



Climate risk and our investments

September 2023



Investing
in a bright
future



Front cover image: Numurkah Solar Farm, Drumanure, Victoria

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IMPORTANT INFORMATION

Unless otherwise mentioned, all our holdings are determined as at 30 June 2023.

Company information has been assessed based on information available as at 10 August 2023. Any information announced or published after this date was not considered in company assessments.

This report may contain statements that are, or may be deemed to be forward looking statements, including climate related goals, targets, pathways and ambitions. Such forward looking statements are not guarantees and involve known and unknown risks, uncertainties and other factors, which are beyond the control of UniSuper. This may cause actual results to differ materially from those expressed or implied in such statements. As a standardised approach and guidance for the disclosure of climate related exposures evolves, UniSuper will continue to work with industry bodies and companies to advocate for a uniform approach to the disclosure of climate related risks. UniSuper will continue to review its disclosure practices which may involve republishing data as the disclosure of data evolves over time.

For further information on limitations see **page 72**.

We engaged an external assurance organisation, EY, to provide UniSuper with limited assurance in relation to the fossil fuel look-through revenue, financed emissions intensity and coverage disclosures contained in this report. See **page 87 and 88** for further information.

We do not accept responsibility for any errors in the data provided or calculations performed by any third parties on whom we have relied.



John Pearce
Chief Investment Officer

Message from the Chief Investment Officer

Welcome to the sixth edition of *Climate risk and our investments*.

The race to net-zero continues apace with governments, particularly in developed countries, strengthening their resolve to make good on their commitments. Australia, not long ago tagged as a climate pariah, is now firmly in the race. Headlining our position is the targeting of a 43% reduction in emissions by 2030. As lofty an ambition as it is, underpinning the goal is an even loftier goal to power the electricity grid with 83% renewable energy in the same time frame. Most importantly, policies and mechanisms are being put in place to ensure that there are incentives (and penalties) to support achievement of the goal. The Safeguard Mechanism, in particular, is as close to a price on carbon that we can achieve given the political settings. Granted it may not be perfect in the eyes of some, but we can't let the pursuit of perfection result in nothing being done.

While the developed countries in Europe and Asia are also setting ambitious goals, and implementing appropriate policies, this is all being dwarfed by the United States (US). The (misleadingly labelled) Inflation Reduction Act (IRA) is estimated to provide total incentives in the vicinity of \$1.5 trillion to corporates that invest in the US energy transition. The IRA has been described as the equivalent of Roosevelt's New Deal in terms of its broader impact on the US economy; there is even talk about the re-industrialisation of the US. Hyperbole or not, the current reality is that the IRA has already attracted (and diverted) investment. It is also a political master stroke, with quite a number of Republican states already benefiting from increased investment and jobs. Therefore, ongoing political support for key components of the IRA is likely to be bipartisan.

“Where achievement of net zero is practically and financially possible before 2050, every effort needs to be made to do so.”

There are two ways to look at the implications of the IRA. The US is arguably the only scale player in the world that can do this, so the world will be better off because of it. The downside is that other countries now find themselves competing with a dominant player for people, equipment, and capital. Nevertheless, with Australia's endowment of resources essential for the transition, we need to find a way to ensure developments in the US turn out to be a net opportunity rather than a risk.

The overarching aim of this report is to provide our members with a level of comfort that we are on top of the opportunities and risks in a world that has to, and is, decarbonising. The report has four key areas, and to assist with navigation, the following is a brief summary of the key points and messages.

PATHWAY TO NET ZERO

UniSuper endorses the goals of the Paris Agreement on climate change and we intend to play a part as Australia fulfils its commitment as a signatory. We believe that UniSuper's investment-related activities, when viewed in aggregate, will assist in achieving the goals of the Paris Agreement and provide for greater retirement outcomes through: (i) our governance structure (ii) investment activities (iii) using our position as an owner to engage with the corporate sector (iv) collaborating with like-minded investors and advocating for policies and mechanisms necessary to effect a just and orderly transition. Our pathway to net zero is covered in [pages 6 to 17](#).

Key points include:

- Achieving net zero emissions requires a fully integrated approach with the goals and tone set by our Board and incorporated into management performance frameworks.
- While the ultimate objective is to achieve a net-zero status by 2050, we need to align with Australia's goals by contributing to a 43% reduction in emissions by 2030.
- Where achievement of net zero is practically and financially possible before 2050, every effort needs to be made to do so. To reflect this, we have established asset specific targets for our unlisted property and infrastructure, see [page 10](#).
- We have invested billions of dollars in companies directly involved or instrumental in the energy transition. On top of the more obvious 'green themed' investments (e.g., renewables, EVs, batteries) we also have significant investments in companies that develop the critical resources required to transition (see [pages 11 and 12](#)).
- There is a growing awareness that the energy transition needs to be just and orderly. A just transition implies that less developed countries and certain segments of society are not unfairly bearing the cost of the transition. An orderly transition, in simple terms, means that we must get the sequencing right. We simply can't risk losing the mainstream support needed to effect the transition. An excellent case study of a just and orderly transition is BHP's exit of its thermal coal assets at Mt Arthur ([page 15](#)).

VIEWING PROGRESS THROUGH THE LENS OF OUR TRAFFIC LIGHT REPORT

Our traffic light report ([pages 22 to 23](#)) is a proprietary initiative focusing on our 50 largest Australian investments. These companies constitute over 65% of our Australian investments. They are the companies that we have direct access to, engage with most, and with which we can wield the greatest influence.

The Traffic Light report can be viewed as a 'ready reckoner' with respect to a company's commitment to: (i) achieving net zero by 2050 (ii) setting ambitious shorter-term targets and (iii) tangible evidence of an action plan. Based on our assessment, green, amber and red lights are assigned to each category. The report also serves to inform us on potential areas for further engagement, particularly where companies are falling short of our expectations. The 50 companies involved receive a letter from UniSuper detailing the outcome of our assessment. Suffice to say that a negative assessment typically leads to a robust follow-up discussion between UniSuper and the company.

Partly in response to feedback received from a number of our engaged members, this report has two important additions. First, we have made an attempt to reconcile our assessment of 'net zero readiness' with science-based assessments. In particular, we refer to the analysis conducted by two highly reputable institutions, SBTi and Climateworks.

While our conclusions are broadly consistent with the science-based assessments, in some instances we differ. A key point of difference, in principle, is that UniSuper applies a pragmatic overlay. The crux of the overlay is based on our acceptance that the path to net zero will be non-linear. The analysis is introduced on [page 24](#), and a full listing of the results is contained in the appendix on [pages 81 to 86](#).

This report also attempts to add more colour to our engagement activities by including overviews of the nature of our engagement with three companies—Rio Tinto, Cleanaway, and BlueScope.

Case studies are also used to better illustrate why we voted in favour of APA's climate report and against resolutions at Woodside's AGM.

UNDERSTANDING OUR KEY RISKS

[Pages 34 to 47](#) deal with our key risks, which can be broadly grouped as physical or transition. Physical risks do not vary much from year to year, although a better understanding of them should lead to constantly improving mitigation strategies. In this edition, we use a case study example of a timber asset (HVP Plantations), as an example of how climate risk is impacting strategy.

Transition risk refers to the disruption a company may endure when being forced to adjust to a decarbonising economy. At one extreme this may result in assets becoming 'stranded' (meaning zero economic value), and the most likely candidates are companies directly involved in the fossil fuel industry. We therefore include our 'look-through' exposure to companies with reported revenue from fossil fuels which aims to capture the component of a company's revenues that is related to fossil fuel extraction, production ([page 42 and 43](#)), or generation. See [page 42](#) for the methodology on how fossil fuel exposure is calculated.

We estimate that our look-through exposure to fossil fuels is approximately 2.34% of the total Fund, which is down from 2.80% in the previous year. As has been the case over the past few years, our exposure is dominated by our holding in gas-pipeline company APA which is largely held by the defined benefit portfolio.

While we all accept the need for the world to ultimately wean itself off fossil fuels, there is growing acceptance that gas has a fundamental role to play in the transition. A section on the role of gas ([page 44 and 45](#)) is in the report. The section refers to research published by the Net Zero Australia Project (a partnership between the Universities of Melbourne and Queensland) which concludes that gas capacity would actually need to increase for firming, while operating at low capacity. Suffice to say that we do not envisage APA's gas pipelines are at risk of becoming a stranded asset for a very long time.

MESSAGE FROM THE CHIEF INVESTMENT OFFICER**ESTIMATING OUR CARBON FOOTPRINT**

The final section of the report contains information on individual investment options, including estimates of their carbon footprints. The section is included in the interests of full transparency, although it's caveated with the clear message that there are (potentially significant) limitations given that the source data is far from complete or uniform. Bear in mind that funds represent an aggregation of the equity and debt being held in companies. UniSuper has holdings in over 3000 companies. We expect that over time, adoption of standard reporting will be compulsory for companies, thus enabling a comprehensive and robust set of reporting standards for funds.

As with our previous reports, this edition of our *Climate risk and our investments report* demonstrates our efforts to continually improve our climate risk assessments and reporting.

In relation to the carbon footprint, whichever way one looks at it, there is obviously a very long way to go in order to achieve net zero. So how can we still be confident that we will get there? The two key reasons are: (i) it is a 2050 target and progress is likely to be in quantum steps—not linear, and (ii) companies representing over 80% of the Fund (by look-through value) have already set a net zero target, and a further 7% have committed to material reductions. Furthermore, over time (but before 2050) we have the option of avoiding or divesting any company that we believe is not on the path to net zero. The bottom line is that we remain confident that we will be able to construct a suitably diversified fund with a net zero profile before 2050.

John Pearce

Chief Investment Officer



Image: Basic Oxygen Steelmaking Facility at Port Kembla Steelworks Australia. A crucial piece of BlueScope's manufacturing infrastructure in Australia which converts liquid iron and scrap into steel. | Source: BlueScope Steel

Pathway to net zero



Paris Agreement

The Paris Agreement brings together all signatory nations to combat climate change and adapt to its effects. Its goal is to limit global warming to well below 2°C compared to pre-industrial levels and to take steps to limit the temperature increase further to 1.5°C. To keep global warming to no more than 1.5°C, global carbon emissions need to be reduced by 45% by 2030 and reach net zero by 2050.

By 2050, we expect that the global economy will be operating in a world which has achieved net-zero carbon emissions. Accordingly, committing to a net-zero portfolio will not place undue constraints on our investment universe.

Governance

Our Board determines the degree of risk that we're prepared to accept having regard to the best interests of our members. This includes our approach to climate risk, which is an explicit risk that we consider across our investments. UniSuper's strategy and the key performance indicators of the Chief Investment Officer and Investment Leadership Team make specific reference to environment, social and governance (ESG), which includes supporting the goals of the Paris Agreement. Below we outline key responsibilities and accountabilities.

ENTITY	RESPONSIBILITIES
The Board	<ul style="list-style-type: none"> Ensures that we discharge our duties as a trustee. Approves the risk appetite statement which includes climate-related risks.
Investment Committee	<ul style="list-style-type: none"> Sub-committee of the Board chaired by an independent director. Reviews climate targets for investment portfolios and climate risk exposures. Monitors key fund holdings and actions to assess whether they are aligned to climate targets.
Investments Team	<ul style="list-style-type: none"> Accountable for implementing all investment strategies approved by the Board and overseen by the Investment Committee. Recommends climate targets and ensures that our investment activities are aligned to our targets. Reviews and considers scenario analysis to inform understanding of long-term risks and opportunities and develops plans to mitigate risks. Produces an annual climate report that details climate risk exposures, actions, and progress against targets.
ESG Team	<ul style="list-style-type: none"> Dedicated professionals within the Investment team focused on ESG considerations. Leads company engagements on ESG, including climate approach and sustainability disclosures. Engages with investment analysts to collaborate on ESG engagement and proxy voting advice and due diligence on new assets. Monitors global best practice and emerging themes, regulatory change and advocacy.

PATHWAY TO NET ZERO

Our approach

UniSuper is committed to achieving net-zero carbon emissions across our Fund by 2050, in line with the Paris Agreement.

As a universal owner and diversified investor with exposure to emissions intensive industries, we don't expect the transition of our portfolio to net-zero emissions to be linear.

We will seek meaningful opportunities to invest in the industries, minerals and other products that are needed in a low carbon economy. This will include retaining exposure to some carbon-intensive industries to ensure an orderly energy transition.

Our disclosure is prepared in line with the Taskforce on Climate-related Financial Disclosures (TCFD) framework.

NET ZERO WHOLE-OF-FUND AND PORTFOLIO LEVEL BY 2050

Contribute to a 43% reduction in Australia's emissions by 2030 through company engagement, advocacy, and by investing capital in companies that are instrumental in achieving a net-zero future.

Actions

<i>Integration</i>	<i>Active ownership and advocacy</i>	<i>Just and orderly transition</i>
Portfolio construction – factoring decarbonisation as a core investment theme in all our portfolios	Access and engagement – working with companies to reduce real-world emissions and accelerate the transition	Supporting a just and orderly transition to a low carbon economy
<p>Manage and monitor our portfolio by measuring our carbon footprint, monitoring our exposure to fossil fuels, and taking advantage of transition-related opportunities.</p> <p>Assess performance of material investments that are expected to be held for the medium to long term against a shadow carbon price.</p>	<p>Use our position to engage with companies to reduce emissions and align business models over time.</p> <p>Engage with like-minded organisations and policymakers to develop policy settings that support and accelerate decarbonisation.</p>	<p>Support carbon intensive businesses and industries that are transitioning towards net zero and facilitate inclusive decarbonisation and growth.</p> <p>Use our position to engage with companies and regulators to address concerns of multiple stakeholders.</p>

Targets and activities

The table below shows our progress to date.

OBJECTIVE	TARGET	STATUS
Thermal coal exclusion	Exclude companies generating over 10% of their reported revenue from the extraction and production of thermal coal. ¹	Achieved. Process in place to identify and screen for excluded companies.
Company engagement	Engage with all 50 largest Australian investments at least annually. Ongoing regular engagement with Australian companies.	Met all 50 largest Australian investments during the financial year. Our ESG team discussed climate and environmental issues in 252 company engagements.
Net zero 2050 portfolio	Net zero 2050 portfolio. 50 largest Australian investments have: <ul style="list-style-type: none"> ▪ Paris-aligned operational targets ▪ interim targets and ▪ action plans to support targets. 	See the 'Traffic light report' on page 22 and 23 for our assessment of progress at 30 June 2023. See page 40 for look-through analysis.
Carbon neutral emissions for property	Wholly-owned direct property portfolio to be carbon neutral by 2025. This target excludes assets that are held for development. All other Australian unlisted property holdings to be carbon neutral by 2025. This target excludes assets that are held for development.	Wholly owned property portfolio carbon-neutral for the 2021-22 financial year with Climate Active accreditation for 2022-23 in progress. Ongoing engagement with unlisted property managers and Australian real estate investment trusts (A-REITs) to work towards target. Policies in place to achieve net zero for new additions as soon as practicable post-acquisition. Where we have properties under development, we intend to develop a decarbonisation plan in due course.
Net zero emissions for direct infrastructure	Majority of our direct unlisted Australian infrastructure holdings to be net zero by 2030, with the remainder by 2050. ²	Approx. 95% of direct unlisted Australian infrastructure assets are aligned to 2030. The one remaining asset is aligned to 2050. Ongoing engagement with unlisted infrastructure managers to work towards target. Policies in place to achieve net zero for new additions as soon as practicable post-acquisition.
Incorporate shadow carbon price	Applied to top 50 Australian and top 50 international listed equities.	Achieved. Updated top 50 Australian listed equities analysis and extended to top 50 international listed equities.
UniSuper corporate operations emissions	Carbon neutrality. This target covers UniSuper's corporate operations only which includes, for example, our office tenancies, electricity and office equipment and supplies.	Achieved. We are carbon neutral for the financial year 2021-22 with accreditation for 2022-23 in progress.

¹ In exceptional cases, we may retain an interest in companies that have more than 10% of their reported revenues associated with thermal coal exploration and production, where they are well progressed in the sale or wind-down of those assets as we consider them to comply with the restriction. As at 30 June 2023, we did not hold any interests in companies that had more than 10% of their reported revenues from the extraction and production of thermal coal.

² Excludes public-private partnerships and infrastructure funds.

Portfolio construction and investment

As a long-term investor, earnings sustainability is critical to our investment approach. The risk to company earnings from climate change is one of many factors we consider when assessing earnings sustainability.

DECARBONISATION IS A CORE INVESTMENT THEME

We see decarbonisation as a core investment theme for at least the next decade. We expect all our investee companies to:

- accept that decarbonisation is essential and inevitable
- proactively mitigate and manage climate change risks in their business and supply chains
- set emissions reduction targets
- disclose net zero emissions targets, emissions footprints, and other factors, in line with the TCFD framework.

INVESTING IN 'GREEN THEMES'

Achieving the goals of the Paris Agreement and decarbonising our planet requires trillions of dollars of investment. We continue to look for opportunities to invest in companies that support decarbonisation while providing attractive returns for our members. Inevitably, there will be risks involved so discipline is required.

There's a natural tendency to associate 'green themes' with direct investments in companies such as solar and wind farms, but we take a more expansive view. Many companies are transitioning their businesses to survive and thrive in a low carbon world and are providing supporting infrastructure to facilitate the transition. We see these companies as critical contributors to decarbonisation. For example, many large utility companies like National Grid and Dominion Energy are transitioning their business mix towards renewables.

The UniSuper investment option with the most direct exposure to 'green themes' is Global Environmental Opportunities (GEO). GEO invests in companies that derive at least 40% of their reported revenue from environmentally beneficial products and services. These include alternative energy, clean technology, sustainable water, green buildings, pollution prevention and sustainable agriculture.






















“We continue to look for opportunities to invest in companies that support decarbonisation while providing attractive returns for our members.”

SUPPORTING INFRASTRUCTURE AND MATERIALS

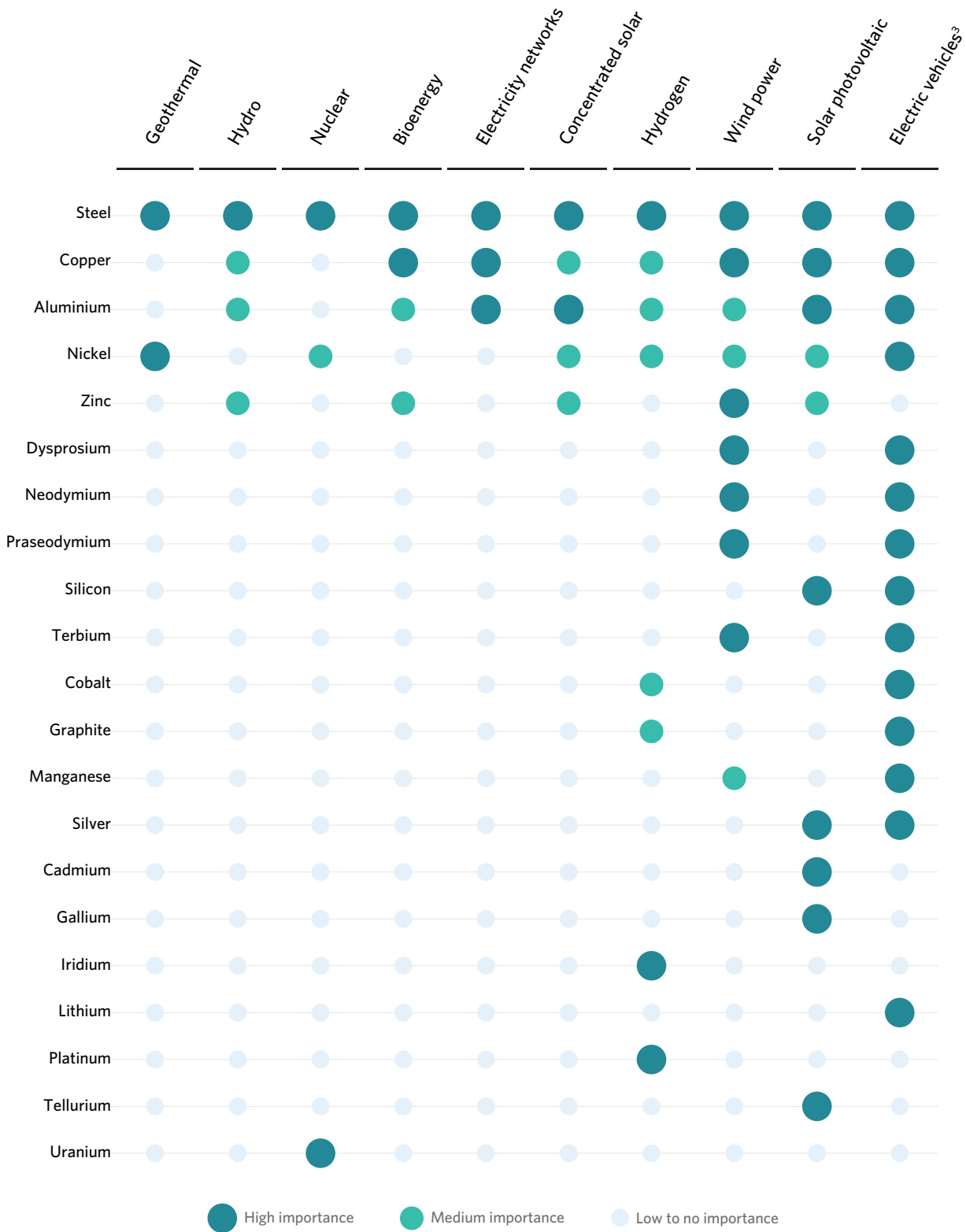
The resources sector provides vast quantities of raw materials for the energy transition, including steel, copper, nickel and other commodities. These will be needed as we move from fossil fuels to renewable power generation, and battery and fuel-cell based electric vehicles, as well as in existing applications like construction, transport, and electronics. Some of our largest investments, such as BHP, Rio Tinto and South32, produce many of these metals and minerals.

