sales are dominated by Japan, South Korea and Taiwan – particularly Japan (Figure 1). These are the three key importers of high-calorific value (high-CV) thermal coal that the company produces. The Australian government forecasts that imports of thermal coal into all three of these countries has already peaked.³

¹ Reneweconomy. [NSW accepts thermal coal is set for major decline, now it needs to act](#). 13 June 2021

² Department of Industry, Science and Resources, [Resources and Energy Quarterly](#), March 2023

³ AZaZP0Z0P

Figure 1: Whitehaven Coal Sales Destinations H1 FY2023



Source: Whitehaven Coal Half Year Results FY2023 Presentation

Japan, South Korea and Taiwan have all committed to reach net zero emissions by 2050. However, when using International Energy Agency (IEA) scenarios to back up their claims on the outlook for thermal coal, Whitehaven largely ignores the IEA’s net zero emissions (NZE) scenario and focuses on the IEA’s Sustainable Development Scenario (SDS) and particularly the Stated Policies Scenario (STEPS).

“For the past three years we stress-tested the resilience of our operating asset portfolio against the enduring IEA scenarios, STEPS and SDS” - Sustainability Report 2022, page 37

“The IEA’s STEPS envisages coal remaining the single largest source of electricity generation worldwide out to 2040.” - Sustainability Report 2022, page 17

The fact that its three key export destinations have all committed to reach net zero emissions by 2050 means that Whitehaven should have at least as much focus on the IEA’s NZE scenario as on the STEPS scenario in key documents such as its Sustainability Reports. It is inappropriate for Whitehaven to simply assume that its three key customers, which made 87% of its sales in the first half of FY2023, will fail to achieve their stated net zero emissions targets.

According to the IEA’s initial NZE scenario released in 2021, no new coal mines or mine extensions are required to meet declining demand going forward and “the precipitous decline in coal use projected in the NZE would have major implications for the future of mining companies and countries with large existing production capacities.”⁴

The IEA highlighted that, under the NZE scenario, “Even with increasing deployment of carbon capture, utilisation and storage (CCUS), coal use in 2050 is 90% lower than in 2020.” However, despite being a technology that has been around for decades, CCUS has not made any significant

⁴ IEA. [Net Zero by 2050: A Roadmap for the Global Energy Sector](#). October 2021

contribution to decarbonising any sectors it has been applied to and has a long history of underperformance and failure.⁵

The IEA notes that the best opportunities that are likely to exist for retro-fitting coal-fired power plants with carbon capture technology are in China,⁶ a country that does not import the high-CV coal that Whitehaven produces and is rapidly increasing domestic coal production to reduce reliance on imports for energy security reasons.

In its updated NZE scenario released as part of its World Energy Outlook 2022 report, the IEA sees global coal demand dropping 45% by 2030 and 90% by 2050 with global coal trade – relevant for an exporter like Whitehaven – dropping by similar levels. In this scenario the share of unabated coal-fired power in global electricity generation “falls rapidly from 36% in 2021 to 12% in 2030, and to zero percent by 2040 and beyond. Low-emissions sources of generation grow so rapidly that no new unabated coal plants beyond those already under construction are built in the NZE Scenario.”⁷

Whitehaven also highlights new coal-fired power stations under construction in its two largest export destinations:

“Japan is commissioning five new USC units (totalling 3,870MW) (2022-24) with Korea commissioning two new units (2,100MW) in 2023.” – Half Year Results FY23 presentation, page 37

“Consistent with Japan’s Strategic Energy Plan to close subcritical power stations by 2030, replacement ultrasupercritical (USC) plants that are coming on line represent new demand for Whitehaven Coal. In fact, Japan has five new USC units coming on line between 2022 and 2024, and Korea will commission two new units in 2023. Collectively these lines will produce close to 6000 MW of electricity and will need to be fuelled by high-CV coal.” – 2022 AGM: Addresses and Managing Director and CEO Presentation, page 6

These statements mischaracterise the outlook for thermal coal demand in Japan and South Korea. Emphasis is placed by the company on the few remaining coal-fired power plants to be built in their key markets and not on the larger capacities that are due for closure. The Australian government has noted that the Japanese government “has released plans to close 100 coal plants over the next seven years” and that despite some final coal capacity additions in South Korea in the short term, “actual coal burning is not likely to change noticeably.” The South Korean government has announced a proposal to halve coal-fired power generation by 2030 compared to 2018 levels.⁸

Whitehaven does acknowledge that demand for thermal coal will decline in Japan:

“Using the IEA WEO 2021 data, if Japan achieves its stated policies it will reduce coal demand by 24% by 2030 and by 53% in 2050 from 2020 levels. There is, however, still significant residual demand in this scenario, and Japan continues to develop new

⁵ IEEFA. [Carbon capture: a decarbonisation pipe dream](#). 1 September 2022

⁶ IEA. [Net Zero by 2050: A Roadmap for the Global Energy Sector](#). October 2021

⁷ IEA. [World Energy Outlook 2022](#). November 2022

⁸ Department of Industry, Science and Resources, [Resources and Energy Quarterly](#), March 2023

ultrasupercritical coal-fired power stations with the expected commissioning of over 3.8 GW of new capacity between 2022 and 2024.” - Sustainability Report 2022, page 20

However, this statement again attempts to place emphasis on the few new coal units under construction and does not acknowledge the likelihood that Japan’s current policies will need to be superseded with more aggressive actions to cut carbon emissions in order for the nation to achieve its net zero emissions commitment. Given coal-fired power is the major contributor to Japan’s carbon emissions, future policies will impact Japanese coal demand even further.

The status of coal-fired power in Japan – and Whitehaven’s two other key customers – within the context of their evolving power systems and targets is outlined below.

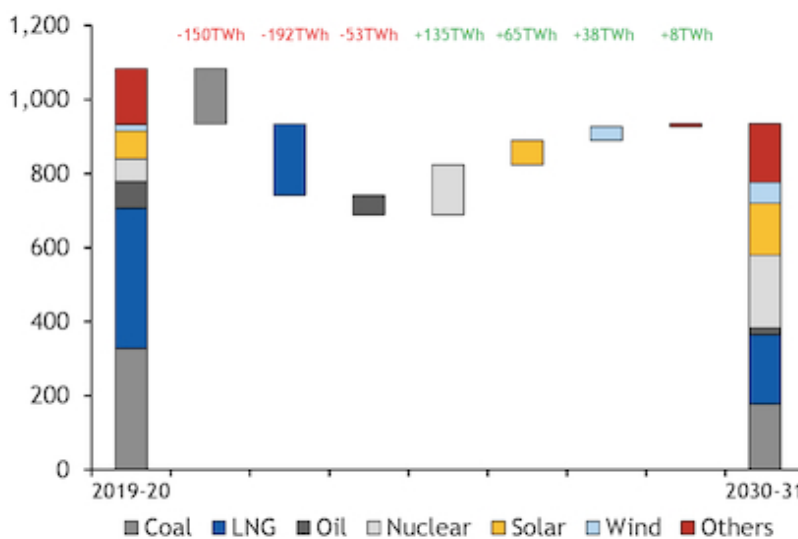
Japan

At the April 2021 Earth Day climate summit hosted by the U.S., Japan increased its 2030 emissions reduction target from 26% to at least 46%⁹—a move that will necessitate a further acceleration in Japan’s shift away from coal-fired power. This target was adopted by Japan’s cabinet in October 2021.

The age profile of its operating coal power fleet means Japan was on track for a significant reduction in coal-fired power capacity in the long term even before it committed to net zero carbon emissions by 2050. This has now been confirmed by Japan’s latest power plan, which increases the focus on renewables and will see reliance on coal- and LNG-fired power reduce significantly.

Japan’s power plan will see coal power’s share of the generation mix drop from 32% in 2019–20 to 19% in 2030 (Figure 2). This suggests that Japan’s consumption of coal will fall by almost 54 million tonnes per annum by 2030 according to calculations by Argus Media, a drop of 46%. To fill the gap, renewable energy will make up 36–38% of the power mix by 2030, up from 18% in 2019–20.¹⁰

Figure 2: Changing Power Mix in Japan’s New Power Plan (terawatt-hour)



⁹ Reuters. [Key takeaways from the Biden Earth Day summit](#). 23 April 2021.

¹⁰ Argus Media. [Japan cuts 2030 coal/gas power share targets](#). 21 July 2021.

Source: [Argus Media](#)

With Japanese power demand expected to fall by 2030–31,¹¹ coal-fired power in Japan will face increased competition from other sources. Japan is planning a hugely ambitious scale-up of renewable energy to help meet its 2050 zero carbon emissions goal. It has ramped up its 2030 solar installation target to 108GW¹² and is aiming for 10GW of offshore wind by the same date¹³ and 45GW by 2040. Japan's first offshore wind firm started commercial operations in January 2023.¹⁴ It is now preparing to roll out battery storage to support greater renewable energy capacity.¹⁵

Following the global energy crisis after the Russian invasion of Ukraine, coal-fired power in Japan may also face increased competition from nuclear power as the Japanese government considers an enhanced role for nuclear as a way to improve energy security and further reduce exposure to expensive fossil fuel prices.¹⁶ Japan wants to restart seven nuclear reactors that were idled after the Fukushima disaster from 2023 onwards. The government will also explore the development of new reactors to reduce reliance in fossil fuel imports.¹⁷

South Korea

Whitehaven Coal's 2022 Sustainability Report does not provide any detail on the long-term outlook for coal-fired power in South Korea, it's second biggest thermal coal export destination.

In October 2021, the government approved two roadmaps to reach carbon neutrality by 2050.¹⁸ Under both options, coal-fired power is completely phased out by 2050 (Figure 3). At the same time, South Korea's new 2030 emissions reduction target was approved by the government, which will see total carbon emissions reduce by 40% compared to 2018 levels. This compares to the previous 2030 emissions reduction target of 26%.¹⁹

Following the raised global energy security concerns after the Russian invasion of Ukraine and the subsequent spikes in fossil fuel prices, in July 2022 the South Korean government revealed plans to further reduce reliance on fossil fuel imports.²⁰

Under South Korea's 2022-2036 Basic Plan for Power Supply, the share of coal in the power mix will drop to 19.7% in 2030 and 14.4% in 2036, down from 34.3% in 2021 and 41.9% in 2018. Three proposed coal power plants will be scrapped and 17 retired. 28 coal power plants will be converted to LNG by 2036. Despite this, the share of LNG in the mix will be slashed to 9.3% by 2036, down from 29.2% in 2021 as LNG-fired power is increasingly used as peaking power to support more renewables.

¹¹ Argus Media. [Japan's power demand forecast to fall towards 2031-32](#). 21 January 2022.

¹² Bloomberg. [Every Roof in Japan Could Have Solar Panels in the Future](#). 6 July 2021.

¹³ Bloomberg. [Japan's Tepco Honing Offshore Wind Bid as Competition Heats Up](#). 22 April 2022.

¹⁴ Reuters. [Japan's Marubeni starts commercial operation at Akita offshore wind farm](#). 31 January 2023

¹⁵ Argus Media. [Japan looks to storage batteries to boost renewables](#). 7 September 2022

¹⁶ The Japan Times. [Kishida eyes nuclear plant restart in green transformation push](#). 28 July 2022.

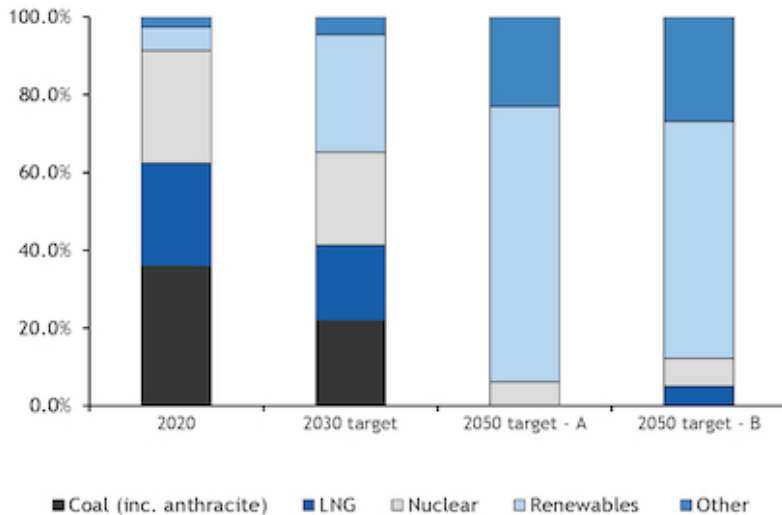
¹⁷ Bloomberg. [Threats of Blackouts Drive Japan to Embrace Nuclear Again](#). 24 August 2022.

¹⁸ Argus Media. [South Korea approves coal phase-out by 2050](#). 27 October 2021.

¹⁹ AP News. [South Korea aims to cut carbon emissions by 40% in 2030](#). 19 October 2021

²⁰ S&P Global. [South Korean president unveils energy plan focussed on cutting fossil fuel reliance](#). 5 July 2022.