These products currently rely on high emissions processes to make them suitable for use. We engage closely with resources companies to encourage them to reduce the carbon intensity of their products and to have robust environmental and social risk management.

We are actively seeking opportunities to invest in the commodities, utilities, energy generation and firming requirements needed to achieve a net zero economy. The table below shows some of our key holdings.

	COMMODITIES	UTILITIES	SOLAR	WIND	BATTERY STORAGE HYDROGEN AND ENERGY EFFICIENCY	ELECTRIC VEHICLES
PORTFOLIO	<i>Global resources</i>	<i>Global listed infrastructure</i>	<i>Global Environmental Opportunities</i>			
KEY HOLDINGS	    	   	  	  	   	  

MATERIALS CRITICAL FOR TRANSITION TO A LOW CARBON ECONOMY BY TECHNOLOGY TYPE



³ Includes energy storage.

Source: Critical raw materials for strategic technologies and sectors in the EU, a foresight study, European commission, March 2020. The role of critical minerals in clean energy transitions, IEA, May 2021, McKinsey analysis.

RESTRICTIONS

As we have noted above, our approach is focused on achieving emissions reduction in the real economy, taking into account broader economic and societal impacts. While divestment appears to be a simple solution, this means that the company's emissions simply transfer to another investor without any lasting impact on real world emissions.

To achieve a net zero economy, it is these high emitting sectors that need to transition to low emissions and require ongoing capital to do this. Our role as responsible investors is to support companies, striking a balance between emissions reductions and an orderly transition and finding opportunities to accelerate where practical.

We will restrict our exposure to certain industries where we consider it prudent risk management, typically where we see no viable pathway to decarbonisation.

CAPPING OUR EXPOSURE TO FOSSIL FUELS

Fossil fuels have a fundamental role in the transition to a low carbon economy. The UniSuper Board has set a look-through fossil fuel exposure limit of 7% with a 5% trigger for monitoring. This cap should not be read as a target and has been set so that risks can be managed in a practical manner, and to allow for share price variations and possible mergers with other funds.

THERMAL COAL

We see thermal coal as the fuel most at risk in the transition to a low carbon economy. We have a six-monthly process for identifying and screening out companies that generate greater than 10% of their reported revenues from thermal coal exploration and production. In exceptional cases, we may retain an interest in companies that have more than 10% of their reported revenue from coal exploration and production if they're in the process of divesting their thermal coal business.⁴

Contributing to a just and orderly transition

Financial markets and market participants all have a role in ensuring a just and orderly transition to a low carbon economy that is inclusive and minimises disruption. A just transition implies that underdeveloped countries and certain segments of society are not unfairly bearing the cost of the transition. An orderly transition requires that we get the sequencing right. Compromising energy security raises the risk of losing mainstream support for the transition.

Our role as an investor and provider of capital requires a balanced and pragmatic approach which includes considering the risks and opportunities for our portfolios. As a fiduciary, our primary duty is to act in the best financial interests of our members. As a large investor with over \$120 billion in funds under management, we are well placed to motivate climate action by using our holdings to drive alignment of business strategies to low carbon business models. This is why engagement with investee companies is our primary vehicle for encouraging real world emissions reductions, alongside engagement with policymakers to ensure appropriate policy settings are in place.

We also have a role in accelerating investment in companies that lean into the transition through investments that support the infrastructure, minerals and other products essential for decarbonisation, and by investing in green themes.

As a long-term investor, we support companies maintaining some level of assistance for fossil fuel assets to ensure that communities and workers have time to transition to a lower carbon setting. One of the best examples is BHP's exit from the Mt Arthur Coal Mine.

⁴ As at 30 June 2023, we did not hold any interests in companies that had more than 10% of their reported revenues from the extraction and production of thermal coal.

BHP's exit from Mt Arthur and a just transition

Mt Arthur Coal Mine is located in the coal dependent Hunter Valley region and is the only thermal coal asset currently owned by BHP. As part of the repositioning of its portfolio to future facing commodities, BHP has announced plans to close Mt Arthur by 2030. We have been engaging with management for a number of years on the future of the mine.

BHP's options for Mt Arthur are to sell the asset, shut down rapidly, or facilitate an orderly wind down over time.

While selling the asset would immediately reduce BHP's emissions, it would simply transfer those emissions to the new owner with no impact on real world emissions. It may also produce undesirable outcomes if the new owner is motivated to maximise asset life and profit.

A rapid shutdown would achieve emissions reductions, but at the same time have negative social and economic impacts on the region and particularly on workers and their families.

The last option of winding down the asset over time allows BHP to plan for the responsible closure of the mine and for the region to work towards economic diversification. This is the option that BHP has chosen to pursue, and it has committed to close Mt Arthur by 2030.

As a responsible investor, we accept that in the short term we will see BHP earning revenue from thermal coal. We are comfortable with this trade-off because we believe BHP's commitment to responsibly close Mt Arthur is in the best interest of all stakeholders.

The resources sector provides the raw materials we need for a low carbon world. Companies like BHP and Rio Tinto are helping the transition towards net zero. The majority of BHP's business is in essential products such as iron ore, steel, nickel, copper and lithium needed for solar and wind farms and electric vehicles. This graph from the International Energy Agency shows how an electric car engine requires three times more copper to operate than a standard combustion engine.

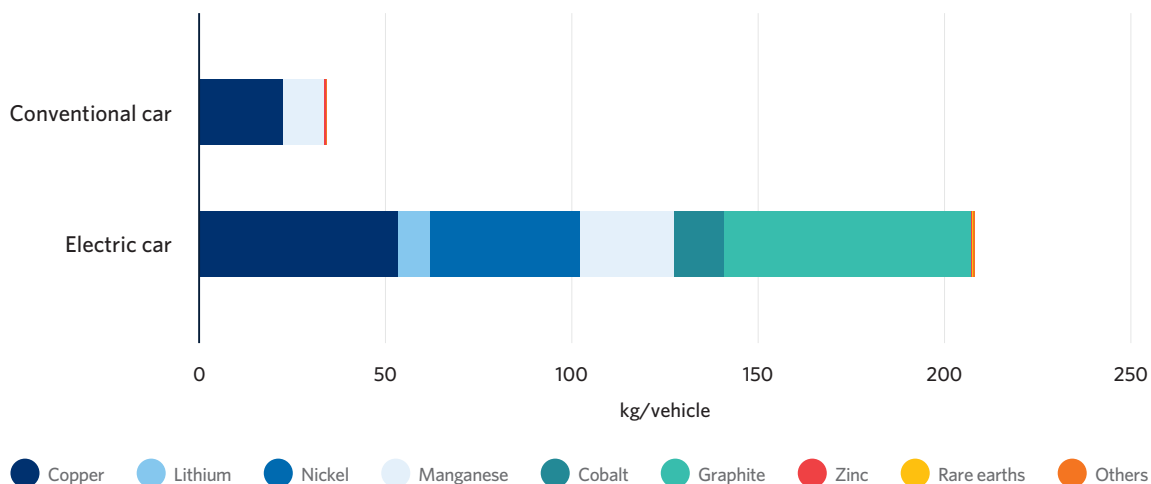


Image: BHP Mt Arthur Coal | Source: BHP

Advocacy

Policy settings are a critical enabler to accelerating the transition. Alongside our company engagement, we participate in policy and advocacy consultations, and we actively contribute to the policy landscape by engaging with policymakers and regulators. Either individually or through industry associations, we have advocated for:

- incentives and settings to accelerate private sector investment in the transition
- development of Australia's Net Zero Authority with a focus on just transitions
- development of mandatory climate-related financial reporting
- development of sectoral decarbonisation pathways
- increasing ambition of Australia's emissions reduction targets for 2030 and beyond
- changes to the Safeguard Mechanism
- development of an Australian sustainable finance taxonomy.

MANDATORY CLIMATE REPORTING IN AUSTRALIA

UniSuper has advocated for mandatory climate related reporting since 2020. We first produced our own TCFD aligned report in 2018. We believe that timely, comprehensive, and comparable climate-related disclosure is core to managing the financial risks associated with climate change.

In 2023, we made a submission to Treasury on mandatory climate reporting in which we:

- supported the Federal Government's plans to introduce standardised, internationally aligned reporting requirements for businesses to report on physical and transition risks from the impact of climate change
- highlighted that mandatory reporting will bring Australia in line with comparable jurisdictions and major trading partners
- emphasised that mandatory, standardised, internationally aligned reporting requirements will assist promoting accurate, transparent, consistent climate reporting; by providing the market with comprehensive and quality information, investors, companies, regulators, and customers can make better and more informed decisions.

See UniSuper's policy consultation submission [here](#).

ADVOCACY THROUGH INDUSTRY ASSOCIATIONS

In many cases, collaborating within a collective body is an effective mechanism for investors to advocate on climate-related issues. Over the past 12 months, two of our industry associations—Australian Council of Superannuation Investors (ACSI) and the Investor Group on Climate Change (IGCC)—engaged policy makers on behalf of Australian and global investors.

Topics covered included:

- Australia's emissions reduction targets and Climate Change Authority
- the Taskforce on Nature-related Financial Disclosures
- the Safeguard Mechanism Reforms
- Sustainability reporting standards developed by the International Sustainability Standards Board and International Financial Reporting Standards (IFRS)
- Mandatory climate reporting in Australia
- Australian carbon credit units framework.

View ACSI's policy submissions [here](#). View IGCC's policy submissions [here](#).

Engagement and voting activities

Ownership gives us the opportunity to directly engage with companies and exercise our voting rights. Divestment, while always an option, eliminates the ability to engage that we otherwise would have. For this reason, engaging with our investee companies and collaborating with like-minded investors is our main way of achieving our net zero emissions goal.

IN-HOUSE INVESTMENT TEAM

Our Investments team manages over 70% of our funds in-house. The team has expertise across all major Australian and global asset classes. We also have internal expertise across investment operations, legal and compliance, and a dedicated ESG team working closely with our portfolio managers.

GENUINE ABILITY TO ENCOURAGE CHANGE

SCALE  IN-HOUSE MANAGEMENT  ACCESS AND ENGAGEMENT

Given our presence in the Australian market, our ability to engage is strongest when dealing with companies in our Australian portfolios. We engage directly and regularly with company management and boards to support a Paris-aligned decarbonisation transition. Our engagement efforts are supported by our voting on company resolutions at shareholder meetings.

We have assessed whether our 50 largest Australian investments have set targets (listed and unlisted, debt and equity). These companies represent 65% of our total Australian investments.

Our expectations of our investee companies include:

- a proactive approach to reducing emissions in line with the Paris Agreement
- an understanding of the climate risks embedded in their assets and businesses
- transparent disclosure explaining their activities and actions to manage climate risks and opportunities.

As climate ambition increases, so do our expectations of companies. We expect companies to go beyond setting a Paris-aligned 2050 commitment. Where industries can achieve net zero earlier, we expect them to do so, and all companies should be setting interim targets with climate management action plans to support their targets.

We use our position to encourage companies to reduce their carbon emissions. We believe this will help us contribute to Australia's 2030 target of a 43% reduction in emissions and our 2050 target of a net zero portfolio.

There are two ways that we engage with companies depending on our ownership exposure:

Direct engagement

As an active owner, we use ownership rights and shareholder voting rights to engage and communicate. Our in-house management have direct conversations with the management and boards of our investee companies.

Collaborative engagement

We also collaborate with other like-minded investor groups and leaders in the climate change space by drawing on data and insights from their research.

Collaborative engagements are useful where holdings are small and to address systemic risk.

Signatory of:



Our progress



AUTONOMOUS

Adelaide

SCANIA

SAV002

R450 XT

Rio Tinto

Traffic light report

Our traffic light report is a proprietary initiative focusing on our 50 largest Australian investments. These are both unlisted assets with Australian based operations and ASX listed companies. The report provides our assessment of companies' operational emissions reduction targets together with the progress we see through our engagement.

PARIS ALIGNED 2050 TARGET

45 of our 50 largest Australian investments received a green light, up from 44 last year.

INTERIM TARGETS

39 of our 50 largest Australian investments received a green light. This is slightly down on last year. Some companies dropped from green to amber lights, in line with our raised expectations. We note that the 50 largest Australian investments will change year on year and in the year to 30 June 2023, six new companies feature on the list.

ACTION PLAN

36 of our 50 largest Australian investments received a green light, up from 33 last year.

METHODOLOGY

Our assessment includes an analysis of companies' lagging indicators, such as emissions performance, and forward looking metrics such as emissions reduction targets. Forward looking targets are an important metric for providers of capital. They enable us to easily assess, compare and communicate companies' climate change goals and give us an indication of the trajectory of our material investments.

Where companies receive 'green lights' in each category, it means they have set a net zero target by 2050 or earlier, an interim target that is ambitious and sector specific, and a strategy that outlines actions to address emissions reduction in alignment with targets.

For the full methodology please refer to the [Appendices](#).

OUR PROGRESS

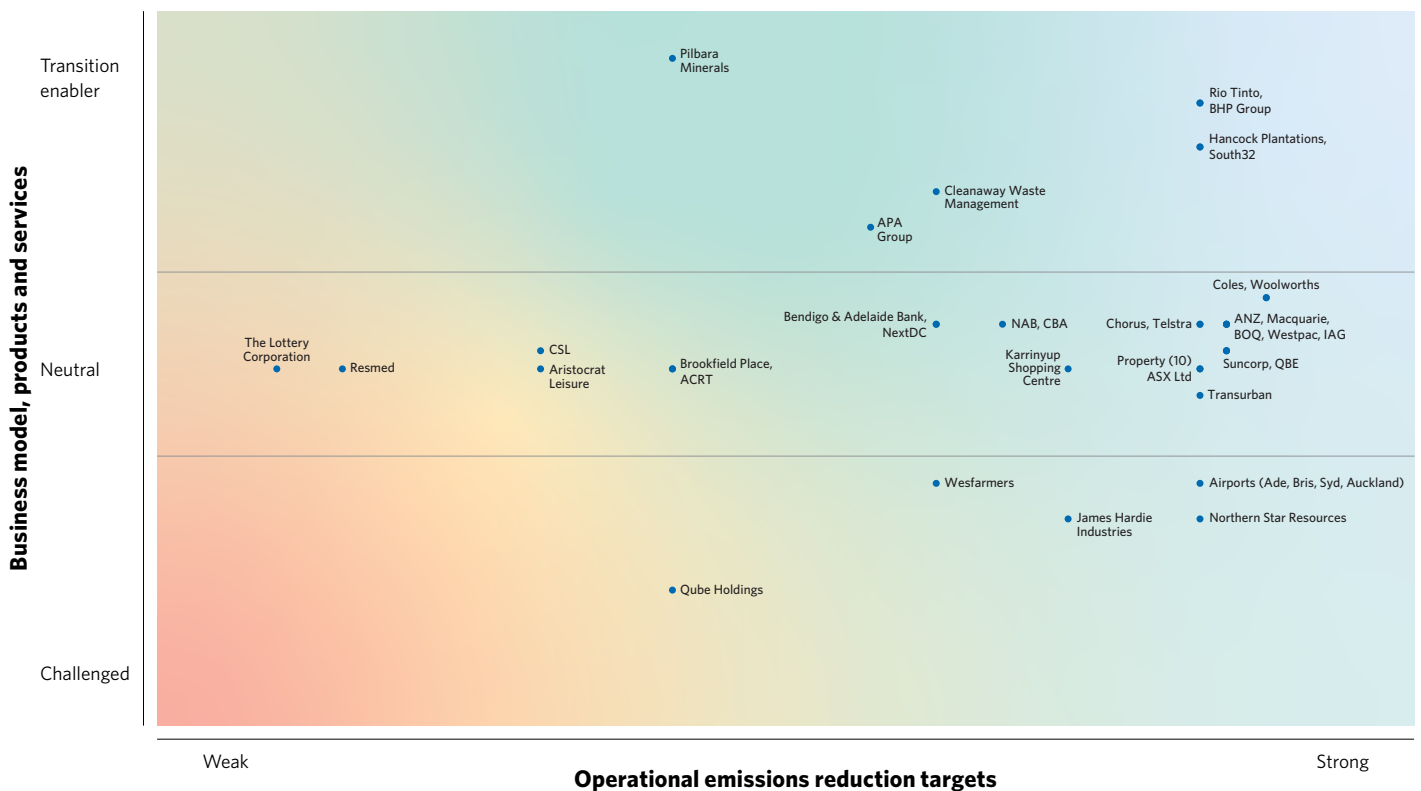
POSITIONING OF OUR 50 LARGEST AUSTRALIAN INVESTMENTS

We take a holistic and expansive view of companies that we consider transition enablers. This includes traditional 'green revenues' such as wind, hydro and solar and other clean energy generation, companies that provide critical resources, and companies that facilitate the transition or provide firming support for energy needs. Examples include companies that produce minerals, products and infrastructure that are critical in a low carbon world, and those that have strategies that help reduce greenhouse gas emissions such as circular economy, sustainable alternatives, and natural capital assets. Many of these companies' operations have associated emissions.

The graph below considers the extent to which each company's business model, products and services can contribute to the transition, alongside an assessment of the company's stated commitments. The analysis is based on our Traffic Light assessment. A company with three green lights is considered to have a strong climate approach.

Most of the entities in our 50 largest Australian investments are neutral and those that are more challenged and have high emissions have mostly made strong commitments to decarbonise. These typically represent industries like transport, chemicals and mining. Companies we consider to be transition enablers may have low or high emissions. These companies typically provide products and services that are critical for a lower carbon economy, such as recycling and waste management, iron ore, copper, nickel, lithium and timber.

UNISUPER'S ASSESSMENT OF COMPANY TARGETS AND CONTRIBUTION TO THE TRANSITION



TRAFFIC LIGHT REPORT

PORTFOLIO COMPANY ⁵	NET ZERO	INTERIM TARGET	ACTION PLAN
<i>Communication services and IT</i>			
Chorus	●	●	●
NextDC	●	●	●
Telstra Group	●	●	●
<i>Consumer</i>			
Aristocrat	●	●	●
Coles Group	●	●	●
The Lottery Corporation	●	●	●
Wesfarmers	●	●	●
Woolworths Group	●	●	●
<i>Financials</i>			
ASX Ltd	●	●	●
ANZ Group	●	●	●
Bank of Queensland	●	●	●
Bendigo and Adelaide Bank	●	●	●
Commonwealth Bank of Australia	●	●	●
National Australia Bank	●	●	●
Macquarie Group	●	●	●
Westpac Banking Corp	●	●	●
Insurance Australia Group	●	●	●
QBE Insurance Group	●	●	●
Suncorp Group	●	●	●
<i>Health care</i>			
CSL	●	●	●
Resmed	●	●	●
<i>Industrials</i>			
Cleanaway Waste Management	●	●	●
Hancock Plantations	●	●	●
Transurban Group	●	●	●
Qube Holdings	●	●	●

OUR PROGRESS

PORTFOLIO COMPANY ⁵	NET ZERO	INTERIM TARGET	ACTION PLAN
Infrastructure			
Adelaide Airport	●	●	●
Auckland International Airport	●	●	●
Brisbane Airport	●	●	●
Sydney Airport	●	●	●
Materials and utilities			
APA	●	●	●
James Hardie Industries	●	●	●
BHP Group	●	●	●
Rio Tinto	●	●	●
South32	●	●	●
Northern Star Resources	●	●	●
Pilbara Minerals	●	●	●
Real estate			
AMP Capital Retail Trust	●	●	●
Brookfield Place	●	●	●
Goodman Group	●	●	●
Goodman Australian Industrial Fund	●	●	●
GPT Group	●	●	●
GPT Wholesale Office Fund	●	●	●
ISPT Core Fund	●	●	●
ISPT 50 Lonsdale St Property Trust	●	●	●
Karrinyup Shopping Centre	●	●	●
Marrickville Metro Shopping Centre	●	●	●
7 Macquarie Trust	●	●	●
Mirvac Wholesale Office Fund	●	●	●
Scentre Group	●	●	●
Vicinity Centres	●	●	●

⁵ Assessments were based on available information as at 10 August 2023.

Science-based assessments

This year, we have provided further analysis on the alignment of a company's medium-term target (2030 targets or similar) relative to a 1.5°C trajectory. We have referred to the methodologies developed by Science Based Targets initiative (SBTi) and Climateworks Centre (Climateworks). UniSuper contributed to Climateworks' research through ACSI in 2022. This resulted in the publication of a research report 'Chasing 1.5°C: The ASX200 - on the right trajectory?', on 4 November 2022.⁶

This information draws on insights from Climateworks' research and provides more context on company disclosed targets and draws on insights from Climateworks' research. Our analysis is limited to 36 listed companies only, and due to limited coverage of both methodologies, we have combined them to get the greatest coverage. Below we provide examples of our analysis. We have provided the company information and links to the methodologies in the [Appendices](#).

In the right hand column, we have outlined our interpretation of company target alignment with SBTi's and Climateworks' methodologies. Due to limitations in the models, we don't always agree with the assessments provided.

These limitations include accounting for regional nuances, evaluating absolute and intensity targets, the plausibility of assumptions and inputs. For example, SBTi has not yet established transition pathways for all industries and Climateworks' pathway is an Australian based scenario, not a global based scenario. In some cases, the SBTi and Climateworks methodologies also produce different conclusions, and at this stage there is no consensus on how to rationalise different outcomes drawn from global and country specific scenarios.

The conclusions from this analysis are one of several inputs in our assessment. The Intergovernmental Panel on Climate Change (IPCC) notes in its special report on climate change at 1.5°C⁷ that there are 90 1.5°C-consistent scenarios. We consider a range of Paris aligned assumptions and scenarios. Relying solely on a single scenario comes with much greater risk than a range-based approach.

Upon reviewing SBTi's and Climateworks' insights and weighing the advantages and drawbacks of their scenarios, we believe that for the majority of the 36 listed equities analysed, the medium-term targets are consistent with achieving the Paris Agreement goals.

An example of this analysis is provided below.

COMPANY	TARGET (SCOPE 1 & 2)	SBTi	'CHASING 1.5°C: THE ASX200 - ON THE RIGHT TRAJECTORY?' CLIMATEWORKS 'ALL IN' 1.5°C SCENARIO	UNISUPER'S INTERIM TARGET TRAFFIC LIGHT	UNISUPER'S INTERPRETATION
ANZ Group	90% reduction by 2030, from 2015 baseline	No	Aligned. Exceeds pathway.	●	Aligned to Climateworks pathway. Does not have SBTi accreditation.
Cleanaway Waste Management	43% reduction in CO2 by 2030 and 34% reduction in CH4 by 2030	No	Not aligned. Moderate divergence from pathway	●	Within an acceptable range of divergence from Climateworks pathway. Does not have SBTi accreditation because there is no sector specific pathway. Both CO2 and CH4 targets have been set relative to IPCC and COP26 guidance and against those are considered "aligned". ~80% of CWY emissions are methane and have been set aligned to the expectations of the COP26 Global Methane Pledge.

⁶ Research data and assessment of company commitments were completed in November 2022 using data as at 31 March 2022. Climateworks has updated some company targets on its Net Zero Momentum Tracker in November 2022.

⁷ IPCC **Special Report Global Warming of 1.5°C**, Chapter 2, Table 2.1 Classification of pathways that this chapter draws upon, along with the number of available pathways in each class

Scope 3 emissions



- Target
- Monitor/report
- No disclosure

Companies generally report Scope 1 and 2 emissions. Scope 3 emissions come from sources outside a company's direct operations (e.g., materials suppliers, third-party logistics providers, waste management suppliers, travel suppliers, lessees and lessors, franchisees, retailers, employees, and customers) which means they are the direct emissions of another entity. For this reason, estimating these emissions is more challenging. For example, two or more companies may account for the same emission within Scope 3.⁸

We encourage companies to disclose Scope 3 emissions. By understanding Scope 3 emissions we're better able to account for a company's full contribution to climate risk.

At a minimum we expect our 50 largest Australian investments to understand their emissions profile and how these emissions contribute to their total emissions. Where Scope 3 emissions are within a company's influence, we expect to see some action being taken to reduce these, or to see companies encouraging innovation across their supply chains.

Activities we look for include:

- reducing lifecycle emissions by building energy efficient design into products
- focusing on the circular economy through use of reusable, recycled and recyclable materials
- supporting research in emerging technologies that support decarbonisation
- trialling alternative fuels and technologies
- offering offset programs (as we are currently seeing with airlines and data centres)
- providing long-term contracts to help suppliers access finance to invest in new plant and equipment.

We monitor this and regularly engage with companies on their disclosures. We have seen an increase in targets and reporting on Scope 3 emissions compared to last year.

⁸ Greenhouse Gas Protocol, **Scope 3 Frequently asked questions**, June 2022

How we engage on climate change

Engagement, voting and advocacy are the core pillars of our approach to managing climate risks and opportunities. We engage directly with companies and policy makers to encourage more ambitious actions and to ensure the architecture and critical enablers for accelerating a low carbon transition are in place.

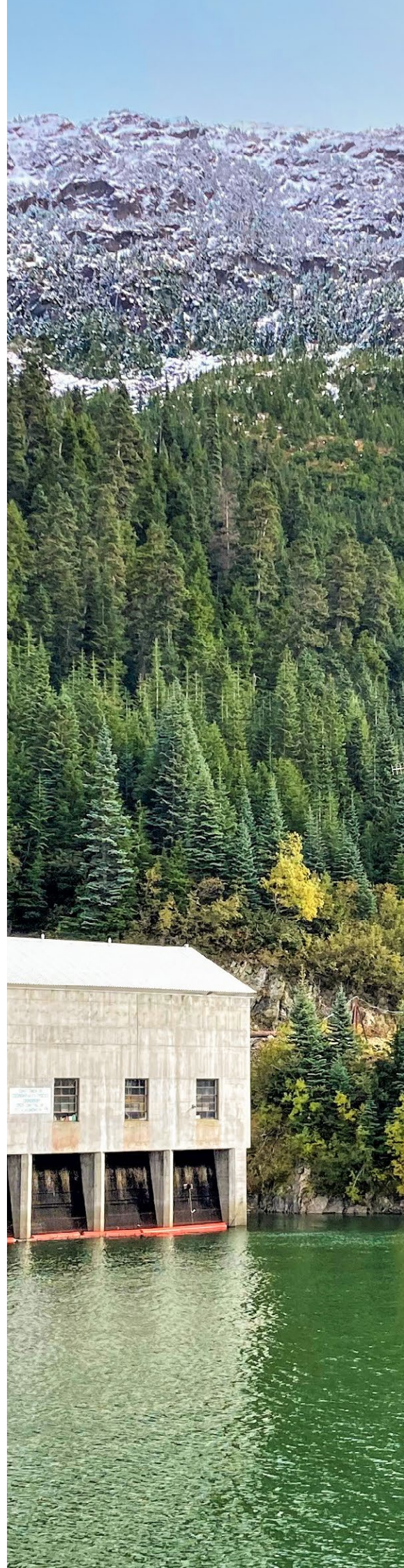
Our approach is dynamic and flexible and recognises that in many cases transformation can't be achieved in short time frames. When updates are made to climate science and industry decarbonisation pathways, we review our objectives, re-establish baselines and adjust expectations. At all times we must take into consideration our members' best financial interests. Because of this, our engagement program is typically company specific, multiyear and does not progress in a linear manner.

Divestment is an option that we consider depending on the circumstances. While divestment can reduce the carbon footprint of our portfolio, it fails to address real world emissions reductions. To successfully transition to a net zero emissions economy, many high emitting sectors will often require significant capital to transform.

The decarbonisation of our portfolios will be based on the decarbonisation of the underlying assets that we own. Ultimately, for this to happen we need our investee companies to do the heavy lifting in parallel with government, industry, and consumers.

As long-term investors, we prioritise our direct engagement with companies where climate change is a material risk and where we believe we can encourage meaningful change.

To be resilient in a low carbon economy, we expect companies to develop low carbon transition plans. Our Traffic Light assessment sets out the criteria that we expect companies to work towards and improve on, and we have provided several case studies below that demonstrate our active ownership approach.



Rio Tinto: Challenges for decarbonising diversified miners

BACKGROUND

Rio Tinto (RIO) is a global mining and metals company producing many of the metals required to support the transition to a low carbon world. It is the largest contributor to UniSuper’s carbon intensity. Because of its commodity mix (especially aluminium), RIO has significantly higher emissions than BHP, many of its emissions are difficult to decarbonise and are in regions with challenging decarbonisation pathways. RIO has set a 2030 target of 50% emission reductions and an ambitious 2025 target of 15% emission reductions.

HOW RIO’S COMMODITY MIX CONTRIBUTES TO THE TRANSITION

MINERALS AND METALS	HOW THEY CONTRIBUTE TO CLEAN ENERGY TECHNOLOGY AND ENABLE DECARBONISATION			OTHER USES	
Iron ore/ steel	<ul style="list-style-type: none"> Solar Wind Power grids 	<ul style="list-style-type: none"> Hydrogen Electrolysers 	<ul style="list-style-type: none"> Nuclear Hydropower 	<ul style="list-style-type: none"> Construction Transport 	<ul style="list-style-type: none"> Consumer goods
Aluminium	<ul style="list-style-type: none"> Solar Wind 	<ul style="list-style-type: none"> Power grids 		<ul style="list-style-type: none"> Construction Transport 	<ul style="list-style-type: none"> Industry Beverages
Copper	<ul style="list-style-type: none"> Solar Wind Power grids 	<ul style="list-style-type: none"> Construction Industry 	<ul style="list-style-type: none"> Electronics Wiring 	<ul style="list-style-type: none"> Construction Industry 	<ul style="list-style-type: none"> Electronics Wiring

OUR OBJECTIVES AND ENGAGEMENT ACTIVITY

RIO’s progress towards its emissions reduction target has become challenging due to a range of factors, including late delivery of equipment, resourcing constraints impacting study progress, construction and commissioning delays, and project readiness. A key objective for UniSuper was understanding how RIO would address its 2025 target if there was a shortfall in emissions reductions. This includes how management intend to use offsets, the quality of those offsets, and how they are working to overcome the challenges they face to achieve RIO’s 2030 target. In addition, many of RIO’s Australian based assets are covered by changes to Australia’s Safeguard Mechanism which increases the requirement to reduce Scope 1 emissions. We wanted to understand what projects are in place to tackle emissions from fuel combustion and industrial processing.

PROGRESS

Over the last 12 months we have conducted eight engagement meetings with RIO’s board, management and climate change team to discuss its emission reduction targets. The company has set up six abatement programs focused on repowering Pacific Aluminium Operations, renewables, ELYSIS (technology to reduce emissions in aluminium smelting), alumina process heat, minerals processing and diesel transition. RIO is using these initiatives as part of its 2030 target but has acknowledged it may miss its 2025 target. In response to the challenges faced to date and the long lead times for some projects, RIO has established an additional program focused on nature-based solutions to address carbon emissions and biodiversity challenges.

To complement these projects and drive investor confidence, RIO has provided progress to date on all six work streams. It has recently announced a plan to begin producing low-carbon alumina in 2025, a significant step forward to reducing emissions from alumina refining processes.

Image: Rio Tinto Hydropower at Kemano, Kitimat, Canada which provides long-term reliability of the power supply for Rio Tinto’s aluminium smelter in Kitimat British Columbia and neighbouring communities | Source: Rio Tinto



Image: Online Sunfield solar farm at NS BlueScope Malaysia | Source: BlueScope Steel

BlueScope Steel: Decarbonising steel

BACKGROUND

UniSuper has been the lead investor for BlueScope Steel in Climate Action 100+ since the initiative's inception in 2017. Steel is used in the construction of renewable energy assets such as wind and solar farms, power grids, hydrogen electrolyzers, building construction, transport, and consumer goods. Given the role of steel in engineering and construction, it will play a critical role in underpinning sustainable development and the transition to both a low carbon and circular economy. At the same time, the steel industry is among the biggest emitters, contributing 8% of global carbon dioxide emissions.

CHALLENGES TO DECARBONISING STEEL

Decarbonising the steel manufacturing process is challenging due to high energy use, intense heat and reliance on coal as a reductant to extract iron from iron ore. Currently, there are limited viable alternatives to carbon-intensive production technologies in steelmaking. Enabling the transition will require affordable and firm renewables, hydrogen availability and scaling of emerging technologies.

Transitioning to 'green steel' in Australia requires firm renewables in the energy market, supply of high-grade iron ore and scrap steel, viable and commercial scale hydrogen based direct iron reduction and policy support. Progress is being made across all these areas, but none are sufficiently advanced for large scale production. Many solutions, especially evolution of new technology, are expected to emerge between 2030 and 2050.



“Our engagement priorities focus on areas we view as critical for driving change.”

OUR OBJECTIVES AND ENGAGEMENT ACTIVITY

Our engagement activity with BlueScope is built around collaboration. We recognise that many of the step-change decarbonisation solutions for its business are long-dated. Our engagement priorities focus on four areas we view as critical for driving change:

- progressing near term emissions reduction opportunities and technology
- undertaking and investing in research and development for low-emissions iron and steelmaking technology
- further integrating regions, supply chains and energy network solutions
- advocating for financial and regulatory settings that promote transition and support manufacturing.

PROGRESS

BlueScope has developed a climate action plan with net zero goals and interim intensity targets. Its pragmatic strategy balances near-term asset optimisation, such as the blast furnace reline at Port Kembla, investing in lower carbon assets like North Star's high-performance electric arc furnace in the US using scrap steel, and investing in emerging technology, research and development. BlueScope is committing \$300 to \$400 million of capital over the next ten years for these initiatives.

This year, BlueScope announced an accelerated feasibility study for a new electric arc furnace in Glenbrook, New Zealand, as part of a move towards lower-carbon production, which is set to reduce the site's Scope 1 and 2 emissions by approximately 800,000t CO₂-e (equivalent to a reduction of over 45%). The project is targeted to be operational by 2026 and is made possible through co-funding from the New Zealand Government, with over 80% of New Zealand's energy coming from renewables and more than 500,000 tonnes of scrap steel available in the country.

Cleanaway Waste Management: Reducing methane emissions

BACKGROUND

Waste management and 'circular economy' initiatives like ensuring products are reused, repaired, recycled and repurposed, are an important component of the transition to a more sustainable and net-zero economy. Waste resources that cannot be recovered and re-used are typically sent to engineered landfill, where natural breakdown generates methane and carbon dioxide emissions. Emissions from landfill are considered hard-to-abate with no defined sector specific pathway to achieve net zero emissions. Methane makes up around 80% of Cleanaway's Scope 1 emissions. Although methane makes up just 1% of global emissions, it's much more potent than carbon, despite having a shorter life span. Cutting methane emissions is therefore an important step to slow the rate of global warming.

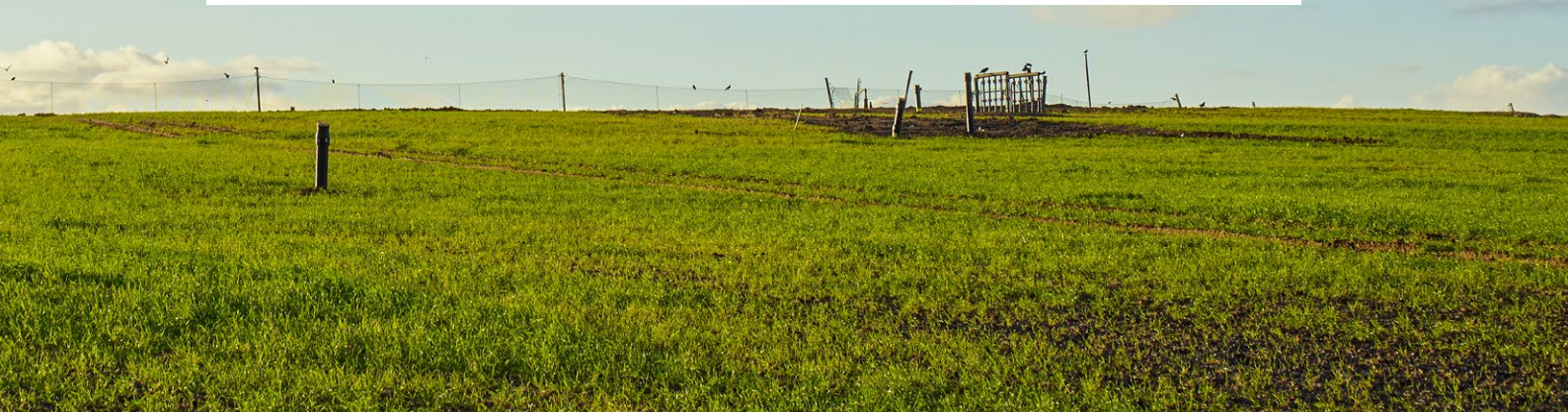
OUR OBJECTIVES AND ENGAGEMENT ACTIVITY

As Australia's leading waste management company, Cleanaway has a significant role to play in decarbonising this industry. We expect Cleanaway to set targets to reduce both carbon and methane emissions and to integrate these into a climate change transition plan with projects that address Scope 1 and 2 emissions. Because methane is emitted from its landfills, we want to see how it is progressing to improve the capture efficiency of landfill gas, where it is initially targeting to greater than 75% and setting up systems for better organic waste recovery. In addition, given its central role in handling large waste streams, we want to see initiatives around recycling and reuse of waste products.

PROGRESS

Over the last 12 months, we have engaged with Cleanaway nine times. We are pleased to see it has established what we assess to be 'SBTi equivalent targets' in the absence of an SBTi defined sector pathway. This includes interim and net zero targets for carbon emissions and interim and long-term targets for methane emissions. To address methane, Cleanaway is developing a plan for improving landfill gas capture. For example by increasing its network of gas collection infrastructure and optimising existing gas well performance. This has led to a 15% improvement in gas capture efficiency in FY23. To address carbon dioxide from its fleet, it is investing in route optimisation, driver training, and trialling alternative fuel collection vehicles such as battery and biodiesel. To help fund emission reduction activities, Cleanaway realises revenue from the sale of Australian Carbon Credit Units issued by Australian Government for abatement activity, and large-scale generation certificates from the electricity generated from gas captured at its landfills. It has also measured and reported the amount of paper, cardboard, plastics, and metals recovered, oil recycled, landfill gas captured to generate renewable electricity, as well as investigating the feasibility of energy-from-waste plants.

Image: Gas from landfill remediation and gas wells at Melbourne Regional Landfill | Source: Cleanaway Waste Management



Voting at company AGMs

We engage with companies on a wide range of ESG issues, including the management of physical and transition risks associated with climate change. In addition to our engagement with senior management and company boards, exercising our right as a shareholder to vote at company Annual General Meetings (AGMs) is a key element of our active ownership strategy and an accountability mechanism between a company and its shareholders. Voting on AGM resolutions such as Say on Climate, director elections, executive remuneration and climate related shareholder proposals is an important tool we can use to express our views on a company's progress and hold management and boards accountable.

Increasingly, shareholder action has been used to escalate climate concerns in companies for which climate risk is significant. During the 2023 financial year there were 103 environmental related shareholder proposals at company AGMs across our Australian and international holdings, up from 57 in 2022.