Figure 3: South Korean 2020 Power Generation vs Targets (%)



Source: *Argus Media*

In their place nuclear power’s share in the power mix will rise to 34.6% by 2036, up from 27.4% in 2021 and renewable’s share is planned to reach 30.6% in 2036, up from 7.5% in 2021. Renewable energy capacity is planned to reach 108.3GW in 2036, up from 29.2GW in 2022.²¹

The South Korean government’s latest proposals released in March 2023, target renewable energy accounting for 22% of power production by 2030, up from 7.5%.²²

Taiwan

Whitehaven Coal’s 2022 Sustainability Report does not provide any detail on the long-term outlook for coal-fired power in Taiwan, it’s third biggest thermal coal export destination

In March 2022, Taiwan’s National Development Council (NDC)—the government’s planning body—revealed its 2050 net zero carbon emissions roadmap. Taiwan plans to fully decarbonise its power sector by 2050 with renewable energy providing 60–70% of power generation. The government and state-owned companies plan to invest US\$32 billion on renewables, energy storage and grid infrastructure between 2022 and 2030.²³

The Australian government highlighted in its March 2023 Resources and Energy Quarterly report that “Taiwan’s plans to expand its coal fleet have been shelved, and the government is now pushing ahead with plans to replace existing coal capacity with gas” as it noted that the nation’s thermal coal imports are past their peak. Taiwan is targeting a reduction in coal’s share of power generation from 40% in 2020 to 30% by 2025.²⁴

²¹ S&P Global. [South Korea to cut LNG in power mix to 9.3% in 2036, sharply raises role of nuclear energy](#). 12 January 2023

²² Reuters. [South Korea cuts 2030 emissions reductions targets for industry](#). 21 March 2023

²³ Bloomberg. [Taiwan Vows \\$32 Billion Clean Energy Spree as it Lags on Targets](#). 30 March 2022.

²⁴ Department of Industry, Science and Resources, [Resources and Energy Quarterly](#), March 2023

Rest of Asia

Whitehaven Coal is very dependent on Japan, South Korea and Taiwan but as imports by these three key markets enter permanent decline, the opportunity to shift export volumes to alternative markets is rapidly closing as these nations reduce emphasis on thermal coal imports

China

The end of China's unofficial ban on Australian coal is unlikely to alter the outlook for Australian thermal coal exports.

The bigger threat to Australian thermal coal exports comes from China's move to become self-reliant for thermal coal in the medium term. The move threatens the balance of the entire Asian seaborne thermal coal market given China is the world's largest coal importer. The Australian government stated in its most recent Resources and Energy Quarterly report that thermal coal imports into China have entered structural decline.²⁵ The Australian thermal coal industry will be heavily impacted even if it is not exporting to China—a significant drop in China's thermal coal imports would mean a lot of Indonesian coal would be seeking other destinations in competition with Australian coal.

The Chinese government surprised many in September 2020 when it announced that it was targeting net zero carbon emissions by 2060.²⁶ At the April 2021 climate summit hosted by the U.S., President Xi Jinping announced that China would “strictly control coal-fired power generation projects”²⁷ and that China's coal consumption would peak in 2025 and decline thereafter.²⁸

Significantly, 93% of thermal coal consumed in China is mined domestically with imports making up only a small percentage of total consumption. Improvements to domestic coal mining efficiency and output, coal rail logistics and power transmission infrastructure are underway to increase reliance on domestic coal and reduce imports. China produced a record 4.5 billion tonnes of coal domestically in 2022, up 9% on the previous year. Production is expected to increase again in 2023 as China targets energy security. A further 260 million tonnes of new mining capacity was approved during 2022.²⁹

China's 2022 coal imports totalled 293mt.³⁰

A 2022 study on Chinese coal demand found that its seaborne thermal coal imports are likely to fall substantially over the coming decade and are on course to drop 26% on 2019 levels by as soon as 2025.³¹ This decline is driven in part by coal transport infrastructure development, which is enabling greater reliance on domestic coal, as well as China's strategies to accelerate decarbonisation.

In addition, increased emphasis on renewable energy will also squeeze out thermal coal imports. China is aiming for more than 80% of energy consumption to be non-fossil fuel-based by 2060.³² By 2025, the aim is for non-fossil fuels to contribute 39% of total electricity supply, up from 29% currently.³³

²⁵ Department of Industry, Science and Resources, [Resources and Energy Quarterly](#), March 2023

²⁶ S&P Platts. [China's long march to zero carbon](#). 10 December 2020.

²⁷ Reuters. [Key takeaways from the Biden Earth Day summit](#). 23 April 2021.

²⁸ S&P Platts. [China to curb coal demand growth in economic plans as part of climate targets](#). 23 April 2021.

²⁹ Reuters. [China coal output slips in Dec on COVID; rises to record in 2022](#). 17 January 2023

³⁰ Reuters. [China Dec coal imports slip as COVID spike dampens industrial activity](#). 13 January 2023

³¹ The Conversation. [China's demand for coal is set to drop fast. Australia should take note](#). 21 April 2022.

³² Bloomberg. [China Targets More Than 80% Non-Fossil Energy Use by 2060](#). 24 October 2021.

³³ S&P Global. [China to raise share of non-fossil fuels in electricity supply to 39% by 2025](#). 23 March 2022.

2022 was another record year for Chinese renewable energy installation with additions of 125 gigawatts (GW) of solar and wind power.³⁴ S&P has forecast that renewables could account for 36% of electricity consumption by 2025, ahead of China's 14th Five-year Plan target of 33%.³⁵ Goldman Sachs believes China will install 3,300GW of wind and solar by 2030, almost three-times its target of 1,200GW, driving the world's largest fossil fuel importer towards energy self-sufficiency.³⁶

India

<https://energy.economictimes.indiatimes.com/news/coal/india-to-start-coal-export-by-2025-26-coal-minister-pralhad-joshi/99091148>

<https://www.reuters.com/business/energy/india-amends-power-policy-draft-halt-new-coal-fired-capacity-sources-2023-05-04/>

India is the world's second-largest thermal coal importer but, until recently, was not a major destination for Australian thermal coal. Indonesia and South Africa are India's principal sources of thermal coal imports. However, the Chinese ban on Australian coal imports saw more Australian thermal coal exported to India in 2020, 2021 and 2022.

Like China, thermal coal imports make up only a fraction of India's total consumption with far more thermal coal mined domestically by state-owned Coal India—the world's largest coal miner by volume. India has long had an ambition to become self-reliant for thermal coal amid its rapid renewable energy roll-out. In October 2022, the Indian government once again stated its aim to end thermal coal imports by March 2025.³⁷ Following this, India's Coal Minister stated in March 2023 that the nation is seeking to end substitutable thermal coal imports of 90mt per annum by 2025-26.³⁸

The Australian government has forecast that imports of thermal coal into India will increase significantly this decade but any success by the Indian government in reducing imports going forward risks substantially derailing this forecast.³⁹ Following this, a key moment in India's energy transition occurred when it was revealed that it was intending to halt further development of coal-fired power, beyond what is already in the project pipeline.⁴⁰

The global energy crisis following the 2022 Russian invasion of Ukraine has sent the cost of India's coal imports soaring. At the same time, increased power demand amid domestic coal planning and logistics issues led the Indian government to seek increased thermal imports in the short term. However, some Indian power utilities were unwilling to increase imports in the short term due to record coal prices. Independent coal power stations that run on imported coal have been idle amid such high fuel prices and local banks are unwilling to fund the working capital requirements of 13 plants that are categorised as non-performing assets on the bank's books.⁴¹ By August 2022, the Indian government had eased its short-term coal import targets as coal stocks improved.⁴²

The increased energy security concerns following the invasion of Ukraine and the resultant high cost of fossil fuel imports are likely to see increased efforts to substitute imported coal with domestic

³⁴ PV Magazine. [China added 87.41 GW of solar in 2022](#). 18 January 2023

³⁵ S&P Global. [China could exceed renewables generation target of 33% by 2025](#). 23 September 2022

³⁶ Bloomberg. [Goldman Sees China Nearly Tripling Its Target for Wind and Solar](#). 14 March 2023

³⁷ Argus Media. [India seeks to stop thermal coal imports by 2025](#). October 2022

³⁸ ET Energyworld. [India to start coal export by 2025-26: Coal Minister Pralhad Joshi](#). 29 March 2023

³⁹ IEEFA. [Australian government forecasts peak thermal coal exports in three years but further downside risks for Asian seaborne market remain](#). 24 April 2023

⁴⁰ Reuters. Exclusive: [India amends power policy draft to halt new coal-fired capacity - sources](#). 5 May 2023

⁴¹ The Indian Express. [Ministry seeks funds for coal-fired power plants, but banks set to say no](#). 10 June 2022.

⁴² Reuters. [India eases coal import targets as inventories improve in some states](#). 2 August 2022.

product. Moody's Investor Services expects that "large coal-importing countries such as China and India will also seek to ramp up domestic coal production to enhance energy security and reduce reliance on coal imports".⁴³ Indian Minister of Power and New & Renewable Energy R. K. Singh has made it clear he believes the energy crisis will hasten the energy transition from fossil fuels to renewable energy.⁴⁴

Any significant decline in Indian imports would send a major wave of knock-on impacts throughout the Asian seaborne thermal coal market, particularly for South Africa and Indonesia, but also for Australia as both Indonesia and South Africa would need to compete with Australia in other markets.

Meanwhile, the major Indian renewable energy rollout continues. The plummeting cost of wind and solar is bringing forward the date of peak thermal coal consumption in India as it is around the world. Non-fossil fuel-based power generation is targeted to make up 50% of total capacity by 2030.

Vietnam

Vietnam has been cited as a key growth market for Australian coal exports; however, while volumes have recently been increasing, the potential for Vietnam to replace export volumes lost to the four biggest markets as they transition away from coal imports is starting to look increasingly limited.

Most of the coal-fired power projects in Vietnam's project pipeline have not reached financial close and the government has found it increasingly difficult to secure finance for coal-fired power projects as banks abandon coal lending.⁴⁵ In the meantime, the rapid deployment of solar and wind power in the country since 2019 has further put into full context the endemic delays and overall role of coal-fired power in the country's future energy mix.

Vietnam added more than 4GW of solar power within a 12-month period up to the end of June 2019. The average construction period for those solar plants was just 275 days.⁴⁶ The nation followed up this extraordinary growth in solar development with an even more astonishing figure, adding 9GW of rooftop solar during 2020.⁴⁷ Vietnam is also developing wind energy and the government is targeting 16GW of onshore wind and 7GW of offshore wind development by 2030.⁴⁸

Vietnam surprised many at the COP26 summit held in Glasgow in 2021 when it pledged to reach zero carbon emissions by 2050 and also committed to stop building new coal plants.⁴⁹ Vietnam's coal-fired power pipeline—which was already looking increasingly unlikely to reach construction given a lack of financing—now looks even more uncertain.

Vietnam has already been cutting back on plans to rely on coal-fired power. In the March 2021 draft of the long-term Power Development Plan VIII (known as PDP8), coal power capacity was capped at 46.4GW. It was reduced to 36.3GW in the November 2022 draft under the base case scenario, with the

⁴³ Moody's Investor Services. Metals and Mining – Global: Outlook stable as prices and EBITDA retreat from peaks but remain elevated. 6 June 2022.

⁴⁴ Bloomberg. [Energy Crisis is Hastening End of Fossil Fuel Era, India Says](#). 13 July 2022.

⁴⁵ Bloomberg. [Banks Shunning Coal Financing Bodes Badly for New Plants in Asia](#). 25 February 2020.

⁴⁶ Rystad Energy. [Vietnam overtakes Australia in commissioned utility PV](#). 4 July 2019.

⁴⁷ IEEFA. [Vietnam's extraordinary rooftop solar success deals another blow to the remaining coal pipeline](#). 12 January 2021.