We consider all resolutions on a case-by-case basis after engaging with companies and evaluating their current approach. We may support shareholder resolutions asking for TCFD reporting or targets where companies are not reporting or acting to decarbonise their business.

Below we provide examples of our voting decisions at recent AGMs. Our [Responsible Investment Report](#) provides information on how we've used our proxy voting rights to vote on shareholder resolutions and how we put our responsible investment policy into action.

“Exercising our right as a shareholder to vote at company AGMs is a key element of our active ownership strategy.”

Why we voted in favour of APA Group's Climate Transition Plan

BACKGROUND

APA is a major energy infrastructure business responsible for transporting approximately half of Australia's gas as well as operating renewable energy assets. We have prioritised engagement with the Board and management team on climate change and held over 15 engagement meetings since 2019. APA's gas pipeline network plays a critical role in supplying gas to ensure energy stability. Innovation and adaptability are key features of APA's climate approach, as evidenced by its growing renewable assets portfolio and ability to connect these assets to the grid to ensure future resilience.

WHY WE VOTED IN FAVOUR OF APA'S CLIMATE TRANSITION PLAN

APA's climate transition plan articulated a low carbon and decarbonisation strategy for its energy generation and gas infrastructure assets to achieve the goals of the Paris Agreement. Informed by scenario analysis, the transition plan reflects the nature of its various assets and their role in the decarbonisation of Australia's economy. This includes the role of gas as a firm generation, opportunities in renewable generation, emerging technologies, and low carbon solutions.

APA's transition plan outlined net zero and interim targets for gas infrastructure, power generation and electricity transmission. It also identified projects for compressor electrification, fugitive methane emission reduction and operational efficiency. APA has also demonstrated how its power generation portfolio already has a low emissions intensity compared to both the average National Electricity Market intensity and what is required by SBTi.

The company has quantified the expected expenditure at \$150m to \$170m for FY23 to FY30 including estimated operating and capital expenses as well as an allocation for offsets.

HOW WE USED COMPANY ENGAGEMENT TO ADDRESS GAPS IN APA'S APPROACH

While we voted in favour of the climate transition plan, we identified some gaps in APA's decarbonisation approach. Through our engagement with APA ahead of the AGM, we got comfort that APA was well progressed in addressing many of our concerns. Since the AGM we have continued to engage with APA in the following areas and are pleased with the progress to date.

AREAS HIGHLIGHTED FOR IMPROVEMENT	APA'S PROGRESS SINCE
Embedding accountability for climate-related activity	<ul style="list-style-type: none"> Working to enhance the integration of climate metrics in the remuneration structure
Reviewing power intensity target to ensure alignment with the goals of the Paris Agreement	<ul style="list-style-type: none"> Improving disclosure on the alignment of the target
Methane management plan	<ul style="list-style-type: none"> Improved measurement of methane emissions and setting a reduction target Expecting increased disclosure of progress towards gold standard reporting
Scope 3 emissions	<ul style="list-style-type: none"> Current climate transition plan measures Scope 3 emissions Expecting more detailed targets for the 2025 plan
Reducing reliance on offsets in the gas infrastructure decarbonisation plan	<ul style="list-style-type: none"> Expecting more disclosure on abatement projects

Woodside Energy: Board accountability for climate change

BACKGROUND

In 2022, Woodside Energy's (WDS) Board tabled an advisory climate resolution. 48.97% of shareholders did not support the resolution, and UniSuper voted against the resolution.

OUR CONCERNS

WDS was heavily reliant on carbon offsets to achieve its interim target, the strategy to decarbonise between 2030 and 2050 was unclear, and there was insufficient disclosure around the market risk which is of concern given the lower level of contracted sales and the company's significant expansion plan. Ultimately, many oil and gas companies will need to transition to producing lower carbon energy. Our view is that WDS transformation plans are high risk and less formed.

OUR ENGAGEMENT

As our holding in WDS is relatively small, we engaged collaboratively with other like-minded investors led by ACSI and CA100. Through these engagements we communicated our expectations to WDS to improve its approach and disclosure in the following areas:

- developing an emissions reduction pathway between 2030 and 2050
- providing information to help investors assess the risk of demand destruction
- disclosure of new energy and lower carbon services projects pipeline
- use, quality, and reporting of offsets
- providing information on how climate considerations are integrated into capital allocation.

PROXY VOTING OUTCOME

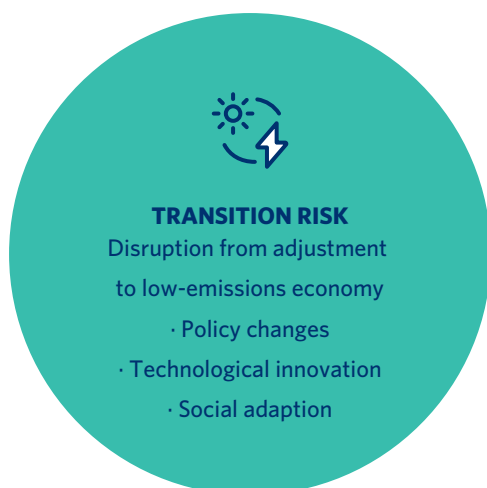
In the lead up to the 2023 AGM, we were disappointed in the lack of progress in addressing shareholder concerns. Through our engagement, we determined that WDS was still not meeting our expectations. This was further compounded by the Board's decision to not table a further Say on Climate vote at the 2023 AGM despite our request for a resolution. We voted against the re-election of several incumbent sustainability committee directors to reflect whole of Board accountability for failing to address our concerns in a proactive manner. The against vote for these directors ranged between 13% and 35%, compared with the average against vote for director elections in the ASX300 of around 5%.

Understanding our risks



We have in place a comprehensive risk management framework across our fund, and climate risk is identified as a specific risk on our risk register. Across our investments, we identify, monitor, and take appropriate action to manage climate risks as shown below.

Types of climate risks



SHORT-TERM RISKS

An abrupt and disorderly transition to 1.5°C has the potential to expose financial portfolios to significant transition risk. This can include negative market repricing, confidence shocks to the financial system, and economic and social impacts from an unjust transition to net zero as a once-off structural adjustment is enforced.

LONG-TERM RISKS

Long-term risks are those where high warming outcomes occur and acute and chronic physical risks negatively impact the economy, society and the environment. Physical risks can increase transition risk until sufficient decarbonisation has occurred to mitigate climate change.

Higher emission scenarios result in a higher projected future global temperature. We look at high emissions scenarios for physical risks.

Low emissions scenarios result in a lower projected future global temperature but require a much faster change to economy and industry. We look at rapid decarbonisation (tracking towards net zero 2050) for transition risks.

Scenario analysis

To understand climate risks, we consider a variety of possible global scenarios. We use these to test our assumptions about our investments and the associated risks and opportunities. We monitor changes and developments in policy and technology to inform our investment decisions.

We refer to a range of climate and economic models to assess how different assumptions influence how the world may look on the path to net zero 2050. These outcomes can vary, depending on which enablers are given more or less consideration. For example:

- different technological changes
- speed of transition
- technology development required
- commercialisation and costs of the required technology
- implementation of policy frameworks to encourage development
- associated social and behavioural changes.

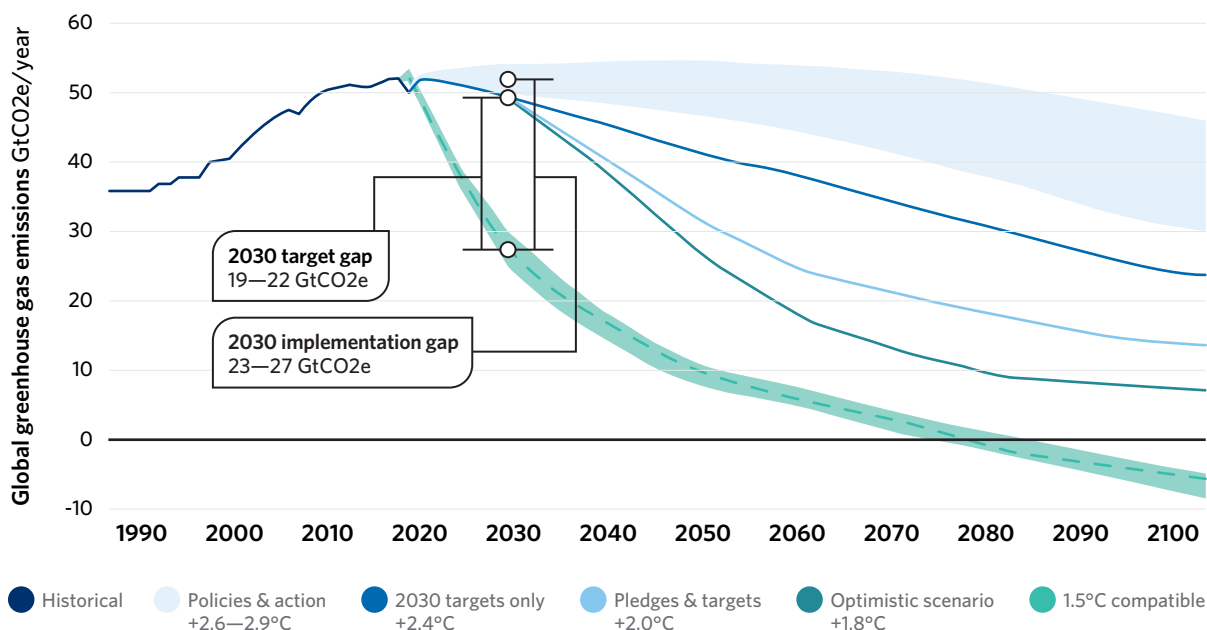
When assessing transition risk, we look at rapid decarbonisation scenarios. While lower projected temperatures are desirable and our ultimate aim, a rapid transition creates greater disruption to the economy—including stranded asset risk for some of our investments.

When assessing physical risk, we look at high emission scenarios as these are most likely to exacerbate extreme weather events which can cause physical damage to cities and infrastructure.

Inevitably, the actual outcome over the longer term will range between the different scenarios. We continue to monitor climate research and practice, and to evolve our approach to scenario analysis.

2100 WARMING PROJECTIONS

Emissions and expected warming based on pledges and current policies



Source: Climate Action Tracker, November 2022

Transition risk

Low carbon scenarios for heavy industry

This year, the Australian Industry Energy Transition Initiative (Australian Industry ETI) collaborated with Climateworks, Climate-KIC Australia, and CSIRO to produce a report that outlines how Australia's major heavy industry supply chains can achieve a 92% emissions reduction by 2050, transitioning to net zero emissions under a 1.5°C decarbonisation path from 2020 levels.

The Australian Industry ETI's pathway offers sector-level decarbonisation insights and considers each sector's supply chain dynamics.

The report helps us understand how and what drives changes in the economy should the 1.5°C pathway eventuate, by providing market signals and signposts to monitor such as consumer preferences, regulatory changes and technology advancements.

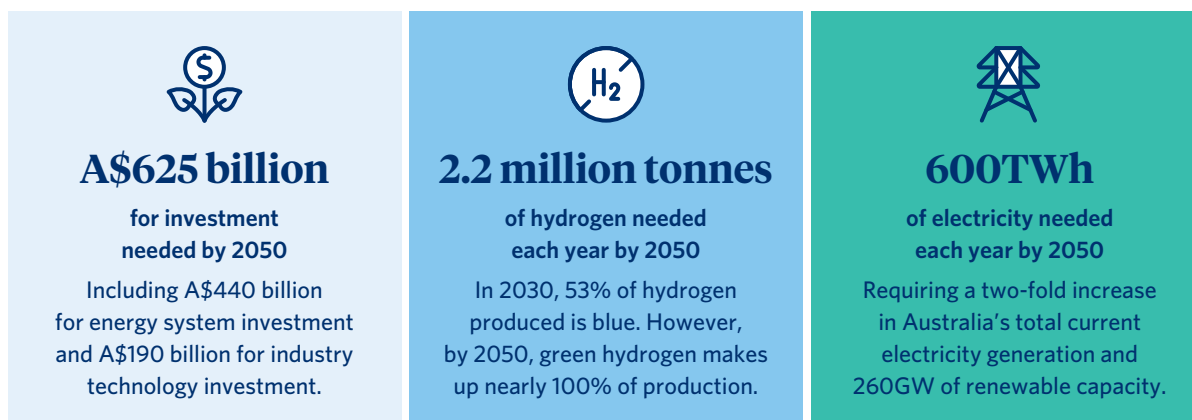
The Australian Industry ETI pathway helps investors better understand the risks that emerge should heavy industry fail to rapidly decarbonise or invest in transitioning carbon-intensive assets. These risks encompass the likelihood of assets being stranded, regulatory uncertainties, potential disruptions from emergent technologies, shifts in consumer preferences, and the financial burden of transitioning, such as absorbing costs related to carbon pricing.

The research brings into focus the technology gaps and investment challenges that could complicate decarbonisation for hard-to-abate sectors if they are not achieved. It also helps investors better understand how heavy industry can capitalise on the opportunities available if they engage in collaborative efforts and initiatives aimed at achieving net zero emissions across critical supply chains by 2050. The research delineates strategic levers and accelerators that companies can prioritise to position themselves to leverage burgeoning markets and emerging technologies such as green steel and aluminium, increasing onshore processing and manufacturing of metals and metal products and new export markets.



Image: Autonomous electric trucks, Pilbara, Western Australia | Source: Rio Tinto

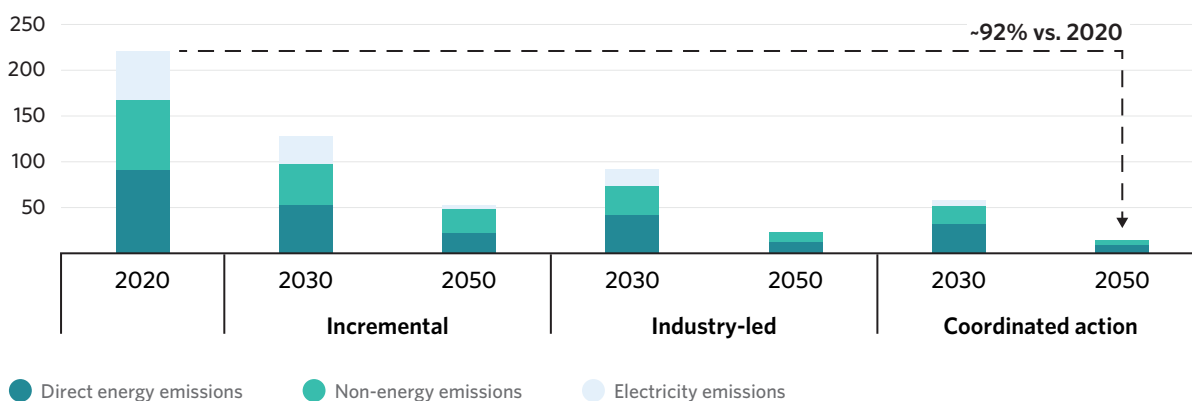
Requirements for the 1.5°C decarbonisation pathway



Source: Australian Industry ETI, 20 February 2023 , Presentation - Pathways to industrial decarbonisation, page 12

Our approach includes a range of scenarios and forms an input into our assessment of climate risk, alongside engaging with sector specialists and portfolio managers. We monitor the risks associated with climate change and transition, but also opportunities to invest and support the transition, and we continually monitor and adjust our portfolio construction as new information becomes available.

ANNUAL EMISSIONS FROM INDUSTRY IN THE AUSTRALIAN INDUSTRY ETI SCENARIOS



Source: Australian Industry ETI, 20 February 2023 , Presentation - Pathways to industrial decarbonisation, page 11

Net zero commitments in our portfolio

The decarbonisation of our portfolios will be based on the decarbonisation of the assets and companies we own.

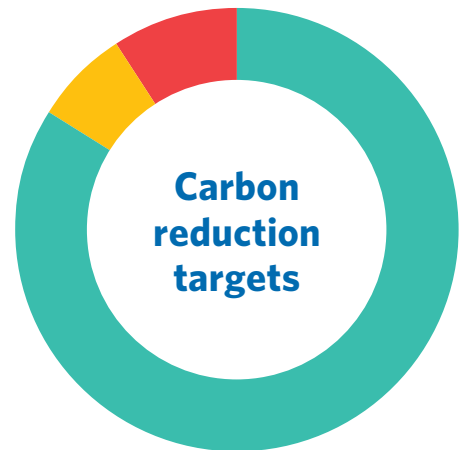
We monitor the decarbonisation strategies of assets in our investment portfolio to better understand our exposure to transition risk. Companies with decarbonisation targets supported by clear action plans give us confidence that they are managing their risks and are ready to take advantage of the opportunities that transition presents.

It is positive to see a dramatic increase in corporate net zero commitments—the annual revenue covered by net zero targets has increased from \$3.8 trillion in December 2020 to \$26.4 trillion as at 12 June 2023.⁹ The credibility and progress towards these targets remain key priorities for us and critical areas of our engagement.

For assessing our whole portfolio, this year we raised the benchmark in our assessment of net zero and science-based targets. Even still, it is encouraging to see that the proportion of companies in our portfolio with emissions reduction targets commitments remains high at 91%.

Across our fund (by look-through value¹⁰):

- 84% of investments are covered by either net zero targets, SBTi approved targets, or targets to reduce emissions by greater than 90%
- a further 7% of investments have some targets to reduce a material component of their emissions
- 9% have no target or no information available.



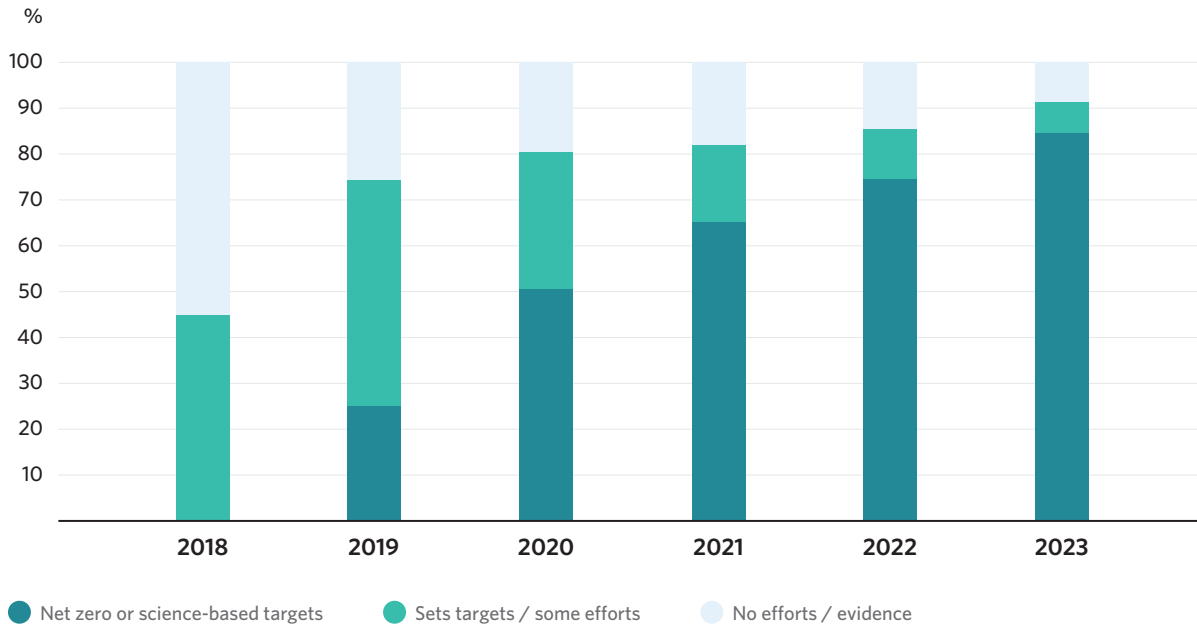
OPERATION TRANSITION EFFORTS

● Net-zero or science-based targets	84%
● Sets targets / some efforts	7%
● No efforts / evidence	9%

⁹ Net zero targets among world's largest companies | [Net zero tracker](#)

¹⁰ Look-through value refers to the proportion of the fund (by dollar value) of investments in companies with targets (not the number of companies). Liquidity items (eg. cash holdings, operational cash and currency hedging items) are excluded. Financial instruments such as futures, trusts, funds and municipal debt are not considered

CLIMATE TARGET PROGRESS ACROSS THE FUND



Shadow carbon pricing

Applying a 'shadow carbon' price is another way we assess climate change risks to our investments. An internal or shadow carbon price is a hypothetical cost that is applied to each tonne of carbon emitted and can demonstrate the carbon liability that can arise if a carbon tax was implemented. We use a shadow carbon price in two ways; to stress-test investee companies' residual emissions after abatement to understand future carbon risks, and as part of investment decisions. This enables us to factor in potential future risks by pricing carbon into our decisions.

In 2022 we assessed the impact of a shadow carbon price on ASX top 50 companies. This year, we expanded that analysis to our 50 largest Australian and 50 largest international listed equity holdings. For this research, we used a base case of US \$100/tCO₂e and stress tested up to US \$250/tCO₂e. The purpose of this exercise was to classify companies based on their sensitivity to carbon pricing, categorising them into high, medium or low impact groups. The results show only a handful of companies in each group are considered higher risk from carbon pricing and that the market has factored these in.

Stranded asset risk

Decarbonisation will lead to a change in the energy mix, which will challenge some businesses and put them at risk of being stranded assets. The greatest impact will be in sectors exposed to fossil fuels.

As part of our portfolio risk management, we monitor these exposures.

Fossil fuel look-through exposure

We analyse our portfolio contribution to climate change, focusing on companies producing fossil fuels as well as companies that report revenue from fossil fuels—for example, utilities, pipelines, transportation, and refining.

We report this way because it gives a more thorough representation of our exposure to fossil fuels and our overall contribution to climate change risks. It also enables a better understanding of our exposure to transition risk.

We calculate the fossil fuel look-through exposure of our portfolio by:

- identifying the holdings which report revenue from fossil fuel extraction, production, generation, transportation, and refining¹¹
- determining the percentage of revenue of each company from fossil fuels¹²
- applying that percentage to each holding to determine its look-through exposure
- summing each holding to determine the dollar value of fossil fuel look-through exposure across the Fund
- expressing that exposure as a percentage of the total Fund.¹³

The following tables set out our fossil fuel look-through exposure by fuel type, activity, and largest holdings.

TOTAL FUND EXPOSURE BY FUEL	EXPOSURE (%)
<i>Fossil fuel revenues</i>	<i>2.34</i>
<i>Thermal coal revenues</i>	<i>0.21</i>
<i>Oil and gas revenues</i>	<i>1.78</i>
Oil and gas pipelines	0.90
Oil and gas extraction	0.20
Refining/transformation	0.68
<i>Fossil fuel electricity generation</i>	<i>0.35</i>

¹¹ Where we hold equity, corporate debt, cash or other instruments with a company, it has been rolled up to a parent company level.

¹² UniSuper relies on fossil fuel revenue data via MSCI as of 12 July 2023. See **page 72 and 73** for more information on limitations.

¹³ Market value data is sourced from our reported holdings data as at 30 June 2023. Look through analysis is reported as a percentage of whole of fund value (including liquidity items).

FOSSIL FUEL EXPOSURE

COMPANY	EXPOSURE (%)	INDUSTRY
APA Group	0.79	Gas pipelines
BHP Group Limited	0.17	Diversified mining
National Grid Plc	0.15	Electric utility
IFM International Infrastructure Wholesale Fund	0.12	Electricity generation
Energy Infrastructure Trust	0.10	Electricity generation
Santos Limited	0.09	Oil and gas extraction and production
Dominion Energy Inc.	0.08	Electric utility
Cheniere Energy Inc.	0.06	Oil and gas extraction and production
Pembina Pipeline Corporation	0.04	Gas pipelines
Ampol Limited	0.04	Refining/sales
Remainder	0.69	-

At 30 June 2023, 2.34%* of our investments (based on a look-through analysis) were in fossil fuels, compared to 2.80% at 30 June 2022. In 2022, our fossil fuel exposure was impacted by strong energy markets which drove up share prices. This year, energy markets saw some moderation, with the net effect on our portfolio contributing to the decrease in fossil fuel exposure.

The nature of our look-through fossil fuel exposures is broadly consistent with last year, with gas pipelines representing our largest exposure. Our exposure to oil and gas extraction is lower than last year. However, our thermal coal exposure is slightly higher, driven by BHP due to its increased valuation and trading activity.

The inclusion of the Australian Catholic Super (ACS) portfolio during the year brought in two assets to the top ten fossil fuel contributing companies—IFM International Infrastructure Wholesale Fund and Energy Infrastructure Trust. The key assets in these portfolios with fossil fuel exposure are in electricity generation (not thermal coal).

As part of our due diligence of the entire ACS portfolio, we conducted an ESG assessment of these assets and were satisfied that their approach is robust with ambitious decarbonisation plans. The fossil fuel exposure of the ACS assets was broadly consistent with our existing portfolio and did not materially alter our overall exposure.

Some companies with high emissions and/or reliance on fossil fuels for their core business do not derive revenue from fossil fuels. Companies like Rio Tinto and BlueScope operate in high-emission sectors without relying on fossil fuel revenue. They play a pivotal role in the economy's transition by supplying crucial materials and minerals.

We will maintain flexibility in our portfolios to continue supporting the most promising strategies and technologies in line with our best financial interest duty and climate commitments.

* We engaged an external assurance organisation, EY, to provide UniSuper with limited assurance in relation fossil fuel look through revenue. See **page 87 and 88** for further information.

Gas's role in the transition

FIRMING GENERATION, INDUSTRIAL USE, TRANSITION FUEL AND NEW ENERGY EXPORTS

One of the most significant challenges we face this decade, is ensuring we maintain a secure, reliable and affordable electricity supply. This requires broad scale investment in grid-scale wind and solar, dispatchable storage and hydro, as well as firming capacity provided by gas-fired generation.

The Australian Energy Market Operator (AEMO) published the Integrated Systems Plan which outlines a 30-year roadmap of investments for the National Electricity Market (NEM) and identifies the 'Step Change' as the most likely scenario to eventuate.

Under this scenario, Australia's National Electricity Market will likely experience a rapid and complex transition to lower carbon energy generation. Electrification of transport, heating, cooking and industrial process will drive annual electricity consumption to double by 2050, while approximately 60% of current coal generation is likely to exit by 2030.

There is significant debate around the role of gas in the transition, but for the NEM to reach 80%+ renewables¹⁴ alongside a large-scale exit from thermal coal generation, gas will need to play a role over the medium term. The greater the share of renewables, the more intermittency and the more challenging it becomes to deliver a reliable grid. Renewables alone cannot do the heavy lifting, and gas needs to be part of the energy generation mix. By 2050, gas-peaking generation will have increased to 10GW, up from 7GW today and play a firming role in the NEM.¹⁵

Australia faces a significant challenge to transition with 60% or more generation still coming from thermal coal. A noticeable element of jurisdictions with high renewables—UK, Netherlands, South Australia—is a higher percentage of gas within the mix.¹⁶ The only exception to high renewables exposure is France which, due to its high nuclear exposure, has very low exposure to fossil fuels. At the same time, affordable electricity remains a fundamental challenge.

¹⁴ AEMO Integrated System Plan 2022; Step Change Scenario | NEM 2021 data: AER State of the Energy Market 2022; 2021 data

¹⁵ AEMO Integrated System Plan 2022; Step Change Scenario

¹⁶ Eastern & SA data: (1) AER State of the Energy Market 2022; 2021 data. Eastern Australia includes Queensland, New South Wales (including the Australian Capital Territory), Victoria and Tasmania (excludes South Australia). WA data: OpenNEM; 2021 data UK and Netherlands data: BP Statistical Review of World Energy 2022-2021 data | France data: IEA Electricity Information 2022

Net Zero Australia Project: The changing role of gas in energy generation and export markets

The Net Zero Australia Project explores the different ways the energy, industrial and transport sectors can decarbonise and the role gas plays under different scenarios in energy generation and export. The research is a partnership between the University of Melbourne, the University of Queensland, Princeton University and international management consultancy, Nous Group.

This year, they built on research commenced in 2021 which models the pathways to net zero emissions for domestic and exported energy in Australia and provides insight into the changing role of gas in Australia's energy system and export markets under different settings.

The research illustrates the scale, complexity and cost of the net zero task, the different ways in which the future could unfold, what is required to drive the changes and how unintended consequences might be avoided and negative impacts reduced. It uses six scenarios to answer the question, "what would it take to achieve net zero?" An important takeaway from this report is that the role and resilience of gas in energy generation and export markets will vary depending on the pace of electrification and rollout of renewables. Ultimately, the report acknowledges that new capacity is required to double for firming generation but will operate at low-capacity factors (less than 10% in 2050) and used when there are prolonged periods of low renewable generation.

Image: Mount Feathertop, Alpine National Park, Victoria

Physical risk

Physical risks from climate change can be:

- **acute** risks that are event driven such as heat waves, bushfires, and floods
- **chronic** risks which are longer-term shifts resulting from changes in climate patterns including sea level risk, decrease in seasonal rainfall and sea level rise.

The financial implications of these risks include direct damage to assets, business disruption, and indirect impacts from supply chain disruption.

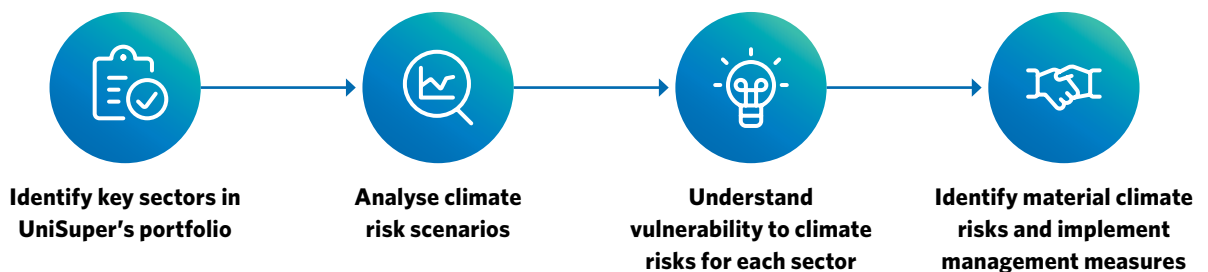
Last year, to understand how acute and chronic physical risks can affect our portfolio, our Investments team assessed the vulnerability of different industry sectors using a high warming scenario (RCP 8.0) which results in 4.3°C of warming by 2100. The results of our analysis highlight how different sectors are more vulnerable to physical risks.

This analysis has helped identify the sectors where we prioritise engaging on physical risk with companies such as in higher risk sectors like infrastructure (eg. airports) and materials (eg. timber and mining).

Our engagement includes assessing each company's risk profile and understanding how the company is developing adaptation plans to improve resilience.

Left unchecked, physical climate risks can have broader systemic impacts on productivity, business continuity and supply chain disruption as well as resource scarcity, insurance, health and wellbeing. Research by Deloitte suggests the global economic losses associated with unchecked climate change by 2070 could be as high as 7.6% of global Gross Domestic Product (GDP), with the most significant impact in the Asia Pacific region with economic losses of 14.7%.¹⁷

This systemic risk to our portfolio gives impetus to our active engagement program because the more we can engage with companies to reduce emissions today, the less likely we are to experience high warming scenarios in the future.



SECTOR	SECTOR EXPOSURE ¹⁸	EXPOSURE TO PHYSICAL RISK ¹⁹
Industrials and materials	29.8%	●
Financials	22.6%	●
Real estate	14.6%	●
IT and communications	12.5%	●
Consumer	10.0%	●
Health care	6.7%	●
Energy and utilities	3.9%	●

● High ● Medium ● Low

¹⁷ <https://www.deloitte.com/global/en/issues/climate/global-turning-point.html>

¹⁸ Liquidity items (eg. cash holdings, operational cash and currency hedging items) are excluded. Financial instruments such as futures, trusts, funds and municipal debt are not considered. Sector weightings updated to reflect exposure as at 30 June 2023.

¹⁹ Exposure to physical risk undertaken in 2022 report, based on 30 June 2022 data.



Image: HVP Plantations manage 240,000ha of land, including 48,000ha of native forest which is managed for conservation and biodiversity values | Source: HVP Plantations

Physical risk and timber assets

Climate events pose significant physical risks to human societies and ecosystems. Sectors involving primary economic activities are often more sensitive to the consequences of climate change due to their immediate dependence on the natural environment. Climate change also affects biodiversity as species struggle to adapt to rapidly changing conditions or face increased vulnerability to habitat loss and disruption.

We regularly engage with companies on their management of physical risks from climate change and how they are investing in adaptation to make their businesses more resilient.

One example is our portfolio company HVP Plantations (HVP) which manages 240,000ha of land, including 170,000ha of pine and eucalypt plantation forest, but also 48,000ha of native forest which is managed for conservation and biodiversity values.

HVP faces a range of climate related dependencies, potential impacts, risks and opportunities relating to soil, climate, forest health, cultural heritage, reputation, fire, plants, animals and carbon. It may be exposed to climate risks through increased frequency of extreme weather events, changes in precipitation patterns, rising temperatures, shifting land suitability and biodiversity disruptions.

HVP is continually improving its understanding and approach to various nature related issues in its business including:

GENETICS AND SITE ESTABLISHMENT

To improve climate resilience, HVP focuses on genetics and site establishment to combat adverse conditions, ensuring a healthy plantation estate for carbon sequestration and resource productivity.

FIRE MANAGEMENT

Uncontrolled bushfires are a significant risk to the company's long-term plantation assets, natural capital, and health and safety. This risk is addressed through the fire management cycle of prevention, preparedness, response and recovery.

FUTURE OPPORTUNITIES FOR HIGH QUALITY CARBON CREDITS

HVP has entered into an agreement with the Victorian Government to increase the size of its Victorian timber plantation estate via the Gippsland Plantations Investment Program. Establishing new plantations provides HVP the opportunity to generate Australian Carbon Credit Units for sale within the Australian Government's Emissions Reduction Fund or the spot carbon market.

Estimating our carbon footprint



One of the ways we track our progress towards net zero by 2050 is by measuring and monitoring the carbon intensity of our portfolio ('financed emissions'). Given the range of investments we hold, including our exposure to emissions intensive industries, the transition of our portfolio—similar to the experience of the global and Australian economies—will not be linear.

Financed emissions refers to the absolute emissions that banks and investors finance through loans and investments (ie investee company operational emissions) and represents UniSuper's financed Scope 3 emissions. The Scope 3 emissions of investee companies are not included within this calculation because this would result in double counting issues when aggregating.

See [page 56](#) for more information on our approach including the assurance on our carbon intensity metrics.

Carbon intensity of UniSuper's covered portfolio

CARBON EMISSIONS
PER \$1 MILLION
INVESTED **33.1t** P.A. CO₂E

This includes the reported and estimated Scope 1 and 2 emissions for the listed equity and corporate bonds components of our funds which report carbon emissions.²⁰ UniSuper's covered portfolio represents 63% of the fund.²¹ [Page 54](#) explains the methodology.

In comparison, the ASX300 has a carbon intensity of 74 tonnes p.a CO₂e per \$1m. The ASX300 is a carbon intensive index due to the high concentration of resources companies, whereas the MSCI World Index is highly diversified, with a mix of high and low carbon companies. It is therefore less intensive with a carbon intensity of 29 tonnes p.a CO₂e per \$1m.²²

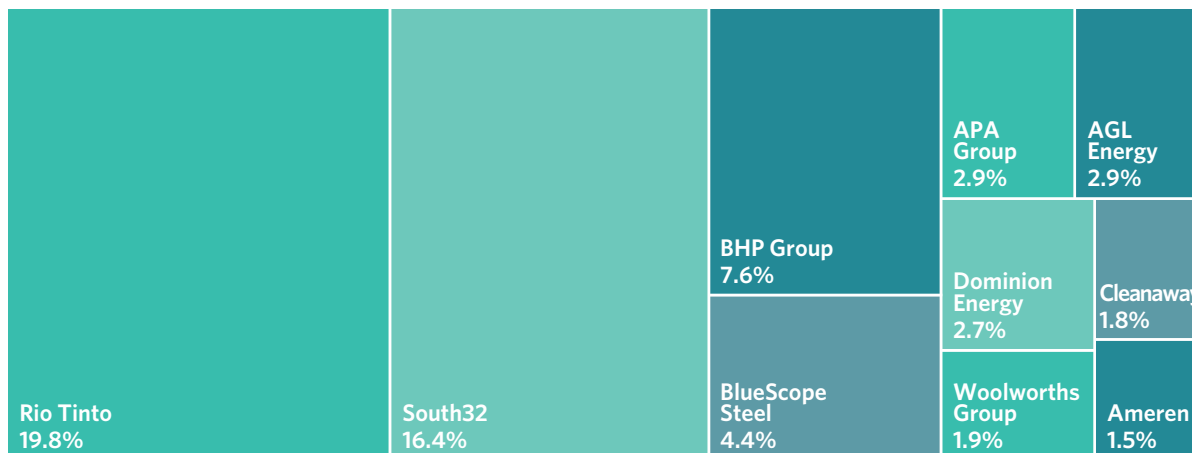
²⁰ Emissions intensity is provided for options with allocation to listed equity and corporate bonds only and therefore excludes Cash, Australian Bonds and Diversified Credit Income options.

²¹ Portfolio coverage is based on whole of fund market value (including liquidity items and financial instruments) as at 30 June 2023.

²² Scope 1 and 2 company level emissions data was provided by S&P Trucost using the most recently data available as at 30 June 2023. Benchmark weighting data is sourced from Eikon as at 30 June 2023. Index weights were rebased to exclude companies which do not report carbon emissions.

ESTIMATING ON OUR CARBON FOOTPRINT**TOP 10 CONTRIBUTORS TO CARBON INTENSITY**

Percentage of fund emissions. Top 10 = 62% of fund emissions.



The top four companies contributing almost 50% of the emissions fund-wide are Rio Tinto, South32, BHP Group and BlueScope Steel. These four companies are critical for enabling the low carbon transition, providing minerals and metals required to meet the future needs of a low carbon economy.

It's important to note that fossil fuel production is not a core business activity of these four companies, and they have set interim and long-term decarbonisation targets, including action plans to achieve them.

We recognise that these companies have significant challenges for decarbonising this decade, with many of the opportunities reliant on emerging technology, improving economics and grid-scale decarbonisation.

Nevertheless, we are comfortable with their ongoing inclusion in the portfolio and view them as enablers for successfully moving to a low carbon economy.

ENGAGING WITH COMPANIES ON EMISSIONS REPORTING

UniSuper relies on the emissions data disclosed by others, which may not always be available or complete. Through our deep dive into carbon data, we identified several examples where inconsistent reporting and estimation methodologies could have a material impact on carbon footprint calculations.

Accurate reporting and disclosure of emissions is a key area of our engagement. In particular, we focus on:

- accurate, complete and standardised emissions reporting
- understanding the tools, assumptions and limitations in calculating emissions
- understanding and reporting on lifecycle emissions based on the type of product or service the company provides.

Over the past 12 months, there has been increased focus on disclosure of emissions data and the methodologies used to estimate financed emissions. Methodologies to calculate carbon intensity continue to evolve.

We have reviewed our methodology for calculating the carbon footprint of our portfolios, looking for opportunities to better align with industry guidance like the Partnership for Carbon Accounting (PCAF). As part of this process, we completed a deep dive into the sourcing and estimation methodologies from our data providers. This has enabled us to refine our calculation tools.

Given the nascent and evolutionary nature of the emissions reporting framework, changes to methodology and standards can be expected over time. We will continue to evolve our methodologies, including adding or changing data as improved disclosure becomes available. As such, we expect that data or methodologies may be re-calculated over time and any changes will be noted where relevant.

Data summary of our investment options



In this section we provide an overview of each of our investment options. This includes the climate risk exposure, carbon intensity, emissions data coverage and companies that have set emissions reduction targets.

Carbon footprint

Below we outline the approach that we've taken to calculate the carbon intensity of our investment options.

SCOPE

The asset classes currently included in our carbon footprinting calculations are the listed equity and corporate bonds components of our investment options.²³ Where possible, we will seek to expand the coverage to include other asset classes, as and when data and methodologies become more reliable. We are working towards including these asset classes over time to expand coverage of our investments.

METHODOLOGY

The equation below shows how we determined the financed emissions for listed equities and corporate debt. Our approach to financed emissions is guided by The Partnership for Carbon Accounting Financials (PCAF).²⁴ An investment option's estimated carbon footprint is reported in units of tonnes of CO₂ equivalent per \$1,000,000 invested. Financial data is sourced from a variety of sources.²⁵

CARBON DATA

Scope 1 and 2 company level emissions data was provided by S&P Trucost. This data includes a mix of reported and estimated data.