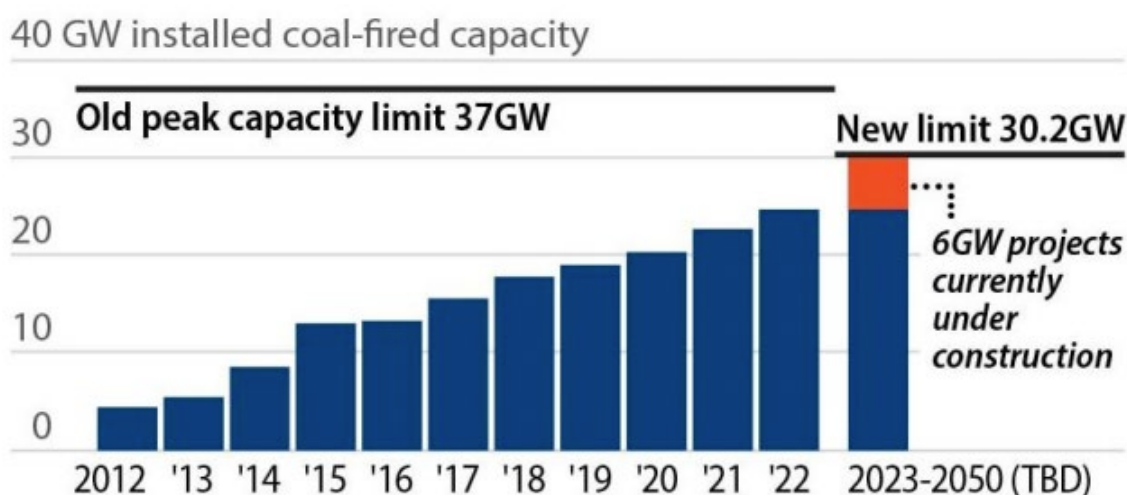
⁴⁸ REVE. [Vietnam looks to offshore wind power in transition to renewable energy](#). 17 March 2023

⁴⁹ Bloomberg. [Vietnam Spurns Coal as Southeast Asia Aims to Kick Dirty Habit](#). 5 November 2021.

planners even acknowledging a potential 30.1GW scenario where several coal-fired power projects may not materialise and must be replaced by wind power capacity.⁵⁰

Then in December 2022, Vietnam and the International Partners Group (including the European Union, United Kingdom, United States, France, Germany, Italy, Canada, Japan, Norway and Denmark) announced a Just Energy Transition Partnership (JETP). The JETP will mobilise an initial US\$15.5 billion of public and private finance over the next three to five years to support Vietnam’s green transition.⁵¹

Figure 4: Vietnam Coal Plant Capacity and the New JETP Deal Limit



Source: Global Energy Monitor, IEEFA calculations

The JETP aims to bring forward Vietnam’s peak emissions target from 2035 to 2030, reduce annual power sector peak emissions from 240 metric tons of carbon dioxide equivalent emissions (mtCO₂e) to 170mtCO₂e and increase the power mix contribution from renewables to 47% by 2030, up from the current plan of 36%. It also targets a reduced peak coal-fired power capacity of 30.2GW, down from 37.0GW (Figure 4).

Given funding issues and policy shifts away from coal, the Australian government notes there is a risk that Vietnam’s coal imports may peak as soon as 2025.⁵²

Malaysia

Malaysia currently has eight coal-fired power plants with a total capacity of 13GW and none currently under development.

In March 2021, Malaysia launched a new long-term power plan intended to see more than half (7GW) of the country’s existing coal-fired power plants closed by 2039.⁵³ According to the plan 1.4GW of new coal-fired power plants will be added in both 2031 and 2037. Given the significant trend of banks and other financial institutions moving away from funding coal, this objective seems highly unlikely to be

⁵⁰ For March 2021 draft: Ministry of Industry and Trade’s Submission No. 1682 to Prime Minister on ratification of PDP8, dated 26 March 2021. For November 2022 draft: Ministry of Industry and Trade’s Submission No. 7194 to Prime Minister on ratification of PDP8, dated 11 November 2022.

⁵¹ European Commission. [Political Declaration on establishing the Just Energy Transition Partnership with Viet Nam](#). 14 December 2022

⁵² Department of Industry, Science and Resources, [Resources and Energy Quarterly](#), March 2023

⁵³ Argus Media. [Malaysia to reduce coal capacity by 4.2GW by 2039](#). 24 March 2021.

achieved. To replace shrinking reliance on coal-fired power, the plan increased Malaysia’s renewable energy target from 20% of capacity to 31% by 2025.

Then in August 2022, state-owned power utility TNB—Malaysia’s largest power provider—announced plans to accelerate the closure of some its coal-fired power plants to speed up its energy transition towards renewable energy.⁵⁴ TNB is targeting a 50% reduction in coal-fired power capacity by 2035 and zero carbon emissions by 2050, by which time it plans to install more than 14GW of renewable energy. The first plant to be closed early is planned to be the 1.4GW Kapar Energy Ventures coal-fired power station in 2028–29, one year prior to the expiration of its power purchase agreement.

Philippines

In October 2020, the Philippines Department of Energy called a moratorium on further coal-fired power development.⁵⁵ This followed the Department of Energy’s earlier caution against an overreliance on inflexible technologies such as coal that cause grid instability.⁵⁶ The new Ferdinand Marcos-led government has stated that it will keep the moratorium on new coal plants.⁵⁷ The Australian government has noted that proposed coal power stations in the planning stages have now largely been abandoned.⁵⁸

In his first State of the Nation Address, President Marcos emphasized that the further development of renewable energy will be a top priority.⁵⁹ The Department of Energy is now encouraging the development of offshore wind projects in the Philippines.⁶⁰

The country is planning to add 18GW of solar and 8GW of wind power by 2030.⁶¹ Finance to make this happen is already arriving from China – nine Chinese companies have committed a collective US\$14 billion in renewable energy development in the Philippines. The country is targeting 35% renewable energy by 2030 and 50% by 2040.⁶² Renewables accounted for 22% of power generation in 2021.

This move by the government followed actions taken by the Philippines’ largest conglomerates, which are also the major power generators. In July 2022, AC Energy—a subsidiary of Ayala Corporation—divested from the South Luzon coal-fired power plant, the only such plant in AC Energy’s portfolio. The company will reinvest the proceeds into renewable energy.⁶³ San Miguel Corporation has also confirmed that it will stop developing new coal plants and switch its focus to renewable energy.⁶⁴ A run of coal-fired power project cancellations in recent years has limited the Philippines as a seaborne thermal coal growth market while opening up the opportunity for renewable energy. In September 2022, Macquarie Capital announced its involvement in a \$1.2 billion investment in a 1.3GW floating solar farm in the Philippines, which will be the largest in Asia.⁶⁵

Following the Department of Energy’s moratorium announcement, the nation’s banks have also been distancing themselves from coal. In December 2020, the CEO of Rizal Commercial Banking

⁵⁴ PV Magazine Australia. [Malaysia energy major targets early closure of coal plants](#). 4 August 2022.

⁵⁵ Department of Energy. [DoE Sec. Cusi declares moratorium on endorsements for greenfield coal power plants](#). 27 October 2020.

⁵⁶ IEEFA. [The Philippines considers a power sector future without new coal](#). 9 June 2020.

⁵⁷ Argus Media. [Marcos govt keeps ban on new Philippine coal plants](#). 17 August 2022.

⁵⁸ Department of Industry, Science and Resources, [Resources and Energy Quarterly](#), March 2023

⁵⁹ Philippine News Agency. [Renewable energy tops Marcos admin’s climate change agenda](#). 25 July 2022

⁶⁰ Manila Standard. [DOE issues 40 offshore wind service contracts](#). 20 October 2022

⁶¹ Reuters. [Column: Philippines set to go from renewable laggard to leader in SE Asia](#). 14 March 2023

⁶² PV Tech. [Chinese companies commit US\\$13.7 billion for renewables in Philippines](#). 9 January 2023

⁶³ Power Philippines. [ACEN to sell shares in SLTEC coal plant](#). 27 July 2022.

⁶⁴ Manila Standard. [San Miguel drops more coal projects, favors renewables](#). 21 July 2021.

⁶⁵ Manila Standard. [Macquarie, Sun Energy investing \\$1.2b in Laguna solar project](#). 13 September 2022

Corporation stated: “No more coal, no more coal. I’ll say that slowly—NO MORE COAL.”⁶⁶ In September 2022, the Philippines largest lender announced that it would reduce its coal exposure 50% by 2033.⁶⁷

Bangladesh

There has been growing realisation in Bangladesh that its plan to expand power generation through imported coal-fired power plants was setting it on course for significant overcapacity, financially unsustainable capacity payments and increased cost of power generation. Bangladesh already has more power capacity than it needs with up to two-thirds of total power capacity lying idle at a time.⁶⁸ Overall utilisation of the nation’s total power generation capacity was just 42% in fiscal year 2020–21 and is set to drop even lower as more capacity is added in excess of power demand growth.⁶⁹

Prompted by the increasing difficulty in getting finance for coal-fired power as more banks withdraw lending for coal, Bangladesh’s power minister revealed in late June 2020 that the government is reassessing its plans for coal-fired power development. Even China—which has increasingly looked like the last lender to coal projects globally—has now stated that it will no longer consider financing coal proposals in Bangladesh.⁷⁰ In June 2021 it was confirmed that the government had decided to cancel 10 proposed coal-fired power projects.⁷¹

With Bangladesh’s 8th five-year plan (2020–2025) acknowledging that increased dependence on imported coal and LNG will increase the cost of power generation and worsen the financial position of the power system,⁷² renewable energy is also expected to become a higher priority for Bangladesh. The plan acknowledges that subsidies for fossil fuels have held back the development of solar and wind power in Bangladesh and that such subsidies will need to be wound back to facilitate an increase in renewable energy ambition.

In 2022, Bangladesh’s coal-fired power pipeline shrank even further. In March, Japan’s Sumitomo Corporation withdrew from the Matarbari 2 coal-fired power plant project as part of its global shift away from coal.⁷³ Following this, the Japan International Cooperation Agency (JICA) withdrew finance for the Matarbari 2 project.⁷⁴ JICA has already provided finance for the under-construction Matarbari 1 project, which is running significantly over budget and behind schedule.⁷⁵

It has now become clear that beyond the handful of coal-fired power projects already under construction in Bangladesh, no more will be built. The first new project to be completed was the Payra coal-fired power plant, which is fuelled by Indonesian coal.⁷⁶

Bangladesh, along with Pakistan and Vietnam, has been earmarked by thermal coal exporters as a growth market that could replace declining demand in traditional export markets. The end of Bangladesh’s coal-fired power project pipeline will disappoint exporters across the Asian seaborne thermal coal market.

⁶⁶ Manila Bulletin. [RCBC to stop funding coal power projects](#). 10 December 2020.

⁶⁷ Manila Standard. [BDO commits to reduce coal liability to 50%](#). 8 September 2022

⁶⁸ IEEFA. [Bangladesh’s power system headed for financial disaster due to overcapacity in coal, LNG power](#). 18 May 2020.

⁶⁹ IEEFA. [Bangladesh Power Development Board Financial Results FY2020-21](#). February 2022.

⁷⁰ Daily Star. [\\$3.6b Chinese loan uncertain after Dhaka drops projects from agreed list](#). 4 March 2021.

⁷¹ Daily Sun. [Govt scraps 10 coal power projects](#). 23 June 2021.

⁷² Bangladesh Planning Commission. [8th Five-year Plan](#) (English). December 2020.

⁷³ Argus Media. [Sumitomo exits Bangladesh coal plant expansion plan](#). 3 March 2022.

⁷⁴ The Business Standard. [Japan cancels financing Matarbari coal project phase 2](#). 22 June 2022.

⁷⁵ The Financial Express. [Matarbari fast-track power project in need of more fund and more time](#). 22 April 2021.

⁷⁶ The Daily Star. [Indonesian firm to supply coal to Payra power plant](#). 19 June 2019.

Pakistan

Like Bangladesh, Pakistan is similarly burdened by overcapacity and capacity payments within its power system.⁷⁷ Capacity payments to power generators are on course to reach Rs1.5 trillion (US\$6.4 billion) per annum by 2023. The expense of overcapacity is making the build-up of debt within Pakistan's power system (known as circular debt) even worse. The inevitable consequence of expensive power generation and unsustainable debt is a rise in consumer power tariffs.

The unaffordable nature of surplus coal-fired power built under the China-Pakistan Economic Corridor program has also led the Pakistan government to seek debt relief from China. The request is likely to take the form of longer loan repayment terms in order to reduce capacity payments to the coal power generators.

Pakistan has long since moved away from further reliance on imported thermal coal and has cancelled several plants that were intended to have been fuelled by imports.^{78, 79} Other coal-fired power proposals have had their plans changed to use domestic rather than imported coal.

This planned shift away from thermal coal imports has now received new impetus from the global energy crisis that followed the 2022 Russian invasion of Ukraine. High seaborne coal prices have been too expensive for Pakistan,⁸⁰ leading to a drop in coal imports and the imposition of power cuts.⁸¹ In June 2022, the cost of fossil fuel imports surged almost 150% compared to the same month in 2021 and made up about half of the nation's total imports of US\$7.9 billion.

Coal-fired power generation based on imported coal fell to a five-year low in November 2022 on the back of high prices. Total 2022 coal imports were expected to drop below 10mt, down from 16mt in 2021. High coal prices have led to a significant increase in the proportion of cheaper Indonesian coal being imported and a reduction in South African volumes.⁸²

As a result, energy security and replacement of fossil fuels imports are now an even higher necessity for Pakistan than before the invasion of Ukraine. The government is prioritising domestic coal over expensive imports of seaborne coal and LNG⁸³ and is seeking to press ahead with the conversion of the existing 4GW of operational power plants fuelled by imported coal to use domestic coal instead.⁸⁴

Far from being a seaborne thermal coal growth market, Pakistan's imports may soon begin to start falling.

Global Fossil Fuel Crisis Will Accelerate the Transition Away from Coal

Whitehaven Coal blames reduced investment in coal and gas as a contributor to the global fossil fuel crisis that followed the Russian invasion of Ukraine:

⁷⁷ Bloomberg. [Nation Plagued by Power Shortages Suddenly Has Too Much Electricity](#). 27 January 2021.

⁷⁸ Dawn. [Govt puts major CPEC power project on hold](#). 14 January 2019.

⁷⁹ Express Tribune. [PTI government abandons K-Electric's coal project](#). 25 June 2020.

⁸⁰ S&P Global. [Pakistan's coal crisis prompts industries to shut plants, reduce capacities](#). 23 May 2022.

⁸¹ Bloomberg. [Cash-Strapped Pakistan Cuts Power to Households on Fuel Shortage](#). 18 April 2022.

⁸² Argus Media. [Pakistan's imported coal generation at five-year low](#). 21 December 2022

⁸³ Reuters. [Exclusive: Pakistan plans to quadruple domestic coal-fired power, move away from gas](#). 14 February 2023

⁸⁴ Dawn. [Thar coal projects to prove 'game-changer' with \\$6bn savings in fuel imports: PM Shehbaz](#). 10 October 2022

“Shutting down coal and gas or restricting investments in these sectors in the absence of viable alternatives has meaningfully contributed to the current energy crisis.” - Sustainability Report 2022, page 15.

Australian coal exports were down significantly in 2022^{85 86} as the industry was unable to raise volumes to meet demand after Russian coal imports were restricted in many territories. However, this reduction in Australian volumes was largely due to extreme weather (flooding) and labour shortages – two issues that look like becoming long term trends that will continue to impact the coal mining sector going forward.^{87 88}

In its 2022 World Energy Outlook, the IEA refuted the idea that climate policies and net zero emissions commitments contributed to the spike in fossil fuel prices following the invasion of Ukraine, “Climate policies and net zero emissions commitments were blamed in some quarters for contributing to the run-up in prices, but it is difficult to argue that they played a role. More rapid deployment of clean energy sources and technologies in practice would have helped to protect consumers and mitigate some of the upward pressure on fuel prices.”⁸⁹

More recently, Whitehaven Coal has correctly noted that energy security has become even more of a concern for nations as a result of the fossil fuel crisis:

“Energy security remains a key priority for customer countries” - Half Year Results FY23 presentation, page 33

A key energy security concern for nations that import fossil fuels is affordability. Developing nations that Whitehaven sees as the future locations of thermal coal demand are particularly sensitive to coal price. The high coal prices of 2022 were unaffordable for Pakistan which stopped running coal power units that run on imported coal. As a result, power generation based on imported coal dropped to a five-year low⁹⁰ and households were hit with power cuts.⁹¹ In Bangladesh, the Rampal coal-fired power plant had to be shut down for a month due to the high cost of coal made worse by the Bangladesh Taka weakening against the dollar.⁹²

At this stage of the global energy transition, high coal prices are a double-edged sword for coal miners like Whitehaven. They result in high profits and cash generation but will erode long-term demand for thermal coal even faster as the energy security implications of being reliant on expensive coal imports become even starker. Nations can be expected to accelerate their transition to renewable energy even faster given its energy security benefits.

⁸⁵ Australian Financial Review. [Coal exports crash ahead of NSW reservation](#). 3 February 2023

⁸⁶ Argus Media. [Queensland coal shipments at decade low in 2022](#). 16 January 2023

⁸⁷ IEEFA. [Coal cost trends: Climate impacts on coal mining likely long term](#). 24 November 2023

⁸⁸ IEEFA. [Coal cost trends: Higher labour costs could continue into the long term](#). 15 November 2023

⁸⁹ IEA. [World Energy Outlook 2022](#). November 2022

⁹⁰ Argus Media. [Pakistan’s imported coal generation at five-year low](#). 21 December 2022

⁹¹ Bloomberg. [Cash-Strapped Pakistan Cuts Power to Households on Fuel Shortage](#). 18 April 2022

⁹² The Daily Star. [Rampal electricity cost nearly doubles due to rise in coal price, dollar rate](#). 18 February 2023

In April 2022, Moody’s Investor Services warned that a prolonged period of high coal prices would make renewable energy an even cheaper option and accelerate the decline of thermal coal demand.⁹³

BlackRock—the world’s largest investor with US\$10 trillion of assets under management—has made it clear that recent high fossil fuel prices will only accelerate the energy transition. In highlighting the fragile status of oil, gas and coal amid heightened energy security concerns, BlackRock Investment Institute’s chief regional strategist stated in March 2022 that “it’s not only a green issue, but also a broader supply issue now. We would see this as an accelerant to the transition towards energy sources of the future because the energy sources of the past have shown to be fraught with challenges in the last few weeks.”⁹⁴

In July 2022, former Governor of the Bank of England Mark Carney called on Australia to accept that there is no future in coal.⁹⁵

The CEO of the Port of Newcastle – the world’s largest coal export port – stated in November 2022 that the shift away from fossil fuels is happening faster than expected. The port is planning to build a container terminal as soon as possible to diversify away from reliance on coal.⁹⁶

A November 2022 survey of almost 2,000 senior executives across 20 major economies by the British law firm Ashurst found more than 75% of them believed the Ukraine crisis would speed up the energy transition away from fossil fuels.⁹⁷

In February 2023, a report by S&P Global noted “Last year, the growing role of clean energies in the global power mix accelerated as countries sought cheaper forms of domestic energy at a time of upheavals in global fossil fuel markets.”⁹⁸

S&P’s research found that in South-east Asia – supposedly a key seat of future seaborne thermal coal demand – wind and solar made up more than 50% of all power projects under development in Q4 of 2022, up from 35% in Q4 2021. Over the same period, the share of coal-fired power projects in the pipeline declined from 20% to 14% as more coal projects were cancelled. The share of gas-fired plants in the pipeline also declined. S&P further stated “This fact means that in 2023 and beyond, capacity additions will tilt further away from coal and gas and toward renewables in the fast-growing region of Asia. A year after the Russian invasion of Ukraine, investors seem to be doubling down on renewables and retreating further from fossil fuel generation.”

S&P concluded that “In the power sector, the overarching drivers seem to point to an unstoppable rise in renewable energy.”⁹⁹

Coal Quality and Carbon Emissions Claims

Whitehaven coal claims its high-CV coal gives it an advantage over other coal miners in that it will gain market share even as overall demand for seaborne thermal coal declines.

⁹³ Ibid.

⁹⁴ Australian Financial Review. [BlackRock: soaring energy prices underline the need for transition](#). 2 March 2022.

⁹⁵ Bloomberg. [Australia Needs More Realism on Coal’s Future, Carney Warns](#). 28 July 2022.

⁹⁶ Australian Financial Review. [‘Coal is declining’: Newcastle port gets closer to containers](#). 8 November 2022

⁹⁷ Reuters. [Global executives see Ukraine conflict accelerating energy transition](#). 23 November 2022

⁹⁸ S&P Global. A year like no other. How 2022 supercharged the energy transition in the global power sector. 28 February 2023

⁹⁹ Ibid

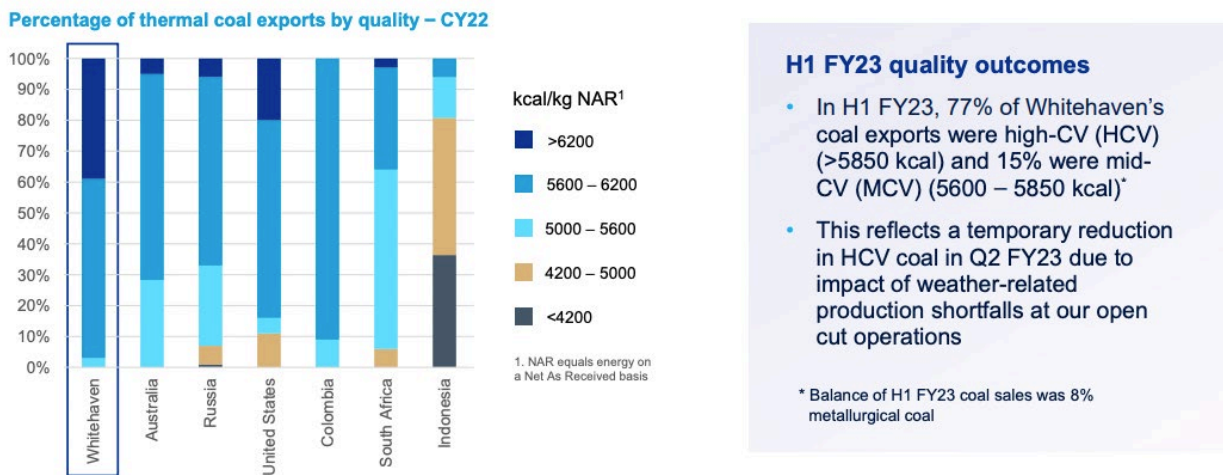
“89% of our thermal coal exports >5,600 kcal/kg and 34% >6,200 kcal/kg fueling high-efficiency, low-emissions power stations across Asia” – Sustainability Report 2022, page 4

“Although in the IEA’s SDS coal demand declines faster than under STEPS, in a more carbon-constrained world we expect higher quality coals to exit the market last.” - Sustainability Report 2022, page 17

In the first half of FY2023, 77% of Whitehaven’s exports were high-energy (>5,850 kcal/kg) coal and a further 15% were 5,600-5,850 kcal/kg coal (Figure 5).

There is no evidence to back up the idea that Whitehaven will be able to gain market share due to the high energy content of its coal. Developing nations around Asia that could provide alternative destinations to Japan, South Korea and Taiwan do not import the high energy grades of thermal coal that Whitehaven produces and likely never will. The plentiful supply of lower energy thermal coal from the likes of Indonesia makes it cheaper than the more restricted supply of high energy coal from Australia. Coal cost is the key influence on coal sourcing decisions and developing nations that could potentially replace the declining markets of Japan, South Korea and Taiwan tend to be more cost-sensitive.

Figure 5: Whitehaven Coal Thermal Coal Energy Content



Source: Whitehaven Coal Half Year Results FY2023 Presentation

Japan, South Korea and Taiwan are the only Asian nations that import top grade (~6,000 kcal/kg NAR) thermal coal in large quantities. This is why they account for the great majority of Whitehaven’s exports. Elsewhere, lower energy thermal coals are imported. China and India do import Australian thermal coal but this is lower energy 5,500 kcal/kg coal.¹⁰⁰ Other developing Asian nations import cheaper, lower energy (< 5,000 kcal/kg) Indonesian coal e.g. Bangladesh.¹⁰¹

Coal-fired power plants are configured to particular grades of coal, in developing Asia this generally means cheaper Indonesian coal or lower energy Australian coal. Some blending of coals from different

¹⁰⁰ Reuters. [Column: India, China demand boost low-rank thermal coal prices in Asia](#). 27 February 2023

¹⁰¹ Financial Express. [First cargo of coal to reach Payra Sept 18](#). 13 September 2019

sources can be done to maintain the desired coal characteristics that meet the design needs of the power plant. According to the Australian Government’s Office of the Chief Economist, in Vietnam “Many recently built coal plants have been designed to use Indonesian coal, and it is expected that imports of Indonesian coal will rise as coal plants currently under construction are completed.”¹⁰²

Whitehaven’s claim that higher quality (higher energy) coal will “exit the market last” depends on its coal gaining market share in developing Asia as imports by its key markets of Japan, South Korea and Taiwan decline. However, not only is there no evidence that price-sensitive importers like India¹⁰³ will switch to higher energy coal, there are technical barriers to them doing so given their coal power plants are configured for lower energy coal.

As such, the high energy content of Whitehaven’s coal could even prove to be a disadvantage as the only nations that import this grade of thermal coal (Japan, South Korea, Taiwan) have all committed to reach net zero emissions by 2050 and have all made clear that coal-fired power will now be significantly scaled down in pursuit of that target.

Carbon Emissions Claims

Whitehaven claims that its high energy coal helps its customers decarbonise and as such will remain in demand going forward:

“Whitehaven’s high-CV thermal coal delivers lower emissions intensity than other coals, helping our customers decarbonize” - Annual Report 2022, page 2

“Our high-CV, low-ash, low-sulphur thermal coal also contributes to our customers’ energy security and decarbonisation objectives” - Sustainability Report 2022, page 3

“Demand for high-quality, high-CV, low-ash coal is increasing in an effort to reduce carbon emissions.” – Half Year Results FY23 presentation, page 37

Given the relatively small emissions impact of burning higher energy coal compared to lower energy coal, no nation can credibly plan to reduce power system emissions by merely switching from one grade of coal to another. Technical barriers would also limit the ability to switch to coal with a higher energy content. No nation has announced such a move as part of any power system decarbonization plan. Where a change in emphasis in coal sourcing is planned, it is a shift away from thermal coal imports and towards increased reliance on domestic coal such as in China¹⁰⁴, India¹⁰⁵ and Pakistan¹⁰⁶ for the purpose of increased energy security and lower cost.