Wherever possible we've used the most recent data available as at 30 June 2023. Our ability to use up-to-date carbon data is dependent on the reporting cycles of companies, and the frequency at which S&P Trucost updates its database.

One of the key limitations in calculating a carbon footprint is the completeness of available emissions data. Measuring and estimating emissions accurately can be challenging.

S&P Trucost applies an estimation methodology to selected companies within our portfolios where this data is not reported publicly. This methodology uses a number of estimation models. The exact estimation model applied depends on the type of company and the extent of that company's historical carbon reporting. A company's carbon emission data can and does vary between different data providers.

We strongly encourage mandatory adoption of TCFD reporting and methodology standards for climate relevant metrics—such as emissions reporting—as this helps drive consistency across companies. Not all companies have carbon data available. For this reason, we report emissions intensity for a 'Covered Portfolio' within each investment option and disclose the level of coverage as a proportion of market value. This Covered Portfolio is comprised of listed equities and corporate bonds with carbon and financial data available as at 30 June 2023.

$$\text{CARBON FOOTPRINT} = \sum \text{UNISUPER OWNERSHIP SHARE} \times \text{COMPANY EMISSIONS}$$

$$\text{WHERE UNISUPER OWNERSHIP SHARE} = \frac{\text{OUR HOLDING IN THE COMPANY (EQUITY AND DEBT)}}{\text{TOTAL EQUITY + DEBT}}$$

Reference: PCAF, 2022, The Global GHG Accounting and Reporting Standard for the Financial Industry. Second edition, pg 40.

²³ Other asset classes such as cash, private equity, green bonds, sovereign debt, and derivative financial products (e.g., futures, options, swaps) are not in scope.

²⁴ PCAF, The Global GHG Accounting and Reporting Standard for the Financial Industry, <https://carbonaccountingfinancials.com/standard>

²⁵ The financial input data used in our calculations is obtained from the following sources:

- Market value data is sourced from our reported holdings data
- Market capitalisation and enterprise debt data are sourced from multiple third party providers (such as MSCI & Factset) in order to increase data coverage.

Fossil fuel exposure

We calculate the fossil fuel look-through exposure of our options using the same methodology as for the whole of fund fossil fuel look-through exposure (see page 42).

Once we have identified the holdings which report revenue from fossil fuel extraction, production, generation, transportation, and refining we apply this percentage fossil fuel revenue to the value of the holding in the option. We then sum each holding to determine the dollar value of fossil fuel look-through exposure in the option.

The option level fossil fuel exposure is expressed as a percentage of the total value of the option.

Climate risk exposures

Sector exposures, company ambition and top holdings show the look-through value of our exposure in each option. Look-through value refers to the proportion of the fund (by dollar value) of investments (not the number of companies). Liquidity items (eg. cash holdings, operational cash and currency hedging items) and financial instruments such as unlisted unit trusts, municipal debt and futures are excluded.

“We have been strong advocates for mandatory TCFD reporting and methodology standards for climate relevant metrics which will help drive consistency across companies.”

Conservative

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **19.4t** P.A. CO₂E

This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 44% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

TOTAL OPTION FOSSIL FUEL EXPOSURE **2.5%**

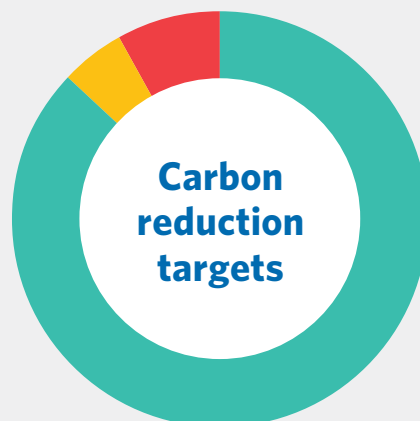
The largest fossil fuel holding is IFM International Infrastructure Wholesale Fund, which contributes 0.69% to the above exposure. [Page 55](#) explains the methodology.

Sector breakdown



- Industrials and materials
- Financials
- IT and communications
- Real estate
- Consumer
- Health care
- Energy and utilities

Company ambitions



- Paris-aligned targets
- Sets targets/some efforts
- No efforts/evidence

Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
Commonwealth Bank of Australia	Financials	Net zero 2050 target
ANZ Group Holdings Ltd	Financials	Net zero 2050 target
National Bank Australia	Financials	Net zero 2050 target
Westpac Banking Corporation	Financials	Net zero 2050 target
IFM International Infrastructure Wholesale Fund	Industrials and materials	Net zero 2050 target

[Page 55](#) explains the methodology of how this data was calculated.

Conservative Balanced

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **28.5t** P.A. CO₂E

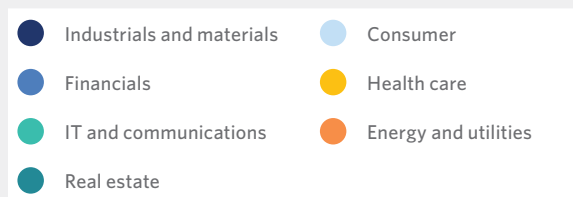
This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 54% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

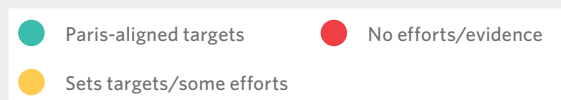
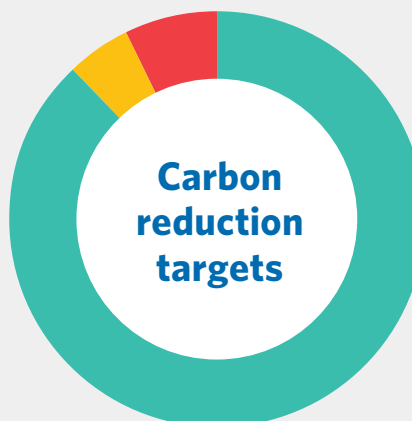
TOTAL OPTION FOSSIL FUEL EXPOSURE **2.1%**

The largest fossil fuel holding is IFM International Infrastructure Wholesale Fund, which contributes 0.38% to the above exposure. [Page 55](#) explains the methodology.

Sector exposures



Company ambitions



Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
Commonwealth Bank of Australia	Financials	Net zero 2050 target
ANZ Group Holdings Ltd	Financials	Net zero 2050 target
National Bank Australia	Financials	Net zero 2050 target
Transurban Group	Industrials and materials	SBTi approved target
BHP Group Ltd	Industrials and materials	Net zero 2050 target

[Page 55](#) explains the methodology of how this data was calculated.

Balanced

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **43.3t** P.A. CO₂E

This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 60% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

TOTAL OPTION FOSSIL FUEL EXPOSURE **2.0%**

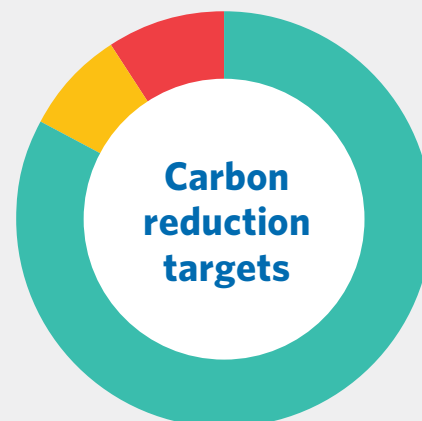
The largest fossil fuel holding is BHP Group Ltd, which contributes 0.27% to the above exposure. [Page 55](#) explains the methodology.

Sector breakdown



- Industrials and materials
- Financials
- IT and communications
- Real estate
- Consumer
- Health care
- Energy and utilities

Company ambitions



- Paris-aligned targets
- Sets targets/some efforts
- No efforts/evidence

Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
Sydney Airport	Industrials and materials	Net zero 2050 target
BHP Group Ltd	Industrials and materials	Net zero 2050 target
Transurban Group	Industrials and materials	SBTi approved target
Commonwealth Bank of Australia	Financials	Net zero 2050 target
National Bank Australia	Financials	Net zero 2050 target

[Page 55](#) explains the methodology of how this data was calculated.

Sustainable Balanced

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **15.1t** P.A. CO₂E

This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 73% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

As at 30 June 2023, this option did not have any exposure to fossil fuel exploration and production companies based on the data available to UniSuper. More information on our sustainable branded option screens can be found [here](#).

TOTAL OPTION FOSSIL FUEL EXPOSURE **0.1%**

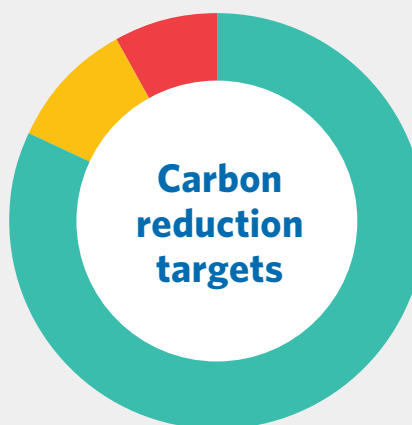
The largest fossil fuel holding is Ecolab Inc., which contributes 0.09% to the above exposure. [Page 55](#) explains the methodology.

Sector breakdown



- Industrials and materials
- Financials
- IT and communications
- Real estate
- Consumer
- Health care
- Energy and utilities

Company ambitions



- Paris-aligned targets
- Sets targets/some efforts
- No efforts/evidence

Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
Transurban Group	Industrials and materials	SBTi approved target
Sydney Airport	Industrials and materials	Net zero 2050 target
Commonwealth Bank of Australia	Financials	Net zero 2050 target
ANZ Group Holdings Ltd	Financials	Net zero 2050 target
Vantage Towers	Industrials and materials	Some efforts

[Page 55](#) explains the methodology of how this data was calculated.

Growth

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **47.4t** P.A. CO₂E

This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 62% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

TOTAL OPTION FOSSIL FUEL EXPOSURE **2.1%**

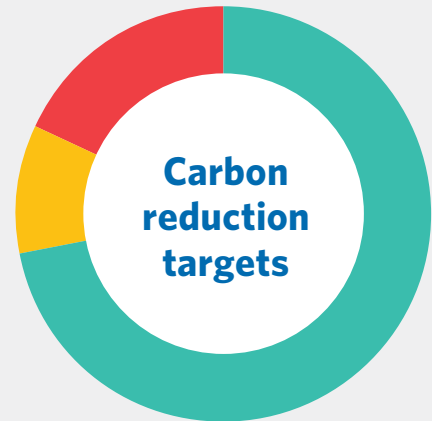
The largest fossil fuel holding is BHP Group Ltd, which contributes 0.2% to the above exposure. [Page 55](#) explains the methodology.

Sector breakdown



- Industrials and materials
- Financials
- IT and communications
- Real estate
- Consumer
- Health care
- Energy and utilities

Company ambitions



- Paris-aligned targets
- Sets targets/some efforts
- No efforts/evidence

Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
BHP Group Ltd	Industrials and materials	Net zero 2050 target
Sydney Airport	Industrials and materials	Net zero 2050 target
Vantage Towers	Industrials and materials	Some efforts
Microsoft Corporation	IT and communications	SBTi approved target
Apple, Inc.	IT and communications	SBTi approved target

[Page 55](#) explains the methodology of how this data was calculated.

High Growth

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **46.6t** P.A. CO₂E

This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 74% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

TOTAL OPTION FOSSIL FUEL EXPOSURE **2.3%**

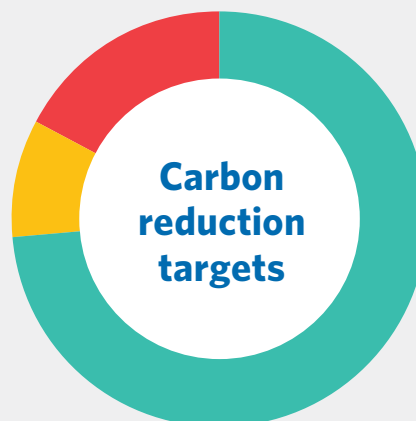
The largest fossil fuel holding is BHP Group Ltd, which contributes 0.3% to the above exposure. [Page 55](#) explains the methodology.

Sector breakdown



- Industrials and materials
- Financials
- IT and communications
- Real estate
- Consumer
- Health care
- Energy and utilities

Company ambitions



- Paris-aligned targets
- Sets targets/some efforts
- No efforts/evidence

Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
BHP Group Ltd	Industrials and materials	Net zero 2050 target
Microsoft Corporation	IT and communications	SBTi approved target
Apple, Inc.	IT and communications	SBTi approved target
CSL Ltd	Health care	Committed to setting an SBTi target
Commonwealth Bank of Australia	Financials	Net zero 2050 target

[Page 55](#) explains the methodology of how this data was calculated.

Sustainable High Growth

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **17.0t** P.A. CO₂E

This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 90% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

As at 30 June 2023, this option did not have any exposure to fossil fuel exploration and production companies based on the data available to UniSuper. More information on our sustainable branded option screens can be found [here](#).

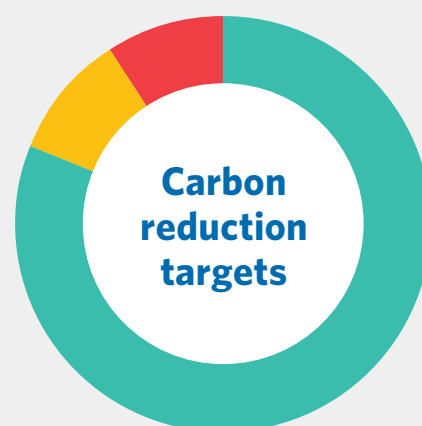
TOTAL OPTION FOSSIL FUEL EXPOSURE **0.2%**

The largest fossil fuel holding is Ecolab Inc., which contributes 0.11% to the above exposure. [Page 55](#) explains the methodology.

Sector breakdown



Company ambitions



Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
CSL Ltd	Health care	Committed to setting an SBTi target
Microsoft Corporation	IT and communications	SBTi approved target
Commonwealth Bank of Australia	Financials	Net zero 2050 target
Transurban Group	Industrials and materials	SBTi approved target
Apple, Inc.	IT and communications	SBTi approved target

[Page 55](#) explains the methodology of how this data was calculated.

Listed Property

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **5.3t** P.A. CO₂E

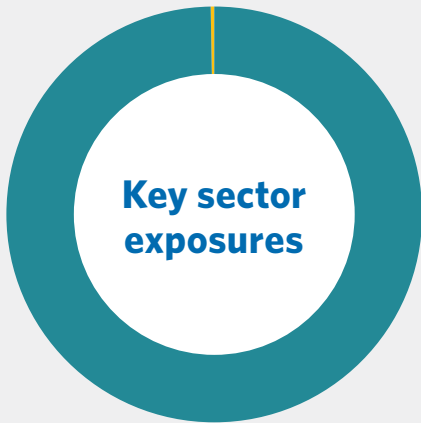
This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 98% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

TOTAL OPTION FOSSIL FUEL EXPOSURE **0%**

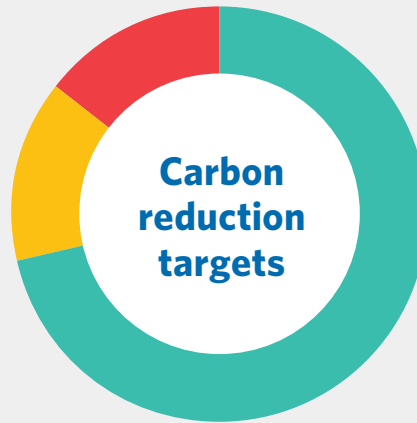
No companies with reported revenue from fossil fuels in this option.

Sector breakdown



- Industrials and materials
- Financials
- IT and communications
- Real estate
- Consumer
- Health care
- Energy and utilities

Company ambitions



- Paris-aligned targets
- Sets targets/some efforts
- No efforts/evidence

Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
Goodman Group	Real estate	SBTi approved target
Scentre Group	Real estate	Net zero 2050 target
Prologis, Inc.	Real estate	Net zero 2050 target
Stockland Corporation Ltd	Real estate	Net zero 2050 target
Dexus	Real estate	Net zero 2050 target

[Page 55](#) explains the methodology of how this data was calculated.

Australian Shares

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **75.6t** P.A. CO₂E

This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 72% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

TOTAL OPTION FOSSIL FUEL EXPOSURE **3.4%**

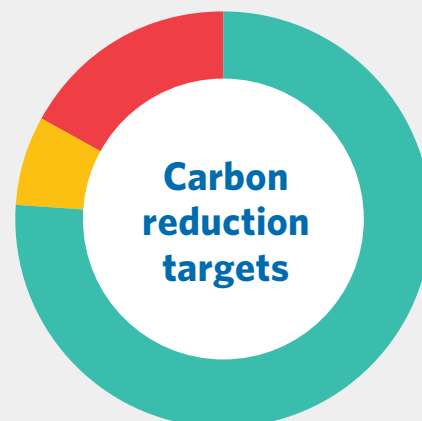
The largest fossil fuel holding is Santos Ltd, which contributes 0.88% to the above exposure. [Page 55](#) explains the methodology.

Sector breakdown



- Industrials and materials
- Financials
- IT and communications
- Real estate
- Consumer
- Health care
- Energy and utilities

Company ambitions



- Paris-aligned targets
- Sets targets/some efforts
- No efforts/evidence

Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
BHP Group Ltd	Industrials and materials	Net zero 2050 target
Commonwealth Bank of Australia	Financials	Net zero 2050 target
CSL Ltd	Health care	Committed to setting an SBTi target
National Bank Australia	Financials	Net zero 2050 target
Macquarie Group Ltd	Financials	Net zero 2050 target

[Page 55](#) explains the methodology of how this data was calculated.

International Shares

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **34.8t** P.A. CO₂E

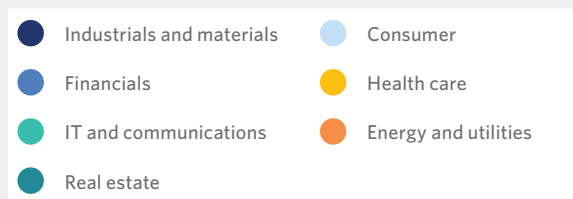
This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 86% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

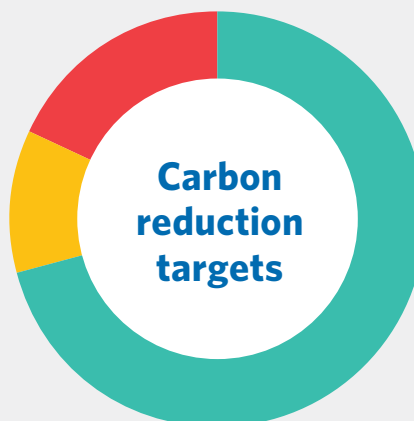
TOTAL OPTION FOSSIL FUEL EXPOSURE **3.3%**

The largest fossil fuel holding is ExxonMobil Corporation, which contributes 0.3% to the above exposure. [Page 55](#) explains the methodology.

Sector breakdown



Company ambitions



Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
Microsoft Corporation	IT and communications	SBTi approved target
Apple, Inc.	IT and communications	SBTi approved target
London Stock Exchange Group	Financials	SBTi approved target
NVIDIA Corporation	IT and communications	Target covers >90% of emissions
Amazon.com, Inc.	Consumer	Net zero 2050 target

[Page 55](#) explains the methodology of how this data was calculated.

Global Environmental Opportunites

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **19.4t** P.A. CO₂E

This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 98% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

As at 30 June 2023, this option did not have any exposure to fossil fuel exploration and production companies based on the data available to UniSuper. More information on our sustainable branded option screens can be found [here](#).

TOTAL OPTION FOSSIL FUEL EXPOSURE **<0.01%**

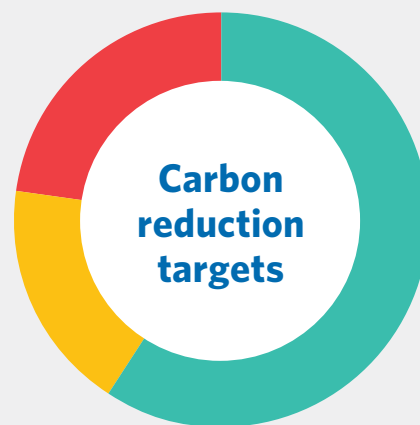
The largest fossil fuel holding is Verbund AG, which contributes 0.003% to the above exposure. [Page 55](#) explains the methodology.