As outlined in the ‘Demand for Thermal Coal’ section above, nations across Asia are planning major expansions in renewable energy to meet their decarbonization targets. This transition towards

¹⁰² Office of the Chief Economist. [Resources and Energy Quarterly](#). December 2022

¹⁰³ Reuters. [Column: India’s coal imports are shifting, thermal more than coking](#). 21 April 2022

¹⁰⁴ The Conversation. [China’s demand for coal is set to drop fast. Australia should take note](#). 21 April 2022.

¹⁰⁵ ET Energyworld. [India to start coal export by 2025-26: Coal Minister Pralhad Joshi](#). 29 March 2023

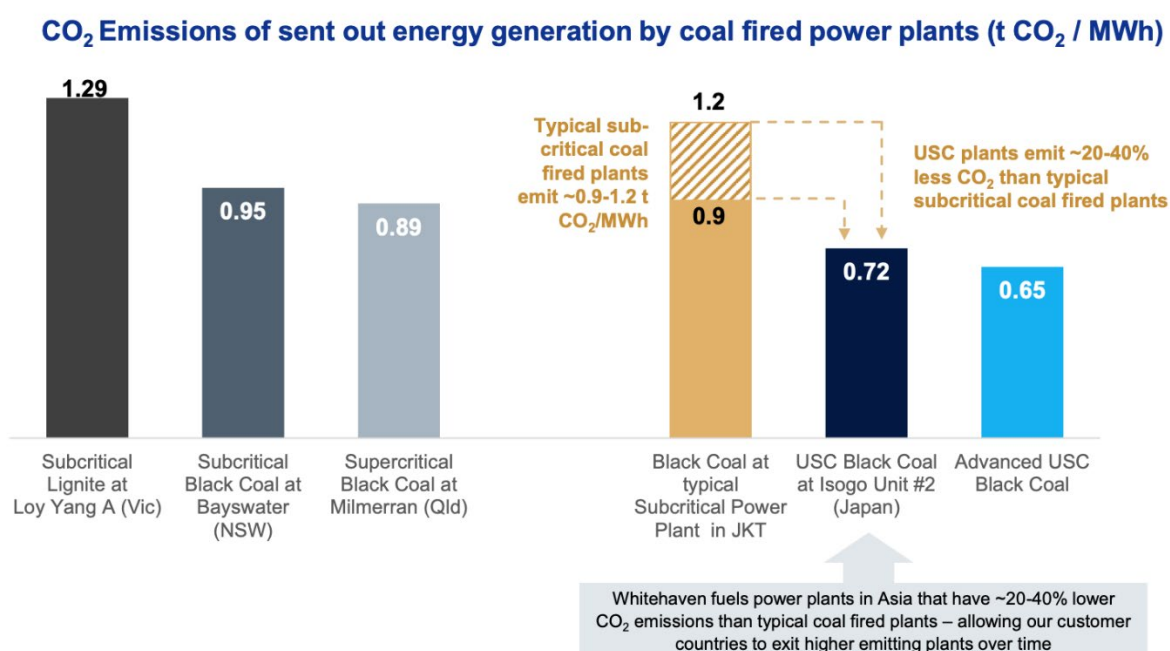
¹⁰⁶ Reuters. [Exclusive: Pakistan plans to quadruple domestic coal-fired power, move away from gas](#). 14 February 2023

renewable energy is well established and will be driven even faster as wind, solar and batteries continue to decline in cost and energy security concerns mount on the back of high fossil fuel price volatility.

Comparing New Coal Technology to Old Technology, Not Renewables

As well as suggesting that thermal coal buyers will switch to higher energy coal to reduce emissions, Whitehaven also maintains that a switch from older coal power station technology to newer technology will contribute to decarbonization (Figure 6).

Figure 6: Whitehaven Compares Modern Coal Power Technology to Old Coal Power Technology, Not Renewables



Source: Whitehaven Coal FY23 Half Year Results presentation

“To reduce GHG emissions and meet the goals of the Paris Agreement, many coal-reliant countries have committed to retiring old and inefficient coal-fired plants and moving towards newer, lower emission, more energy-efficient generation technologies” - Sustainability Report 2022, page 36

“Our thermal coal fuels high-efficiency, low-emissions (HELE) electricity generation that is helping our customers in Asia generate electricity with emissions much lower than older coal-fired power plants.” - Annual Report 2022, page 4

This does not represent what is actually happening across Asia. Although Japan and South Korea have a few remaining coal power projects under construction, the clear trend going forward will be one of declining coal power capacity as plants are closed. The remaining plants under construction in these countries will be the last they ever build. As a result, it is clear that as older coal power plants close, they will not be replaced with new coal plants – given the renewable energy targets of Japan and South Korea it is clear they will be replaced with wind and solar and possibly some nuclear power.

Taiwan has no coal-fired power plants under construction and no plants in the project pipeline. Coal power development in Taiwan is already over.¹⁰⁷

In Southeast Asia, wind and solar power projects make up more than 50% of all power projects currently under development. Coal power projects make up 14%, a share that is declining as more projects are cancelled.¹⁰⁸ In Vietnam, the coal plants currently in the development pipeline will be the last every built there given its declining coal power capacity targets and the difficulty it faces in attracting coal power finance. These remaining projects are being configured for Indonesian, not Australian, coal.¹⁰⁹

The only nations that have significant capacities of coal-fired power in the latter stages of development with any likelihood of proceeding are China, India and Indonesia¹¹⁰ which are all major coal producers that will fuel any new plants with domestic coal – an energy security priority that has only become more important after record seaborne coal prices in 2022.

Whitehaven also continues to cling onto the myth of baseload power – the outdated idea that power plants (like coal-fired power plants) that run continuously are needed for a reliable power system:

“As the world transitions to more intermittent renewable energy sources, traditional energy sources like coal are critical to provide a reliable baseload of energy” - Annual Report 2022, page 4

The global transition towards renewable energy is in fact ending the role of traditional baseload power generators like coal-fired power plants. The high levels of renewable energy that will be installed over the next couple of decades are incompatible with baseload coal-fired power. Global consultancy McKinsey & Company stated last year that “Renewables are expected to become the new baseload, accounting for 50% of the power mix by 2030 and 85% by 2050.”¹¹¹

Australia’s Origin Energy made clear that the transition towards renewable energy is “increasingly not well suited to traditional baseload power stations and challenging their viability” as it announced an accelerated exit from coal-fired power generation in 2022.¹¹²

Australia’s power sector is clearly shifting away from baseload coal- and gas-fired power stations and towards renewable energy backed up by batteries, pumped hydro storage and peaking gas-fired power plants. This is confirmed by the Australian Energy Market Operator’s latest Integrated System Plan.¹¹³ This shift is occurring globally. Gas peaking plants are much more flexible than coal-fired power plants and far better suited to go on and offline as required to complement the generation

¹⁰⁷ Global Energy Monitor. [Coal-fired Power Capacity by Country \(MW\)](#). January 2023

¹⁰⁸ Ibid

¹⁰⁹ Office of the Chief Economist. [Resources and Energy Quarterly](#). December 2022

¹¹⁰ Global Energy Monitor. [Coal-fired Power Capacity by Country \(MW\)](#). January 2023

¹¹¹ McKinsey & Company. [Global Energy Perspective 2022](#). April 2022

¹¹² Origin Energy. [Origin proposes to accelerate exit from coal-fired power generation](#). 17 February 2022

¹¹³ AEMO. [2022 Integrated System Plan](#). June 2022

profile of wind and solar. As a result, as the world transitions to more and more renewable energy, coal will become more and more ill-suited to a modern power system. Around Asia, earlier-than-expected coal power plant closures can be expected as renewable energy capacity continues to expand, as is occurring in Australia.

Ultra-supercritical Coal-Fired Power Plants

In an attempt to further claim that its high energy (high-CV) coal can play a role in decarbonization, Whitehaven suggests that the most efficient ultra-supercritical coal power technology requires high-CV coal of the type it produces:

“the important role our high-CV, high quality coal plays in fuelling new ultrasupercritical power stations, which are allowing our customer countries to meet their decarbonisation goals.” - Sustainability Report 2022, page 3

“Our thermal coal products are used in high efficiency, low emissions (HELE) electricity generation including ultrasupercritical (USC) power plants” – Sustainability Report 2022, page 16

In fact, not only are nations not turning to ultra-supercritical coal power technology to reduce power generation emissions, such plants do not require high-CV coal of the type Whitehaven produces. Ultra-supercritical coal power plants can, and do, run on low CV coal:

- The Payra ultra-supercritical coal-fired power plant in Bangladesh is known to be fuelled by Indonesian coal (which produces coal with a significantly lower CV on average¹¹⁴). The plant is reportedly to use sub-bituminous coal with CV of 4,700-5,500 kcal/kg¹¹⁵ – well below the great majority of Whitehaven’s production.
- India’s Khargone ultra-supercritical coal plant uses Indian domestic coal sourced from Jharkhand state¹¹⁶ which will be significantly lower-energy coal than that produced by Whitehaven.
- The first ultra-supercritical coal power unit built in the Philippines uses sub-bituminous coal imported from Indonesia¹¹⁷ - the world’s largest thermal coal exporter.
- The new ultra-supercritical units of the Mae Moh coal power plant in Thailand will use sub-bituminous, low-CV lignite from a local coal mine.
- The ultra-supercritical expansion (known as Jawa-8) to the Cilacap Sumber power station in Indonesia runs on domestic coal that will be well below the energy content of coal produced by Whitehaven.¹¹⁸

¹¹⁴ Minerals Council of Australia. [Australian Export Thermal Coal: The Comparative Quality Advantages](#).

¹¹⁵ Daily Star. [Indonesian firm to supply coal to Payra power plant](#). 19 June 2019

¹¹⁶ Power Magazine. [Khargone: India’s High Efficiency Leap](#). 3 August 2020

¹¹⁷ Mitsubishi Power. [MHPS receives order for boiler, steam turbine and generator for the Philippines first ultra-supercritical-pressure coal-fired power unit](#). 9 December 2015

¹¹⁸ Global Energy Monitor. [Cilacap Sumber power station](#)

- The majority of ultra-supercritical coal power plants operational today are in China. Many of these will run on domestic Chinese coal of a lower energy content than that produced by Whitehaven given that more than 90% of coal consumed in China is domestic, not imported, coal.

Demand for Metallurgical Coal

Metallurgical coal made up only 8% Whitehaven's H1 FY23 coal sales¹¹⁹ but the company highlights strong demand growth going forward based on Wood Mackenzie forecasts:

“Asian demand for metallurgical coal is forecast to grow by 33% over the next three decades” - Half Year Results FY23 presentation, page 10

Whitehaven is planning to expand its metallurgical coal production via the Winchester South mine project in Queensland.

Until recently, it has been widely accepted that metallurgical coal has a stronger demand outlook than thermal coal as it is less immediately challenged by alternative technology. However, the outlook for met. coal is now starting to change. The steel technology transition has started to accelerate and looks likely to happen faster-than-expected as has already been seen with the ongoing transition away from coal-fired power towards renewable energy.

Direct reduced iron (DRI) based steelmaking – that does not use coal and can instead be based on green hydrogen – has been gaining momentum. The second half of 2022 saw European steelmakers move from DRI pilot projects and announcements towards investment decisions and finance at industrial scale¹²⁰, albeit supported by decarbonization policies that are not yet available globally. The IEA has noted this acceleration. Fatih Birol – executive director of the IEA – stated in April 2023 that “The project pipeline for producing steel with hydrogen rather than coal is expanding rapidly. If currently announced projects come to fruition, we could already have more than half of what we need in 2030 for the IEA's net zero pathway.”¹²¹

Iron ore major Vale forecasts that DRI production will increase 55% over the rest of this decade to reach 200mt by 2030.¹²² Steelmakers in developed nations will lead this transition but, as was seen with the proliferation of renewable energy technology, other regions including Asia are likely to follow this lead faster than expected.

Growing momentum in DRI-based steelmaking is now starting to leave carbon capture technology behind in the steel sector, as has already occurred in other sectors like power and gas.¹²³ Iron ore major BHP noted in 2022 that “there are no full scale operational CCUS facilities in blast furnace steelmaking operations at present, with only a limited number of small capacity carbon capture or utilisation pilots underway or in the planning phases globally”. International steel major

¹¹⁹ Whitehaven Coal. [Half Year Results FY23 presentation](#). 16 February 2023

¹²⁰ IEEFA. [Green finance has begun to flow into green steel funding](#). 11 November 2022

¹²¹ Financial Times. [Clean energy is moving faster than you think](#). 14 April 2023

¹²² Vale. [Iron solutions webinar: Decarbonisation of steel and impacts in iron ore supply](#). 14 April 2023

¹²³ IEEFA. [Carbon capture: a decarbonisation pipe dream](#). 1 September 2022

ArcelorMittal's "flagship" carbon capture project will capture only a tiny percentage of its Belgian operations emissions.¹²⁴

The lack of significant progress in carbon capture for steelmaking and the growing momentum behind DRI will steer the global steel industry away from metallurgical coal as demand for low-carbon steel rises. McKinsey expects that demand for low-carbon steel will grow tenfold over the rest of this decade to reach 200mt by 2030.¹²⁵

In its 2022 annual report BHP – Australia's largest metallurgical coal exporter – disclosed that it had increased its met. coal mine rehabilitation provision by US\$750m having recognized that the end of its met. coal mine operations "may be earlier than previously anticipated."¹²⁶ BHP is now developing DRI-based steelmaking technology that doesn't require any of its metallurgical coal.¹²⁷

South32 has ceased metallurgical coal mine development and will now wind down its coal mining business as existing mines are depleted.¹²⁸ Chief executive Graham Kerr stated that the transition from met. coal to hydrogen will occur within a couple of decades. However, Anglo American, which mines met. coal in Queensland, stated in an April 2023 update that it sees the steel transition taking only 10-15 years.¹²⁹

In its most recent Resources and Energy Quarterly report, the Australian government's Department of Industry, Science and Resources medium-term forecast sees both world trade in metallurgical coal and Australian metallurgical coal exports reach 317mt in 2026 before declining out to 2028.¹³⁰ India's demand over the period and beyond is forecast to increase as steel demand rises significantly but, in the Department's medium-term forecast, this is outweighed by declines elsewhere by 2027.

China – the world's largest steel manufacturer by far – will see a significant decline in metallurgical coal imports as its economy continues to mature and steel demand drops markedly. On top of this, China is attempting to become more self-sufficient for coal in the shorter term and will also increase imports from Mongolia which it considers a more energy secure source. China is also aiming to recycle more scrap steel which will further depress met. coal imports. The decline of Chinese primary steel demand going forward will leave the future long-term met. coal demand in the hands of India, depending on which steel technology route it focuses on. India already has a significant energy security issue due to its reliance on fossil fuel imports and is eyeing green hydrogen developments to improve this situation.¹³¹

¹²⁴ IEEFA. ["Hard-to-abate" must not become code for delaying steel decarbonisation.](#) 24 January 2023

¹²⁵ McKinsey & Company. [The resilience of steel: Navigating the crossroads.](#) April 2023

¹²⁶ BHP. [Annual Report 2022](#)

¹²⁷ BHP. [BHP and Hatch commence study for an electric smelting furnace pilot.](#) 23 March 2023

¹²⁸ Bloomberg. [Hydrogen Could replace Coking Coal in Two Decades, South32 Says.](#) 25 August 2022

¹²⁹ Anglo American. [Sustainability Performance Update.](#) April 2023

¹³⁰ Department of Industry, Science and Resources, [Resources and Energy Quarterly,](#) March 2023

¹³¹ RMI. [India Aims to Become a Green Hydrogen Leader.](#) 4 April 2023

About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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**Institute for Energy Economics
and Financial Analysis**

Annexure B

Expert Report of Dr Karl Mallon dated 9 May 2023

Dr Karl Mallon
Ph: 0412 257 521

9 May 2023

Carmel Flint
National Coordinator
Lock the Gate Alliance

Dear Ms Flint

You have asked for my expert opinion about the physical climate risk profile of Whitehaven Coal, providing me with several geographical files of the company's coal mining operations to consider and the rail lines that connect these mines to ports from which the access international markets.

My standing to provide an expert and independent opinion

Since 1997, I have worked in the field of both energy and emissions modelling and climate change physical impact analysis. I endeavour to provide scientifically robust and independent analysis which can be trusted by governments, the private sector and non-government organisations alike.

My work in climate impacts analysis has received awards from the German Government and the Australian climate adaptation profession. In these fields I have contracts with, and have provided consultation and reports to, a large range of private sector companies, infrastructure utilities, federal, state and local governments and national and international non-government organisations. I am currently a director of The Climate Risk Group Pty Ltd, which provides physical climate risk analysis to Governments, companies, households and civil society organisations – though I provide the assessment in this letter in a private capacity, at no cost.

The analysis and opinion I provide here is intended to be independent and objective. It is the kind of analysis that I or any of the companies I work with, would provide to government or corporations. As I am personally committed to ensuring all parts of society have access to climate impact information, my objective in this letter is to ensure that your organisation has equivalent access.

Extreme Weather Risks Considered Relevant the Company's Operations

A review of the company's statements to the ASX and elsewhere indicates that extreme weather is already present as a risk to operations.

For example, on 12 April, 2023, Whitehaven Coal issued updated production guidance to the ASX citing "intermittent weather disruptions in the month of March,"¹ among the factors leading to a reduction in expected production at Maules Creek in the March quarter, resulting in an overall fall in the company's production guidance for FY2023.

¹ Whitehaven Coal, ASX announcement 12 April 2023. "Updated FY2023 Guidance" https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02653450-2A1443074?access_token=83ff96335c2d45a094df02a206a39ff4

A number of hazards appear to be relevant to saleable coal production and transport across the company, including flooding, wind storms, drought and water scarcity.

Vulnerability to Flooding

- Whitehaven Coal’s Quarterly Report for September 2022 indicated that “flooding impacts in September ... cut off mine access at Maules Creek for seven days,” and that for the Tarrawonga mine, production was impacted by “mine access being cut off for two days for light vehicles and 14 days for truck movements on the haulage road to the Coal Handling and Preparation Plant (CHPP).”²
- The September 2022 quarterly report also reported that, “Weather events in both July and September impacted railings across the quarter. Flooding in the Hunter Valley region in July cut the rail network to all load-points west of Maitland for 12 days, but by the end of August we had largely caught up on our delayed July rail volumes. During September, rain events in the Gunnedah Basin catchment area caused flooding which impacted railings from all Whitehaven loadpoints on a number of occasions.”
- In addition to flooding impacts, that quarter, “Port movements were impacted on multiple occasions in the quarter by high winds and swell.”
- In the following quarter, December 2022, it was reported for Maules Creek coal mine that “Localised flooding cut off mine access for 17 days (versus 7 days for the previous quarter). The use of helicopters to access site [sic] allowed mining operations, CHPP production and train loading to continue but at a limited rate.”³
- At Tarrawonga in the December 2022 quarter, “there was continued heavy rain which caused regional and localised flooding resulting in mine access being cut off for 15 days (two days for the previous quarter) and 22 days for coal haulage to the CHPP in Gunnedah (14 days for the previous quarter).”

These incidents came within eighteen months of flooding disruption to rail services and site access in 2021.

Vulnerability to Wind events

The infrastructure is also vulnerable to extreme wind events.

- A storm-wind incident in late 2020 blew a loader owned by Newcastle Coal Infrastructure Group - which contracts Whitehaven’s coal - off its rails at the Newcastle port, reducing

² Whitehaven Coal. 19 October 2022. “Quarterly Report (Q1 FY23)” https://whitehavencoal.com.au/wp-content/uploads/2022/10/WHC_September-2022_Quarter_Production_Report.pdf

³ Whitehaven Coal 20 January 2023. “Quarterly Report (Q2 FY23)” https://whitehavencoal.com.au/wp-content/uploads/2023/01/WHC_December_2022_Quarterly_Report.pdf

export capacity within the port for several months, which was reported by Whitehaven subsequently to investors as affecting production guidance.⁴

- The Updated FY20 Guidance suggests that Maules Creek was affected by dust storms in late 2019.⁵

Vulnerability to Drought, Fire and Water scarcity

- Operations at Maules Creek were “affected by numerous unscheduled production stoppages during November and December [2019] from smoke, dust and haze events which can be considered an effect of extended drought conditions.”⁶
- In 2020, the Whitehaven company responsible for the Maules Creek coal mine was prosecuted by the water regulator in NSW for taking large volumes of water without a licence over a three year period, coinciding with a regional drought.⁷

Climate Physical Risk Analysis of Specific Whitehaven Coal Related Assets

In the preparation of this letter, I have asked the Climate Risk Engines team in The Climate Risk Group to produce data on the climate change and extreme weather risk to Whitehaven Coal’s areas of operations, including the rail lines that connect these operations to market.

As a matter of policy, the group does not provide analysis for any company’s expansion of fossil fuel operations. However, due the nature of this letter, this request was not considered in breach of this policy.

Overview of Methods

Taking 1990 as the base year for extreme weather risk, The Climate Risk Group’s structural model applies global and regional climate models to local weather and contextual exposure data at the site, such as canopy cover and elevation, to calculate the probability of asset operational thresholds being exceeded. The main aim has been to establish the extent to which hazards known to affect the company’s operations, or that can be reasonably expected to do so, may or may not be exacerbated by climate change over the period of mining operations. Results are generally presented as an escalation of average risk from the 1990 baseline.

For the railway lines, a series of points were created along the length of the line to coal port facilities, and models run calculating damage and productivity loss based on a railway archetype.

⁴ Whitehaven Coal, ASX announcement 23 March 2021. “NCIG outage, NSW floods and FY21 guidance” <https://whitehavencoal.com.au/wp-content/uploads/2021/03/210323-Whitehaven-Coal-market-update-NCIG-outage-NSW-floods-and-FY21-guidance.pdf>

⁵ Whitehaven Coal ASX announcement 5 December 2019. “Updated FY20 Guidance” https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02182183-2A1191226?access_token=83ff96335c2d45a094df02a206a39ff4

⁶ Whitehaven Coal ASX announcement 5 December 2019. “Updated FY20 Guidance” https://cdn-api.markitdigital.com/apiman-gateway/ASX/asx-research/1.0/file/2924-02182183-2A1191226?access_token=83ff96335c2d45a094df02a206a39ff4

⁷ Natural Resources Access Regulator. Media release 2 July 2020. “Water regulator commences prosecution of mine at Maules Creek” <https://www.nrar.nsw.gov.au/news/water-regulator-commences-prosecution-of-mine-at-maules-creek>

This was to look at the extent of the rail lines exposed to potentially disruptive hazards such as flooding and forest fire.

The Geographical Areas Considered

1. Maules Creek mine,
2. The Winchester South project,
3. The rail line connecting the NSW mines to the Port of Newcastle.
4. The relevant NSW and Queensland coal rail network for the Winchester project.

I was also provided with information about the location of the Narrabri Underground Stage 3 mine, the Vickery Extension Project, Tarrawonga and Werris Creek mines, which are in the same region as Maules Creek mine and utilise the same railway.

Time Periods

The periods of analysis were for 2020, 2030 and 2040, based on a 1990 baseline. These years were deemed to be relevant to the expected period of operations of one or more of the mines.

Included Hazards

The analysis was produced by applying global regional climate models to explore the exacerbation of relevant hazards in the localities where the mines and railways operate. The models were selected based on a standard 'stress test' methodology – i.e. wetter climate models are used to test future flood risk, drier climate models used to test forward-looking drought risk. The hazards considered were: Riverine flooding, Surface water flooding, Extreme heat, Extreme (synoptic) wind, Soil subsidence driven by drought conditions, Forest fire, and, for the rail lines, Coastal Inundation.

Results for the Impact of Climate Change on Relevant Hazards

Maules Creek

Exposure analysis indicates that the Maules Creek mine site is exposed to Riverine flooding, Extreme heat, Extreme (synoptic) wind, Soil subsidence, indicative of drought conditions, and Forest fire. The results indicate that physical risk from extreme heat, forest fire, extreme wind and drought/soil subsidence are the most significant hazards present at the site, have already increased since 1990 and will escalate further during the rest of the operating life of this mine. We note that the Maules Creek coal mine is near to the Tarrawonga mine and so could be expected to experience similar conditions.

Results for heat, wind and soil subsidence are presented together as they have the potential to combine to cause material disruption to operations, given recent experience.

As shown in Table 1, in the year 2020 there is already an escalation in physical risk from these hazards compared to the 1990 baseline and this risk increases further by 2030.

- The probability of extreme heat thresholds being exceeded increases four-fold (306.2%) from 1990 to 2020 and doubles again to 2030 – this can cause electrical equipment failure and be a hazard to worker health.
- The probability of extreme wind conditions increased 23.6% from 1990 to 2020 and by 2030 is 35.8% higher than in 1990.
- The soil subsidence hazard occurs in drought conditions as a result of soil contraction. It can affect built structures and roads. Drought contributes to water scarcity is a precursor to dust storms. The probability of thresholds from this hazard being breached in 2020 is 92% higher than in 1990 and 140% higher in 2030 than in 1990.