Sector breakdown



- Industrials and materials
- Consumer
- Financials
- Health care
- IT and communications
- Energy and utilities
- Real estate

Company ambitions



- Paris-aligned targets
- No efforts/evidence
- Sets targets/some efforts

Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
Tesla, Inc.	Consumer	Committed to setting an SBTi target
Digital Realty Trust, Inc.	Real estate	SBTi approved target
Samsung SDI Co., Ltd.	IT and communications	Net zero 2050 target
SolarEdge Technologies, Inc.	IT and communications	Some efforts
Vestas Wind Systems A/S	Industrials and materials	SBTi approved target

[Page 55](#) explains the methodology of how this data was calculated.

Australian Equity Income

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **56.2t** P.A. CO₂E

This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 95% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

TOTAL OPTION FOSSIL FUEL EXPOSURE **4.0%**

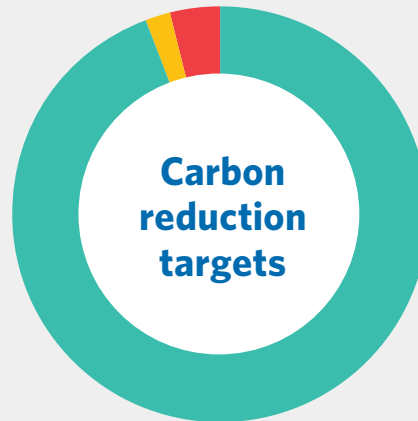
The largest fossil fuel holding is APA Group, which contributes 3.02% to the above exposure. [Page 55](#) explains the methodology.

Sector breakdown



- Industrials and materials
- Financials
- IT and communications
- Real estate
- Consumer
- Health care
- Energy and utilities

Company ambitions



- Paris-aligned targets
- Sets targets/some efforts
- No efforts/evidence

Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
BHP Group Ltd	Industrials and materials	Net zero 2050 target
Commonwealth Bank of Australia	Financials	Net zero 2050 target
Wesfarmers Ltd	Consumer	Net zero 2050 target
Telstra Group Ltd	IT and communications	SBTi approved target
Woolworths Group Ltd	Consumer	SBTi approved target

[Page 55](#) explains the methodology of how this data was calculated.

Global Companies in Asia

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **3.8t** P.A. CO₂E

This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 91% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

TOTAL OPTION FOSSIL FUEL EXPOSURE **0.02%**

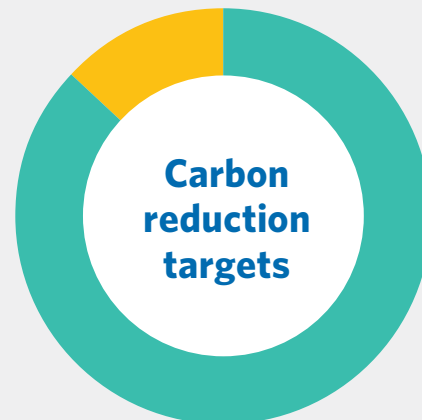
The largest fossil fuel holding is Walmart, Inc., which contributes 0.02% to the above exposure. [Page 55](#) explains the methodology.

Sector breakdown



- Industrials and materials
- Consumer
- Financials
- Health care
- IT and communications
- Energy and utilities
- Real estate

Company breakdown



- Paris-aligned targets
- No efforts/evidence
- Sets targets/some efforts

Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
Microsoft Corporation	IT and communications	SBTi approved target
Apple, Inc.	IT and communications	SBTi approved target
Alphabet, Inc.	IT and communications	Committed to setting an SBTi target
Amazon.com, Inc.	Consumer	Net zero 2050 target
LVMH Moët Hennessy Louis Vuitton SE	Consumer	SBTi approved target

[Page 55](#) explains the methodology of how this data was calculated.

Defined Benefit

Carbon intensity of the covered portfolio

CARBON EMISSIONS PER \$1 MILLION INVESTED **25.4t** P.A. CO₂E

This only includes the reported and estimated scope 1 and 2 emissions. The covered portfolio represents 66% of the option. [Page 54](#) explains the methodology.

Look-through fossil fuel exposure

TOTAL OPTION FOSSIL FUEL EXPOSURE **4.1%**

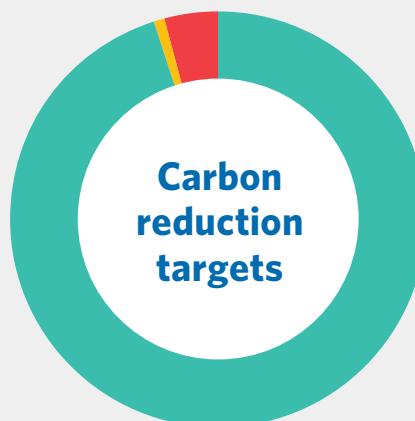
The largest fossil fuel holding is APA Group, which contributes 2.8% to the above exposure. [Page 55](#) explains the methodology.

Sector breakdown



- Industrials and materials
- Financials
- IT and communications
- Real estate
- Consumer
- Health care
- Energy and utilities

Company ambitions



- Paris-aligned targets
- Sets targets/some efforts
- No efforts/evidence

Climate ambition of key holdings

COMPANY NAME	SECTOR	COMPANY AMBITION
Transurban Group	Industrials and materials	SBTi approved target
Commonwealth Bank of Australia	Financials	Net zero 2050 target
Sydney Airport	Industrials and materials	Net zero 2050 target
ASX Ltd	Financials	Committed to setting an SBTi target
National Bank Australia	Financials	Net zero 2050 target

[Page 55](#) explains the methodology of how this data was calculated.

Appendices





Limitations

IMPORTANT INFORMATION

Unless otherwise mentioned, all our holdings are determined as at 30 June 2023

Company information has been assessed based on information available as at 10 August 2023. Any information announced or published after this date was not considered in company assessments.

This report may contain statements that are, or may be deemed to be forward looking statements, including climate related goals, targets, pathways and ambitions. Such forward looking statements are not guarantees and involve known and unknown risks, uncertainties and other factors, which are beyond the control of UniSuper. This may cause actual results to differ materially from those expressed or implied in such statements. As a standardised approach and guidance for the disclosure of climate related exposures evolves, UniSuper will continue to work with industry bodies and companies to advocate for a uniform approach to the disclosure of climate related risks. UniSuper will continue to review its disclosure practices which may involve republishing data as the disclosure of data evolves over time.

We engaged an external assurance organisation, EY, to provide UniSuper with limited assurance in relation to the fossil fuel look through revenue, financed emissions intensity and coverage disclosures contained in this report. See [page 89](#) for further information.

We do not accept responsibility for any errors in the data provided or calculations performed by any third parties on whom we have relied. This report doesn't suggest that any particular view of the future will hold true, and readers may disagree with our view or assessment of risk. Climate risk is one of many risks that any company faces, and companies facing significant climate risks may still be good investments due to other factors such as price, management, mitigation and transformation strategies.

DATA AVAILABILITY AND ACCURACY

Reporting on underlying business units can be inconsistent, even for those companies that do report. While we aim to be as transparent as possible and undertake due diligence on data provided by external data providers, information gaps, timing differences or price volatility mean sometimes data availability is not as precise as we would like. We review data for material holdings. Where we have more accurate, relevant, up to date information or information on companies not covered by third party data providers (eg. unlisted assets), we may add to or override data provided by third parties.

While we continually refine our processes, some of the known limitations of our data coverage are:

- the currency of data provided by external data providers
- the accuracy and frequency of information reporting companies (potentially leading to estimations of revenue)
- the coverage of the companies assessed by external data providers.

LOOK-THROUGH REVENUE ANALYSIS

When assessing our portfolio exposures (and for the purposes of portfolio compliance for our thermal coal exclusion), we supplement internal analysis with third party data to cover the whole portfolio. While we believe at a high level our exposures are portrayed accurately, we recognise that the information is incomplete and uses varying methodologies and assumptions in assessing revenues. When we refer to reported revenues, this refers to revenues reported by a company, and depending on the approach taken by the relevant companies, these revenues may be reported on either a gross or net basis. Had we chosen to carry out our assessment on an exclusively 'gross' or 'net' basis, the assessment of our exposures may have been different.

APPENDICES**Examples of data limitations include:**

- Out of date information—we rely on company reported business unit data, which may be updated infrequently and is collated by third party data tools at least annually. On occasion, this may mean revenue breakdowns are over a year old.
- Revenue breakdowns—where companies don't provide specific revenues associated with reported sectors (for example, the split between thermal and metallurgical coal), we use other information to estimate revenues such as fuel reserve split.
- Small or unlisted companies—reporting and coverage by third party data providers is not comprehensive. While we review our larger holdings (which comprise around 90% of our total exposures), we rely on data providers for the majority of our smaller holdings.
- Estimated data—where detailed breakdowns of company revenue streams are not reported, estimations may be used to calculate business segment revenues (for example, for fossil fuel power generation, thermal coal revenue, oil and gas pipeline revenue). The exact estimation model applied depends on the type of company and the extent of available reported data. A company's business segment revenue can and does vary between different data providers.

FOSSIL FUEL LOOK-THROUGH REVENUE ANALYSIS

In connection with the fossil fuel methodology on [page 42](#) MSCI fossil fuel revenue largely covers listed companies. For material exposures, we review the data and consider if there is more up-to-date information available. Where we do not have data available zero fossil fuel revenue is applied after undertaking a reasonable level of analysis over the material exposures to the fund. Our review does not cover long-short funds or index derivative positions.

SCOPE 3 LIMITATIONS

We don't include the Scope 3 emissions and lifecycle emissions of our investments in the calculation of our carbon footprints.

Current limitations in the reporting of Scope 3 emissions include:

- Scope 3 emissions are most appropriate for single entities, not portfolios, as there is a high risk of double-counting
- Very few companies report Scope 3 emissions comprehensively
- Scope 3 emissions reporting relies on assumptions about activities that are outside the control of the company and may not be disclosed by customers or suppliers. For example, to calculate the Scope 3 emissions associated with iron ore, an assumption needs to be made about the carbon intensity of the blast furnaces that will turn the ore into steel. This assumption could be made using global or regional averages or could use site-specific information (if known).

THERMAL COAL EXCLUSION

In addition to the above limitations, we may retain an interest in companies that have more than 10% of their reported revenues associated with thermal coal exploration and production, but are well progressed in the sale or wind-down of those mines as we consider them to comply with the restriction.

As at 30 June 2023, we did not hold any interests in companies that had more than 10% of their reported revenues from the extraction and production of thermal coal.

Glossary

TERM	DESCRIPTION
Asset manager	Asset managers manage our investment strategies across all asset classes. Whenever we can, we manage investments in-house. We also use selected external investment managers with specialist skills and strong performance records.
Asset class	An asset class is a grouping of investments that exhibit similar characteristics. Key asset classes in our investment options include cash and fixed instruments, shares, property, infrastructure, and private equity.
Carbon dioxide (CO₂)	A naturally occurring gas that is found in Earth's atmosphere. CO ₂ produced by burning carbon in organic materials, including fossil fuels, is the main greenhouse gas driving human-induced climate change.
Carbon neutral	<p>This means achieving a balance between the CO₂ that an organisation emits through its operations over a specified period, and the CO₂ that is removed or avoided through carbon offsets.</p> <p>Carbon neutrality is often achieved by a combination of reducing CO₂ emissions (through energy switching and energy efficiency measures) and purchasing carbon offsets equal to an organisation's residual emissions. Companies can often use this interchangeably with 'net-zero carbon'.</p>
Carbon offsets	<p>Certified credits, generated per tonne of CO₂-e, that can be purchased to balance an organisation's operational emissions.</p> <p>Offsets may be derived from nature-based (e.g. reforestation) or technological (e.g. carbon capture and storage) removals. They may also be generated by 'avoided emissions' such as forest conservation and new renewable energy projects.</p>
Carbon footprint	<p>The carbon footprint is the amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organisation, or community.</p> <p>We calculate the carbon footprint of our investment options using the methodology outlined on page 56.</p>
CO₂ equivalent (CO₂-e)	A means of comparing the global warming potential of greenhouse gases. CO ₂ is the reference gas that other greenhouse gas emissions are measured against when calculating their global warming potential.
Climateworks Centre Australia 'All in' 1.5°C pathway	This assessment is based on one specific analytical output developed by Climateworks Centre in 2020: Decarbonisation Futures' '1.5C All-in' scenario which illustrates one possible pathway for Australia to reach net zero emissions limiting global warming to 1.5°C. In instances where electricity generation is concerned, the Australian Energy Market Operator's 2022 ISP Hydrogen Superpower scenario is used.
Covered portfolio	A portfolio within an investment option consisting of listed issuers of equity and debt investments that had disclosed carbon emissions data at 30 June 2023. See page 56 for detailed analysis.

APPENDICES

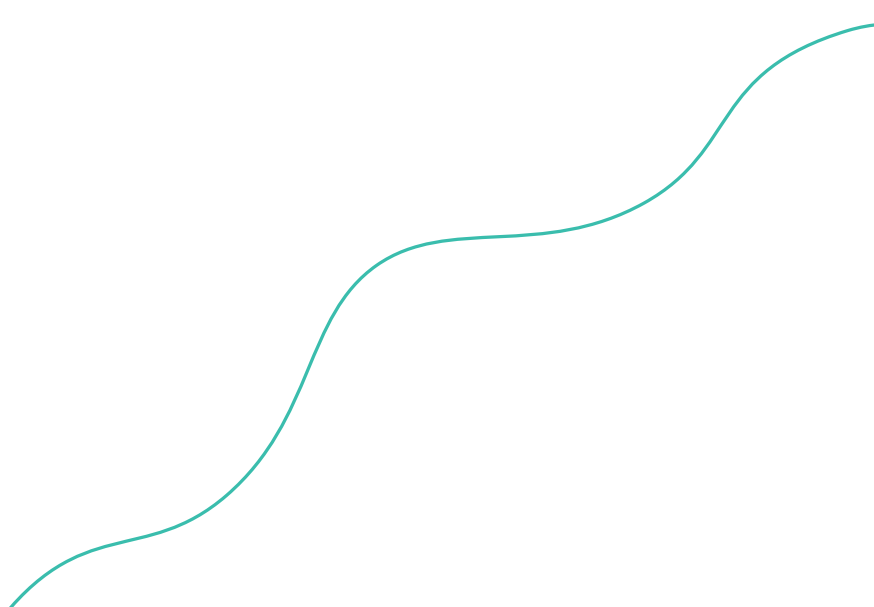
TERM	DESCRIPTION
Decarbonisation	Decarbonisation is the reduction of carbon dioxide emissions through the use of low carbon power sources, achieving a lower output of greenhouse gasses into the atmosphere. This can include lowering the amount of greenhouse gas emissions produced by the burning of fossil fuels or decreasing CO ₂ output per unit of electricity generated.
Double counting	<p>Occurs when GHG emissions (generated, avoided, or removed) are counted more than once in a GHG inventory or toward attaining mitigation pledges or financial pledges for the purpose of mitigating climate change.</p> <p>For financed emissions, double counting can occur when 'company Scope 3 emissions' to our 'financed Scope 3 emissions'. It can also occur between financial institutions in co-financing the same entity or activity, between transactions within the same financial institutions, across different asset classes and within the same asset class. PCAF recognizes that double counting of GHG emissions cannot be avoided completely; however, it should be minimized.</p>
Exploration and production	Companies involved in the extraction (by mining or otherwise) of minerals and fuels from the earth, and their refining or processing for use.
Enterprise value	The total value of a company, defined in terms of its financing. It includes both the current share price (market capitalisation) and the cost to pay off debt (net debt, or debt minus cash).
Financed emissions	For financial services, Scope 3 emissions also includes 'financed emissions' which includes emissions attributed to a financial institution's lending and investing activities. This includes investee company Scope 1 and 2 emissions. It does not include investee company Scope 3 emissions which can create double counting. See 'double counting' for detail.
Fossil fuels	<p>A fuel such as oil, gas or coal that is formed in the earth from natural remains. For the purposes of this report, when referring to fossil fuels, we mean oil, gas and thermal coal.</p> <p>When referring to our fossil fuel exposures, we mean companies who have revenues associated with the exploration, refining, processing, extraction, transportation of, or electricity generation from, oil, gas and thermal coal.</p>
Greenhouse gas effect	The increased presence of heat-trapping gases in the atmosphere that warm the planet and disrupts Earth's stable climate system.
Greenhouse gas emissions ('GHG emissions')	Atmospheric gases and aerosols, both natural and produced through industrial activities, that contribute to the greenhouse gas effect. This includes CO ₂ , nitrous oxide (N ₂ O), methane (CH ₄) and hydrofluorocarbons (HFCs).

TERM	DESCRIPTION
Green bond	A green bond is a fixed interest investments that aim to contribute to positive environmental and social outcomes—such as green bonds issued by institutions such as the World Bank and a range of other institutions. Examples include where a bond’s use of proceeds must be used on green projects (such as renewables or energy efficiency) or the loan criteria requires .sustainability criteria to be met (such as reduced emissions). The term ‘green bond’ is sometimes used interchangeably with climate bonds or sustainable bonds.
Green building	Building and operating environmentally sustainable buildings and/or offering environmentally sound products and services used in building design and construction. The Green Building Council Australia highlights green buildings: <ul style="list-style-type: none"> ▪ has design, construction and operational practices that significantly reduce or eliminate its negative impact on the environment and its occupants. ▪ promotes efficiency - it can reduce construction and ongoing performance costs significantly. ▪ uses resources effectively and creates healthier environments for people to live and work in.
Green themes	Green themes are opportunities and investments that contribute to decarbonisation such as wind power, solar power, hydropower, and bioenergy to name a few. We also include less obvious areas, such as the resources sector which produces many critical minerals needed to support the transition to a decarbonised economy.
International Sustainability Standards Board (ISSB)	A body for developing sustainability disclosure standards. ISSB aims to meet the information needs of investors, enable companies to provide comprehensive sustainability information to global capital markets and facilitate interoperability with disclosures that are jurisdiction-specific and/or aimed at broader stakeholder groups.
Just and orderly transition	A just and orderly transition refers to a deliberate and well-managed process of shifting from a high-carbon, fossil fuel dependent economic system to one that is sustainable, low carbon and socially equitable. For example, this involves ensuring sequencing of transition to low carbon energy sources does not create energy poverty or put energy security at risk, as well as ensuring communities and workers are not left behind and fossil fuel dependent regions have time to economically diversify.
Fossil fuel look-through analysis	Reporting on the relevant underlying reported revenues of our investments to understand our economic exposure. This is calculated by: <ul style="list-style-type: none"> ▪ identifying the holdings that report revenue from fossil fuel extraction, production, generation, transportation, and refining ▪ determining the percentage of revenue of each company from fossil fuels ▪ applying that percentage to each holding to determine its look-through exposure ▪ summing each holding to determine the dollar value of fossil fuel look-through exposure across the fund ▪ expressing that exposure as a percentage of the total fund.