Table 1: Increased probability of extreme events from 1990 baseline of selected hazard thresholds being exceeded at Maules Creek mine in 2020 and 2030. Extreme heat is based on exceeding 42.1 degrees Celsius, wind is based on exceedance of a 1 in 500 year wind event, forest fire is based on increase in fire weather conditions and subsidence is based on the increased probability of years with lower than the bottom 10th percentile of long term average annual rainfall.

Year	Extreme heat	Forest fire	Extreme wind	Soil subsidence
2020	306.20%	3.73%	23.56%	91.59%
2030	608.37%	7.64%	35.84%	139.72%

NSW Rail Line

For the NSW rail line used by Whitehaven to access the export port in Newcastle, about 14% of the points analysed along the line would be classified as High Risk based on an adaptation of the US FEMA classification system (defined as an Annual Average Loss risk of greater than 1% of the replacement cost of that portion of the line suffering damage from hazards). Various points along the line are at risk of breaching failure thresholds (halt use of the railway) as a result of extreme heat, riverine flooding, forest fire, and, in a short section of track, coastal inundation.

Across all hazards, in the year 2030, there's a 13% annual probability of disruptive asset failure somewhere on the line, rising to 17% by 2040. Maules Creek is not expected to still be operating by this time, but Narrabri Underground Stage 3 and the Vickery mine both have expected mine life to that year.

Winchester South

Three of the Whitehaven Coal mining operations for which details were provided are expected to continue operating out to 2040. One of these is Winchester South, a Queensland-based project for which the company is seeking approval.

The modelling results indicate that parts of the Winchester South site are exposed to Riverine flooding. The results do not show a significant intensification of risk at the site for Extreme wind or Riverine flooding but show a significantly greater escalation of risk of Soil subsidence and Extreme heat than the Maules Creek analysis, as shown in Table 2.

Table 2: Increased probability from 1990 baseline of selected hazard thresholds being exceeded at Winchester South project in 2020, 2030 and 2040. Extreme heat is based on exceeding 42.7 degrees Celsius and subsidence is based on the increased probability of years with lower than the bottom 10th percentile of long term average annual rainfall.

Year	Soil subsidence	Extreme Heat
2020	88.20%	880.75%
2030	136.79%	1648.92%
2040	195.74%	2709.86%

Queensland Rail line

Part or all of the Queensland railway network to be utilised by the Winchester South project is exposed to Riverine flooding, Surface flooding, Forest fire and Coastal inundation.

Modelling indicates a 7% probability of asset failure as a result of climate change hazards somewhere on the railway lines expected to be used by the Winchester South project to deliver coal to one of three export ports on the coast in 2030.

Plausible Consequences Associated with Escalating Hazards

Reviewing the assets, locations and operations of Whitehaven Coal associated with the mines of interest, the following physical risks can be reasonably expected to be present:

- Damage to equipment and infrastructure on the site (e.g. flood, wind)
- Loss of access to the sites (e.g forest fire, flood)
- Loss of ability to transport coal from the sites to port/market (e.g coastal inundation, flood)
- Loss of ability to operate on site (e.g. wind-driven dust, bushfire smoke, flooding)
- Disruption to mining electrical operational equipment (e.g. heat)
- Disruption to mining operations due to limited water availability
- Disrupted access to market from hazards affecting rail lines or port infrastructure;

It would appear therefore that the impacts of extreme weather and climate change are material to the company already and these impacts are likely to worsen based on projected increases the frequency and severity of a range of hazards.

Some events may cause damage to the sites and equipment, some will cause disruption to operations and some may trigger environmental constraints that require work to cease - from a day of dust storms, weeks of flooding or months of water scarcity. Risks to the rail lines create circumstances under which external infrastructure may interrupt access to market. It is plausible that some of events will be coincident, further exacerbating the consequences.

It should be noted that there are also broader impacts which are beyond the scope of this analysis, but which may be as material such as:

- Hazard disruption of post-mining rehabilitation;
- Value chain disruption (e.g. buyer impacts in Asia)

Finally, while the above material risks are specific to the company, its operations and value chain, there is also contextual risk present in the environment in which the company operates. Specifically, the IPCC's Sixth Assessment Report identifies macro and systemic impacts for Australia with global warming above 1.5 degrees. The chapter on Australasia indicates that above 1.5 degrees of warming there is a high risk of "Cascading impacts on cities and settlements in Australia and New Zealand" and "Failure of institutions and governance systems to manage climate risks."⁸ While managing this risk is out of scope for a single company, the potential material transmission of this into the company's operations is present.

Physical risk in Whitehaven Coal's *Sustainability Report 2022*

Whitehaven's climate change risk report in its *Sustainability Report 2022* lists three climate change physical risks in a table of climate-related risks. It appears to provide no information about how these risks were identified, quantified or assessed.

A review of the physical risk elements of the Sustainability Report is outlined below using relevant guidelines from the Taskforce on Climate-related Financial Disclosures (TCFD).

Whitehaven Coal uses scenarios from the IEA *World Energy Outlook* (WEO) to address TCFD guideline *Strategy (c) (Business resilience)*. There does not appear to be a physical risk component in this section of the report. The two IEA scenarios utilised in the report are the Sustainable Development Scenario and the Stated Policies Scenario (STEPS). The former is designed to model the energy system under a temperature goal. The latter is built from the bottom up out of energy and climate change policies and Nationally Determined Contributions. In the 2021 WEO, STEPS was mapped as correlating with 1.5 degrees warming in 2030, 2 degrees of warming mid-century and 2.6 degrees in 2100, with an uncertainty range as high as 3.7 degrees.⁹

Whitehaven's *Sustainability Report 2022* does not appear to describe the impacts of climate-related physical risk on the company's business, strategy and financial planning. Examples of how this could have been undertaken include discussion of how the three identified risks transmit into business-relevant metrics such as days of disrupted operations, or disrupted access to market.

⁸ Lawrence, J., B. Mackey, F. Chiew, M.J. Costello, K. Hennessy, N. Lansbury, U.B. Nidumolu, G. Pecl, L. Rickards, N. Tapper, A. Woodward, and A. Wreford, 2022: Australasia. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 1581–1688, doi:10.1017/9781009325844.013.

⁹ IEA *WEO 2021* <https://www.iea.org/reports/world-energy-outlook-2021/scenario-trajectories-and-temperature-outcomes>

In the table below I have outlined a simple assessment of the company's reporting against the disclosure guidance provided by the 2017 recommendations from the Taskforce for Climate Related Disclosure (TCFD).

Table 3: Checklist of TCFD guidance against Whitehaven Coal's Sustainability Report 2022

TCFD Guideline elements	Whitehaven Coal Sustainability Report 2022
Strategy	
Describe short term acute physical climate risks	No short-term acute hazards described, including hazards recently experienced that have impacted production estimates.
Describe medium term acute physical climate risks	Partial. One medium-term risk described - risk of increased forest fire, flood and heat events on port and rail delivery. Forward-looking quantification of climate exacerbation of forest fire, flooding and extreme heat events not evident.
Describe long term acute physical climate risks	One long-term acute risk described - risk of mine access being cut off for greater than one day, due to forest fire or flood events, increasing over the life of mine. Forward-looking quantification of climate exacerbation of forest fire and flooding not evident.
Describe short term chronic physical climate risks	Risk of water stress is described, but this is characterised as a long-term risk, not short- or medium-term, despite this having already created litigation risk for the company. Forward-looking quantification of climate exacerbation to water stress not evident.
Describe medium-term chronic physical climate risks	Risk of water stress is described, but this is characterised as a long-term risk, not short- or medium-term, despite this having already created litigation risk for the company. Forward-looking quantification of climate exacerbation to water stress not evident.
Describe long term chronic physical climate risks	Partial. Long-term water stress described. Forward-looking quantification of climate exacerbation to water stress not evident. Long term chronic risk of cascading impacts on cities and settlements in Australia at warming above 1.5 degrees, as highlighted by IPCC Sixth Assessment Report, is not considered in terms of supply chain, demand or economic impacts to the business.
Describe physical climate risk scenario analysis process	Not described. Scenario analysis is described for transition risk but not in relation to physical risk. No evidence of forward-looking modelling of physical risk according to the two scenarios adopted for the transition risk analysis, or other standard physical models such as IPCC's RCPs.
Describe impact of physical climate risks on business strategy	No. Business strategy described only in relation to transition risk. No evidence of consideration of the physical climate risk to business strategy.
Describe impact of physical climate risks on financial planning	No. No evidence that climate change physical risk has been incorporated into financial planning, including loss of production, supply or delivery chain or increased operating costs for damage and insurance.

Describe the resilience of the organization's strategy, taking into consideration different climate related scenarios. Where relevant, scenarios consistent with increased physical climate-related risks should be included.	No. Business resilience described only in relation to transition risk. No business resilience plan set out to manage climate exacerbation of extreme weather hazards and chronic risks.
Risk Management	
Describe the process for identifying and assessing physical climate risks	Yes. However, no evidence of systematic discovery (research) and assessment of known disruption and failure modes – i.e. risks are based on experience or internally surmised impacts.
Describe the process for managing physical climate risks	Partial. Limited management actions are described for the three physical risks identified based on current/historic behaviour and mechanisms that are assumed to be available on an ongoing basis (e.g. water security arrangements) without discussion of whether these will remain available under intensifying climate change.
Describe how physical climate risk identification, assessment and management is integrated into the company's overall risk management	Partial. The overall climate risk management is described, but detail on physical risk management is minimal.
Metrics and Targets	
Disclose metrics used to assess physical climate risks in relation to its strategy and risk management process	No metrics or targets disclosed for physical risk.
Cross-Industry Metrics: Disclose the amount and extent (%) of assets or business activities vulnerable to physical risks	No quantification of physical risks disclosed, such as those discussed in this assessment.

For completeness, the three physical risks identified and described in the Sustainability Report are reproduced in full below.

Table 4: Whitehaven Coal physical risk elements in "Climate Change Risks" Table

Risk type	TCFD Risk Category	Description	Mitigation	Risk Rating
Physical (long-term)	Acute	Risk of access being cut off for greater than one day, due to fire or flood events, increasing over the life of mine.	No reasonable controls to mitigate access impacts as access is cut on public roads.	Low

Physical (long-term)	Chronic	Inability to access sufficient external water to supply our operations is increasing due to climate change.	Our water balance model assesses 132 years of historical climate data including the BOM-predicted impacts to rainfall and evaporation over our projects. Our water strategy includes options to improve drought security and redundancy by sharing water between operations.	Low
Physical (medium-term)	Acute	Increasing risk of disruption to port and rail infrastructure from fire, flood and heat events.	We engage regularly with our supply chain partners to ensure our industry partners comply with Australian Standards for all equipment and procedures.	Medium

Conclusions

Based on the analysis of climate change and extreme weather to the operations of Whitehaven coal for the Maules Creek mine and Winchester South project and their associated rail lines, I would draw the following conclusions:

1. There are a number of hazards that already directly disrupt impacts to Whitehaven's operations and these are a likely to have been - and continue to be - exacerbated by climate change over the operational life of the mines.
2. There are a number of hazards that already indirectly disrupt Whitehaven's operations via its transport routes and these are likely to have been - and continue to be - exacerbated by climate change over the operational life of the mines.
3. The scale of exposure is material, with hazards affecting all or significant parts of the mine sites and rail corridors.
4. The inclusion of climate change related disclosures by the company that omit the exposure of the operations and assets to extreme weather and climate change may leave the company at risk of inadequately informing investors, who might reasonably be expected to (a) assume that if a climate change risk assessment has been undertaken, and risk not disclosed, then risk is not present and (b) assume that a climate change related risk that is assessed as low would have included forward looking quantification of the hazard and its consequences.

In closing I would add that the above analysis addresses only the exposure of the company's assets and operational transport lines to extreme weather hazards. There are many impacts that will be relevant for the company which have not been considered here, including the economy wide effects of rising temperatures as well as the effects of national and international policies to limit emissions.

Sincerely,

Dr Karl Mallon

Annexure C

Table of non-compliance by WHC

Date	Action	Explanation	Mine	Amount
November 2022	Investigation ¹	Investigation into a worker suffering serious injury	Tarrawonga	ongoing
April 2022	Fine ²	Conviction for three water pollution events	Maules Creek	\$158,750
Nov 2021	Fine ³	NRAR fine for illegally taking 3B L of surface water over 3 years, without a licence	Maules Creek	\$200,000
Nov 2021	Penalty notices ⁴	Fines issued and environmental audit ordered by the EPA after the third alleged illegal discharge of dirty water since 2020.	Tarrawonga	\$30,000
Nov 2021	Blasting Suspension ⁵ & Prevention Notice	EPA is investigating 7 unsafe blasts causing toxic fumes to leave the mine area between Oct and Nov 2021.	Maules Creek	-
Aug 2021	Fine ⁶	Conviction for breaching licence conditions for 10 incidences including construction of unauthorised tracks and failing to rehabilitate drilling sites.	Narrabri Underground	\$372,500
Aug 2021	Enforceable undertaking	Agreement with NRAR to dismantle illegal dam and build water management structures in keeping with mine approval	Maules Creek	-
Aug 2021	Official caution ⁷	By the EPA, for burying waste tyres on site without being licenced to do so	Maules Creek, Tarrawonga and Werris Creek.	-
March 2021	Investigation	EPA is investigating a pollution event where styrofoam balls flowed into Back Creek & Maules Creek	Maules Creek	-
Oct 2020	Fine ⁸	NSW Resources Regulator Penalty Notice for erosion of emplacement area causing pollution	Tarrawonga	
Oct 2020	Fine ⁹	Uncontrolled water discharge	Werris Creek	\$15,000

¹ Resources Regulator press release [IR22-06 Worker seriously injured during lifting activity \(nsw.gov.au\)](https://www.resourcesregulator.nsw.gov.au/sites/default/files/2021-08/Narrabri-Coal-Pty-Ltd-and-Narrabri-Coal-Operations-Pty-Ltd-convicted-and-fined-for-mining-offences.pdf)

² EPA press release [Maules Creek Coal ordered to pay \\$158,000 for water pollution \(nsw.gov.au\)](https://www.epa.nsw.gov.au/news/media-releases/2021/epamedia211109-fines-for-coal-mine-for-dirty-water-discharge)

³ NRAR Judgement <https://www.caselaw.nsw.gov.au/decision/17d4a1e2adbaa47aacd9bb4d>

⁴ EPA press release: <https://www.epa.nsw.gov.au/news/media-releases/2021/epamedia211109-fines-for-coal-mine-for-dirty-water-discharge>

⁵ <https://www.epa.nsw.gov.au/news/media-releases/2021/epamedia211124-maules-creek-coal-mine-directed-to-suspend-blasting>

⁶ Resources Regulator press release: <https://www.resourcesregulator.nsw.gov.au/sites/default/files/2021-08/Narrabri-Coal-Pty-Ltd-and-Narrabri-Coal-Operations-Pty-Ltd-convicted-and-fined-for-mining-offences.pdf>

⁷ Pers comm from the EPA. Investigation report currently being sought under GIPA.

⁸ Tarrawonga AR 2020 pg 83 [AEMR 2004/05 \(whitehavencoal.com.au\)](https://www.whitehavencoal.com.au)

⁹ EPA media Release [https://www.epa.nsw.gov.au/news/media-releases/2020/epamedia201007-failure-to-maintain-storm-water-controls-costs-werris-creek-mine-\\$15000#:~:text=The%20NSW%20Environment%20Protection%20Authority,on%2018%20February%20this%20year](https://www.epa.nsw.gov.au/news/media-releases/2020/epamedia201007-failure-to-maintain-storm-water-controls-costs-werris-creek-mine-$15000#:~:text=The%20NSW%20Environment%20Protection%20Authority,on%2018%20February%20this%20year)

Oct 2020	Official Caution ¹⁰	NSW Resources Regulator caution for not displaying plans	Tarrawonga	-
Sept 2020	Warning Letter ¹¹	Department of Planning warning for failing to identify and protect a cultural heritage site	Narrabri Underground	-
Aug 2020	Enforceable Undertaking ¹²	Workplace health and safety submission by Resources regulator over serious WHS incident	Maules Creek	\$800,000 plus costs
Aug 20	Fine ¹³	Pollution of a local creek	Tarrawonga	\$30,000
Aug 2020	Prosecution ¹⁴	Eight breaches of exploration licence related to clearing bushland without approval. Convicted.	Narrabri Underground	\$372,500 in fines ¹⁵
May 20	Fine ¹⁶	Overflow of sediment dam	Tarrawonga	\$15,000
Apr 2020	Prosecution	South East Forest Rescue launch legal action for WHC failing to secure necessary biodiversity offsets when clearing endangered woodlands	Maules Creek	Discontinued after approval varied.
Mar 2020	Clean up notice ¹⁷	Release of polystyrene balls into a local water way	Maules Creek	-
Feb 2020	Fine ¹⁸	EPA penalty notice for noise exceeded noise limits	Narrabri Underground	\$15,000
Feb 2020	Penalty notice ¹⁹	Failing to seek consent for construction of two water pipelines	Maules Creek	\$15,000
Nov 2019	Penalty notices	Two penalty notices issue for the carrying out of exploration activities without approval	Vickery	unknown
Nov 2019	Investigation	NRAR and Dept Planning investigating construction of a water pipeline not included in approval	Maules Creek	Ongoing

¹⁰ Tarrawonga AR pg 84 [AEMR 2004/05 \(whitehavencoal.com.au\)](https://www.whitehavencoal.com.au)

¹¹ Whitehaven Annual Review 2020 pg 58 [NAR-Annual Review 2020.pdf \(whitehavencoal.com.au\)](https://www.whitehavencoal.com.au)

¹² <https://safetowork.com.au/whitehaven-commits-to-800000-undertaking-to-enhance-safety/> Resources Regulator media release <https://www.resourcesandgeoscience.nsw.gov.au/about-us/news/2019/maules-creek-coal-prosecuted-over-mining-truck-collision>

¹³ EPA media release [EPA fines Tarrawonga Coal \\$30,000 after pollution discharge \(nsw.gov.au\)](https://www.nsw.gov.au)

¹⁴ https://www.resourcesregulator.nsw.gov.au/_data/assets/pdf_file/0006/1248567/Prosecution-proceedings-commenced-against-Narrabri-Coal-Pty-Ltd-and-Narrabri-Coal-Operations.pdf

¹⁵ Resources Regulator media release 16 August 2021

https://www.resourcesregulator.nsw.gov.au/_data/assets/pdf_file/0008/1329254/Narrabri-Coal-Pty-Ltd-and-Narrabri-Coal-Operations-Pty-Ltd-convicted-and-fined-for-mining-offences.pdf

¹⁶ EPA media release [Tarrawonga Coal fined after environmental breach at mine \(nsw.gov.au\)](https://www.nsw.gov.au)

¹⁷ EPA Clean up notice here: <https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEONotice.aspx?DOCID=-1&SYSUID=1&LICID=1591771>

¹⁸ EPA Fine: [Narrabri Coal fined \\$15,000 for excessive noise \(nsw.gov.au\)](https://www.nsw.gov.au)

¹⁹ Department of Planning statement: <https://www.planning.nsw.gov.au/Assess-and-Regulate/About-compliance/Inspections-and-enforcements/February-2020-formal-enforcements/Penalty-Notice-issued-to-Aston-Coal-2>

Oct 2019	Investigation	NRAR investigating whether mine is causing groundwater loss to local farmers	Maules Creek	Ongoing
Sept 2019	Prohibition notice ²⁰	Issued by Resources Regulator prohibiting the use of vehicles following a dangerous incident	Maules Creek	-
Sept 2019	Prosecution ²¹	Natural Resources Access Regulator finds Whitehaven has taken over 3 billion litres of surface water illegally over four years	Maules Creek	Guilty plea. Sentence pending
Aug 2019	Licence Suspension ²²	Exploration Licence 6243 suspended due to illegal track clearing impacting hollow-bearing trees.	Narrabri Underground	-
Aug 2019	Statutory Notice	Rehabilitation	Tarrowonga and Rocglen	-
Aug 2019	Suspension ²³	Suspension of exploration licence for unlawful clearing of bushland for access tracks	Narrabri Underground	-
Jun 2019	Fine ²⁴	Failure to minimise dust, resulting clouds from stock pile	Narrabri Underground	\$15,000
Apr 2019	Clean up Notice ²⁵	Dumping combustible canisters improperly, resulting in fires breaking out at Narrabri Council's rubbish dump	Narrabri Underground	\$120,000 ²⁶
Mar 2019	Court conviction ²⁷	Blast fume left site and drifted over neighbouring properties	Rocglen	\$38,500
Mar 2019	Penalty notice ²⁸	Blast exceeded the airblast overpressure criteria	Werris Creek	\$15,000
Dec 2018	Warning letter	Sound power levels of equipment exceeded those specified in the Noise management Plan	Narrabri Underground	-
May 2018	Penalty notice ²⁹	Failing to minimise dust pollution from truck movements on haul roads	Maules Creek	\$15,000

²⁰ Resources Regulator media release: <https://resourcesandgeoscience.nsw.gov.au/about-us/news/2019/prohibition-notice-issued-to-maules-creek-open-cut-coal-mine>

²¹ NRAR media release: <https://www.industry.nsw.gov.au/natural-resources-access-regulator/nrar-news/nsw-water-regulator-concludes-investigations-into-maules-creek-coal-mine>

²² Resources Regulator document: <https://www.resourcesregulator.nsw.gov.au/sites/default/files/documents/suspension-notice-decision-document.pdf>

²³ Resources Regulator suspension notice: https://www.resourcesregulator.nsw.gov.au/_data/assets/pdf_file/0005/1153634/Suspension-Notice-Decision-document.pdf

²⁴ EPA media release: <https://www.epa.nsw.gov.au/news/media-releases/2019/epamedia190625>

²⁵ EPA clean up notice: <https://apps.epa.nsw.gov.au/prpoeoapp/ViewPOEONotice.aspx?DOCID=-1&SYSUID=1&LICID=1578807>

²⁶ Part of an enforceable undertaking. Details here: [https://www.epa.nsw.gov.au/news/media-releases/2020/epamedia200428-narrabri-coal-to-pay-\\$120000-after-mine-waste-caused-landfill](https://www.epa.nsw.gov.au/news/media-releases/2020/epamedia200428-narrabri-coal-to-pay-$120000-after-mine-waste-caused-landfill)

²⁷ EPA media release: [https://www.epa.nsw.gov.au/news/media-releases/2019/epamedia190320-whitehaven-coal-mining-ltd-convicted-and-fined-\\$38500-by-court](https://www.epa.nsw.gov.au/news/media-releases/2019/epamedia190320-whitehaven-coal-mining-ltd-convicted-and-fined-$38500-by-court)

²⁸ Department of Planning media release: <https://www.planning.nsw.gov.au/Assess-and-Regulate/About-compliance/Inspections-and-enforcements/March-2019-formal-enforcements/Penalty-Notice-issued-to-Werris-Creek-Coal-Pty-Ltd>

²⁹ EPA media release: <https://www.epa.nsw.gov.au/news/media-releases/2017/epamedia17052202>

April 2018	Official Caution	Exceeding “sound power levels” of fixed plant in 2016 and 2017 in contravention of development consent	Maules Creek	-
Mar 2018	Official caution ³⁰	From DPIE for “failure to undertake annual road noise monitoring for the 2017 calendar year”	Rocglen	-
Mar 2018	Warning letter ³¹	Failure regarding implementation of the Blast management plan.	Tarrowonga	-
Mar 2018	Official caution	Failure regarding implementation of the Noise Management Plan	Tarrowonga	-
Mar 2017	Penalty notice ³²	Failing to provide the government with information and records during the blast investigation	Maules Creek	\$1,500
Aug 2015	2 penalty notices ³³	Failure to implement proper weed and feral animal control as per Biodiversity Management Plan	Maules Creek and Tarrowonga	\$6,000
Jul 2015	Investigation ³⁴	Blast fumes	Maules Creek	-
Dec 2014	Penalty notice ³⁵	Disturbing an Aboriginal artefact	Narrabri Underground	\$3,000
Dec 2014	Penalty notice ³⁶	Mining more coal than licence allows	Tarrowonga	\$15,000
June 2014	Court undertaking	In response to action by Maules Creek Community Council Whitehaven gave an undertaking to the Land and Environment Court not to clear forest habitat during sensitive seasons for wildlife and changed its Biodiversity Management Plan to reinstate this commitment. ³⁷		
Mar 2012	4 penalty notices ³⁸	Polluting waters and breaching its environment protection licences in November 2011 and January 2012	Narrabri Underground and Tarrowonga	\$6,000

³⁰ This caution is cited in Rocglen Annual Review 2018.

³¹ Referred to the Tarrowonga Annual Review 2018.

³² EPA media release: <https://www.epa.nsw.gov.au/nePws/media-releases/2017/epamedia17030801>

³³ Department of Planning media release: <https://www.planning.nsw.gov.au/-/media/Files/DPE/Media-Releases/2015/August/26082015-Miners-fined-for-environmental-breaches.pdf>

³⁴ EPA media release: <https://www.epa.nsw.gov.au/news/media-releases/2015/epamedia15070603>

³⁵ See Independent Environmental Audit 2017. Available here:

<http://www.whitehavencoal.com.au/sustainability/environmental-management/narrabri-mine/>

³⁶ EPA media release: <https://www.epa.nsw.gov.au/news/media-releases/2014/epamedia14120902>

³⁷ For details see a summary of this case from the Environmental Defenders Office

https://www.edonsw.org.au/maules_creek_community_council_v_whitehaven_coal

³⁸ EPA media release: <https://www.epa.nsw.gov.au/news/media-releases/2012/decmedia12033003>