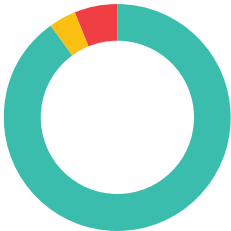
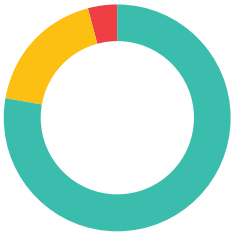
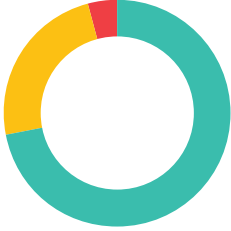
TERM	DESCRIPTION
Look-through value	Refers to the aggregated or calculated value of assets or investments held by one entity, that is derived from the underlying values of the assets held within it. Look-through value refers to the proportion of the fund (by dollar value) of investments in companies (not the number of companies).
Lifecycle emissions	Product lifecycle emissions are all the emissions associated with the production and use of a specific product, from cradle to grave, including emissions from raw materials, manufacture, transport, storage, sale, use and disposal.
Liquidity items	Liquidity items include cash holdings, operational cash and currency hedging items.
Net-zero emissions	<p>At a societal level, net-zero emissions are achieved when human emissions of greenhouse gases into the atmosphere are balanced by human-managed removals over a specified period.</p> <p>For companies, net zero commitments require companies to reduce emissions through efficiencies and abatements, with the balance of any 'residual' emissions being offset. It is a common expectation that using carbon offsets to meet climate targets should only occur after companies have made all efforts to prioritise the reduction in their own emissions (The Oxford Principles for Net Zero Aligned Carbon Offsetting, 2020). We note companies often use this interchangeably with 'carbon neutral'.</p> <p>This covers CO₂ emissions, unless stated otherwise.</p>
Operational emissions	The greenhouse gas emissions associated with the operations of a company. This includes the emissions generated by the company (scope 1), as well as the emissions associated with purchased electricity (scope 2).
Paris Agreement	In December 2015, 196 countries including Australia, signed The Paris Agreement, which brings together all signatory nations to combat climate change and adapt to its effects. Signatory nations commit to the goal of limiting global warming to well below 2°C (preferably to 1.5°C), compared to pre-industrial levels.
Paris-aligned operational target	We consider a Paris-aligned operational target to be one of the following: <ul style="list-style-type: none"> ▪ net-zero operational emissions before 2050 ▪ endorsed science-based targets ▪ at least a 45% emissions reduction by 2030.
PCAF	<p>The Partnership for Carbon Accounting Financials (PCAF) is an industry-led initiative. Created in 2015 by Dutch financial institutions (FIs), PCAF extended to North America in 2018 and scaled up globally in 2019. The globalization of PCAF enables FIs worldwide to consistently measure and disclose the greenhouse gas (GHG) emissions of their financial activities.</p> <p>PCAF (2022). The Global GHG Accounting and Reporting Standard Part A: Financed Emissions. Second Edition.</p>

TERM	DESCRIPTION
Physical risk	Risks associated with the physical impacts of climate change which may disrupt operations or damage assets. 'Acute' physical risks are event-driven risks, such as heatwaves, bushfires, or floods. 'Chronic' physical risks are longer-term shifts, like rising sea levels or lowering seasonal rainfall.
Proxy voting	The term 'proxy vote' refers to a ballot cast by a single person or firm on behalf of a shareholder. Rather than physically attending the shareholder meeting, investors may elect someone else, such as a member of the company's management team, to vote in their place. This person is designated as a proxy and will cast a proxy vote in line with the shareholder's directions.
Reported revenue	<p>Revenue percentage based on companies' reported revenue and business activities and depending on the approach taken by the relevant companies, these revenues may be reported on either a gross or a net basis. Had we chosen to carry out our assessment on a 'gross' or 'net' basis, the assessment of our exposures may have been different.</p> <p>Where the revenue for a covered business activity is not disclosed by a company and is not available through other publicly available sources, an estimate of the maximum possible revenue is calculated based on the company's known business lines.</p>
Representative Concentration Pathway (RCP)	<p>A greenhouse gas concentration pathway used for climate modelling and research. The pathways describe different climate futures, all of which are considered possible depending on the volume of GHGs emitted in the years to come.</p> <p>For example, RCP 8.5 refers to the concentration of carbon that delivers global warming at an average of 8.5 watts per square meter across the planet. The RCP 8.5 pathway delivers a temperature increase of about 4.3°C by 2100, relative to pre-industrial temperatures.</p>
Safeguard Mechanism	The Federal Government's policy for reducing emissions at Australia's largest industrial facilities. It sets legislated limits on greenhouse gas emissions which will decline on a trajectory consistent with achieving Australia's emission reduction targets of 43% below 2005 levels by 2030 and net zero by 2050.
Science-based Targets Initiative (SBTi)	The Science Based Targets Initiative (SBTi) methodology is used globally and offers authoritative guidance on generally required targets, as well as specific sector guidance. Given it is global in nature and broad based (even where there is sector guidance available), Australian companies may encounter nuances that create barriers to implementation.
Shadow price on carbon	A price on carbon allocates a cost to greenhouse gas emissions. In the absence of a legislated price on carbon, an organisation may adopt a shadow price on carbon to implicitly price the risk of carbon-intensity into their financial investment decisions.

TERM	DESCRIPTION
<p>Scope 1, 2 and 3 emissions</p>	<p>To assist with calculations, greenhouse gas reporting guidance divides emissions into 3 Scopes:</p> <ul style="list-style-type: none"> ▪ Scope 1: direct emissions, for example, emissions produced on site ▪ Scope 2: indirect emissions, such as emissions associated with electricity purchased by the company ▪ Scope 3: all other emissions associated with the company’s supply chain (upstream) or in the use of its products (downstream). <p>Scope 1 and 2 emissions represent ‘operational emissions’. See ‘operational emissions’. For financial services, this also covers their ‘financed emissions’ which includes the greenhouse gas emissions linked to the investment and lending activities. This includes investee company Scope 1 and 2 emissions. See ‘financed emissions’.</p>
<p>Stranded asset</p>	<p>An asset which has lost value prior to the end of its anticipated useful life due to economic, physical or legislative changes in the environment. For example, a thermal coal mine could become stranded as the market transitions from coal powerplants to alternative means of electricity generation.</p>
<p>50 largest Australian investments</p>	<p>Our 50 largest Australian investments includes investments in ASX-listed companies and unlisted assets with Australian-based operations.</p>
<p>Traffic light report</p>	<p>Our traffic light report is a proprietary initiative focusing on our 50 largest Australian investments. These are both unlisted assets with Australian based operations and ASX-listed companies.</p>
<p>Thermal coal miner</p>	<p>A company that generates greater than 10% of its reported revenues from thermal coal exploration and production.</p>
<p>Transition risk</p>	<p>Transition risk refers to the disruption a company may endure when being forced to adjust to a decarbonising economy. For example, the transition could prompt changes in legislation, technology and market conditions which may impact the costs faced by society.</p>
<p>Task Force on Climate-related Financial Disclosures (TCFD)</p>	<p>A task force created by the Financial Stability Board to improve and increase reporting of climate-related financial information (including on greenhouse gas emissions, carbon intensity and climate-related risks).</p> <p>The TCFD recommendations for climate-related disclosures promote informed investment, credit, and insurance underwriting decisions.</p>



UniSuper traffic light assessment methodology

Our assessment of the decarbonisation commitments of our 50 largest Australian investments		
NET ZERO COMMITMENT	 <p>Paris-aligned operational target committing to net zero by 2050.</p> <ul style="list-style-type: none"> Net zero target by 2050 or earlier Public commitment to set target in the next year No target 	<p>Factors considered:</p> <ul style="list-style-type: none"> Progress of engagement with companies Ambition relative to peers and industry expectations Science-based assessments and methodologies Level of ambition Reliance on offsets
INTERIM TARGETS	 <p>Companies should have an interim target which is appropriate, accountable and ambitious. Targets should take into account the company's emissions profile and focus on high emitting parts of the business.</p> <ul style="list-style-type: none"> 2030 target—an ambitious, sector-appropriate target Interim target that addresses the majority of emissions but is not sufficiently ambitious, or a public commitment to set target No interim target 	
ACTION PLAN	 <p>Companies should understand sector-specific challenges and opportunities. Clear plan to achieve Scope 1 and 2 interim targets. Focus on high emitting and easy-to-abate parts of the supply chain. Understanding reliance on offsets to achieve targets. Broader targets for: renewable energy; electrification of processes; energy efficiency opportunities to reduce overall energy needs; reducing fugitive (especially methane) and other emissions.</p> <ul style="list-style-type: none"> Strategy has been published which outlines actions to address emission reduction, in alignment with targets. Strong actions taken, but no overarching strategy towards targets Minimal action and no clear strategy 	<p>Factors considered:</p> <ul style="list-style-type: none"> Progress of engagement with companies Ambition relative to peers and industry expectations Science-based assessments and methodologies Level of ambition Reliance on offsets Where applicable, projects to address Scope 1 emissions for companies with exposure to the Safeguard Mechanism.

Different science-based assessment outcomes

DISCLAIMER 1

This published data may have changed since its publication date. It does not take into account any revisions or corrections in the data that may have been published by Climateworks, STBi or the companies in which the data has been sourced. It does not take into account any changes in underlying data which may have changed for a number of reasons, including for example merger or divestment activities of the underlying portfolio companies in which the data has been sourced or changes in reported revenues or activities. The assessment of the companies in the table below are published for informational purposes only and are not a recommendation or endorsement of any of the companies listed for inclusion in personal portfolios. Before selecting companies to invest in personally, you should seek professional financial advice that takes into account your personal circumstances and investment objectives.

SBTI ACCREDITATION

Based on the most recently available information from company reporting and SBTi. The methodology is available on SBTi's website (version 4.1 of its Criteria and Recommendations and Target Validation Protocol were published in April 2020). SBTi accreditation can apply to both absolute and intensity targets and can either be achieved through a sectoral decarbonation approach (SDA), or through an absolute contraction approach (ACA).

CLIMATEWORKS 'ALL IN' 1.5°C SCENARIO²⁸

Based on research that was commissioned by ACSI - 'Chasing 1.5°C: The ASX200 - on the right trajectory?', published on 4 November 2022 and has involved an analytical exercise based on insights from Climateworks research. This research uses Climateworks' 'All in' 1.5°C scenario and the methodology can be found beginning [page 24](#). Key limitations include that it covered company information as at 31 March 2022, it does not consider companies without operations in Australia as their emissions cannot be assessed against the '1.5°C All-in' scenario (which provides an Australia-specific emissions pathway to 1.5°C) and it also only assesses absolute emissions reduction targets. Emissions intensity and other targets, for example renewable energy targets, are not the subject of this analysis.

Climateworks has since updated this research and publicly provides views on alignment through their Net Zero Momentum Tracker, and includes company information as at November 2022, however underlying data in the research report is limited to ACSI members. We consider the level of divergence from the pathway as an important factor when making our assessment and interpretation.

²⁸ Research data and assessment of company commitments were completed in November 2022, using data as at 31 March 2022. Climateworks has updated some company targets on their Net Zero Momentum Tracker in November 2022.

COMPANY	TARGET (SCOPE 1 & 2)	SBTi	'CHASING 1.5°C: THE ASX200 – ON THE RIGHT TRAJECTORY?' CLIMATEWORKS 'ALL IN' 1.5°C SCENARIO	UNISUPER'S INTERIM TARGET TRAFFIC LIGHT	UNISUPER'S INTERPRETATION
ANZ Group	90% reduction by 2030, from 2015 baseline.	No	Aligned. Exceeds pathway.	●	Aligned to Climateworks pathway. Does not have SBTi accreditation.
APA Group	Gas infrastructure portfolio reduce by 30% by 2030 and a goal to reduce emissions intensity for power generation by 35% by 2030.	No	Only gas infrastructure target covered and is not aligned. Higher level of divergence.	●	<p>APA's assets consist of gas infrastructure and energy generation. Energy generation intensity for APA would be considered "aligned" to SBTi requirements because it is well below SBTi sector generation intensity. Climateworks model does not assess the energy generation intensity targets but does assess their infrastructure target which returns a higher level of divergence from the pathway.</p> <p>APA recently set a 30% reduction in operational methane emissions by 2030 aligned to the Global Methane Pledge but not covered by Climateworks' analysis. This prevents understanding the full alignment of APA Group's targets.</p>
Aristocrat Leisure	No targets to assess.	No	No medium-term target.	●	Committed to set SBTi targets. Disclosure is expected at the end of 2023.
ASX Ltd	Net zero Scope 1 and 2 emissions by FY25 end.	No	Aligned. Exceeds pathway.	●	Aligned to Climateworks pathway. Does not have SBTi accreditation.
Auckland International Airport	90% reduction by 2030.	Yes	Auckland International Airport not covered by research.	●	Achieves SBTi accreditation, not covered by Climateworks analysis.
Bank of Queensland	90% reduction by 2030, from 2020 baseline.	No	Aligned. Exceeds pathway.	●	Aligned to Climateworks pathway. Does not have SBTi accreditation.
Bendigo and Adelaide Bank	50% reduction by 2030, from 2020 baseline.	Seeking accreditation	Not aligned. Moderate divergence from pathway.	●	Seeking accreditation from SBTi and within an acceptable range of divergence from Climateworks pathway.

APPENDICES

COMPANY	TARGET (SCOPE 1 & 2)	SBTi	'CHASING 1.5°C: THE ASX200 - ON THE RIGHT TRAJECTORY?' CLIMATEWORKS 'ALL IN' 1.5°C SCENARIO	UNISUPER'S INTERIM TARGET TRAFFIC LIGHT	UNISUPER'S INTERPRETATION
BHP Group	Reduce operational emissions by at least 30% from FY2020 levels by FY2030.	No	Not aligned. Moderate divergence from pathway.	●	Target within an acceptable range of divergence from Climateworks pathway. Because Climateworks is an Australian based pathway and BHP has international assets, the assessment does not fully represent the company's assets and group wide target relative to global decarbonisation requirements. Does not have SBTi accreditation, there is no SBTi methodology for diversified miners.
Chorus	62% reduction by 2030, from 2020 baseline.	Seeking accreditation	Chorus not covered by research.	●	Submitted a new target for SBTi accreditation. Targets not covered by Climateworks analysis.
Cleanaway Waste Management	43% reduction in CO ₂ by 2030 and 34% reduction in CH ₄ by 2030.	No	Not aligned. Moderate divergence from pathway.	●	Within an acceptable range of divergence from Climateworks pathway. Does not have SBTi accreditation because there is no sector specific pathway. Both CO ₂ and CH ₄ targets have been set relative to IPCC and COP26 guidance and against those are considered "aligned". ~80% of CWY emissions are methane and have been set aligned to the expectations of the COP26 Global Methane Pledge.
Coles Group	75% reduction by 2030, from 2020 baseline.	No	Aligned. Exceeds pathway.	●	Aligned to Climateworks pathway. Does not have SBTi accreditation.
Commonwealth Bank of Australia	42% reduction by 2030 from 2020 baseline.	No	Not aligned. Moderate divergence from pathway.	●	Seeking accreditation from SBTi. Whilst medium term target diverges from Climateworks pathway it is within an acceptable range and near-term target over-achieves. To date CBA has overachieved this target having reduced emissions by 64% which would bring CBA's reduction achievement in line with the rate required to meet Climateworks pathway.
CSL	40% reduction by 2030.	Yes	Aligned to pathway.	●	Aligned to Climateworks pathway. Does not have SBTi accreditation.

COMPANY	TARGET (SCOPE 1 & 2)	SBTi	'CHASING 1.5°C: THE ASX200 - ON THE RIGHT TRAJECTORY?' CLIMATEWORKS 'ALL IN' 1.5°C SCENARIO	UNISUPER'S INTERIM TARGET TRAFFIC LIGHT	UNISUPER'S INTERPRETATION
Goodman Group (covers Goodman Australian Industrial Fund)	42% reduction by FY2030, from FY2021 baseline	Yes	Not aligned. Higher level of divergence from pathway.	●	Achieved SBTi accreditation, whilst it diverges from Climateworks pathway this is likely due to industrial exposure and international assets rather than commercial Australian building exposure.
GPT Group (covers GPT Wholesale Office Fund)	100% reduction by 2030, from 2021 baseline	No	Aligned. Exceeds pathway.	●	Aligned to Climateworks pathway. Does not have SBTi accreditation.
Insurance Australia Group	Net zero by 2030	Yes	Aligned. Exceeds pathway.	●	Achieved SBTi accreditation aligned to Climateworks pathway
James Hardie Industries	Reduce Scope 1 and Scope 2 intensity by 40% by 2030	No	Target not covered because it is an intensity target only.	●	Climateworks model does not assess intensity targets, therefore JHX intensity target is not covered. Does not have SBTi accreditation. JHX recently announced a new target that was not covered by the analysis. JHX updated 2030 target to reduce absolute scope 1 and 2 emissions by 42% by 2030 which will result in a 50% reduction in Scope 1 and 2 emissions from fibre cement products by 2030. Target is aligned to JHX Low Carbon Cement Technology Roadmap and is science-based aligning with the ambition of limiting global warming to 1.5°C. This new target appears stretching for the industry.
Macquarie Group	Net zero emissions by 2025	No	Aligned. Exceeds pathway.	●	Aligned to Climateworks pathway. Does not have SBTi accreditation.
National Australia Bank	51% reduction by 2025, from 2019 baseline.	No	Aligned. Exceeds pathway.	●	SBTi have informally noted that the target is set using their methodology and the 2025 target is aligned to Climateworks pathway. NAB have significantly overachieved their pathway to date.
NextDC	100% renewables target by 2030	No	Target not covered because it is renewables target only.	●	New target. Climateworks does not assess renewables target however -100% of emissions are Scope 2 which aligns to Climateworks pathway.

APPENDICES

COMPANY	TARGET (SCOPE 1 & 2)	SBTi	'CHASING 1.5°C: THE ASX200 – ON THE RIGHT TRAJECTORY?' CLIMATEWORKS 'ALL IN' 1.5°C SCENARIO	UNISUPER'S INTERIM TARGET TRAFFIC LIGHT	UNISUPER'S INTERPRETATION
Northern Star Resources	35% reduction by 2030, from 2020 baseline	No	Not aligned. Moderate divergence from pathway.	●	Target within an acceptable range of divergence from Climateworks pathway. Does not have SBTi accreditation there is currently no mining methodology.
Pilbara Minerals	Net zero emissions in the decade commencing 2040	No	No medium-term target.	●	Pilbara are in the process of setting a medium-term target and we expect additional disclosure at the end of CY2023. Does not have SBTi accreditation there is currently no mining methodology.
QBE Insurance Group	Net zero by 2030	No	Aligned. Exceeds pathway.	●	Aligned to Climateworks pathway. Does not have SBTi accreditation but states the target is a 1.5 trajectory aligned science-based target.
Qube Holdings	Reduce Scope 1 emissions intensity 50% by 2030, from 2018 baseline	No	Target not covered because it is an intensity target only.	●	Climateworks model does not assess intensity targets and therefore QUB intensity target is not covered. Does not have SBTi accreditation. Despite this we believe this target is stretching for the Australian transport industry.
Resmed	No targets to assess	No	No medium-term target.	●	No targets.
Rio Tinto	50% by 2030 relative to 2018 equity emissions baseline.	No	Not aligned. Slight divergence from pathway.	●	Target within an acceptable range of divergence from Climateworks pathway. Because Climateworks is an Australian based pathway and Rio has international assets, the assessment does not fully represent the company's assets and group wide target relative to global decarbonisation requirements. There is no SBTi methodology for diversified miners.
Scentre Group	50% reduction by 2025, from a 2014 baseline.	No	Aligned. Exceeds pathway.	●	Aligned to Climateworks pathway. Does not have SBTi accreditation.
South32	50% reduction by 2035, from FY21 baseline.	No	Not aligned. Moderate divergence from pathway.	●	Target within an acceptable range of divergence from Climateworks pathway. Because Climateworks is an Australian based pathway and S32 has international assets, therefore the assessment does not fully represent the company's assets and group wide target relative to global decarbonisation requirements. There is no SBTi methodology for diversified miners.

COMPANY	TARGET (SCOPE 1 & 2)	SBTi	'CHASING 1.5°C: THE ASX200 - ON THE RIGHT TRAJECTORY?' CLIMATEWORKS 'ALL IN' 1.5°C SCENARIO	UNISUPER'S INTERIM TARGET TRAFFIC LIGHT	UNISUPER'S INTERPRETATION
Suncorp Group	Net zero by 2030.	Yes	Aligned. Exceeds pathway.	●	Achieved SBTi accreditation and aligned to Climateworks pathway.
Telstra Group	50% reduction by 2030, from 2019 baseline.	Yes	Not aligned. Moderate divergence from pathway	●	Achieved SBTi accreditation. Within acceptable range of divergence from Climateworks pathway.
The Lottery Corporation	No targets to assess.	No	The Lottery Corp not covered by research. No medium-term target.	●	No targets.
Transurban Group	50% reduction by 2030.	Yes	Aligned. Exceeds pathway.	●	Target has SBTi accreditation and aligned to Climateworks pathway.
Vicinity Centres	Net zero emissions by 2030 for wholly owned retail assets .	No	Aligned. Exceeds pathway.	●	Aligned to Climateworks pathway. Does not have SBTi accreditation
Wesfarmers	Net zero targets for Bunnings, Kmart, Officeworks for 2030.	No	Not aligned. Slight divergence from pathway.	●	Does not have SBTi accreditation, there is no SBTi pathway methodology for the business. Climateworks analysis does not cover intensity targets or renewables targets. Despite this we believe there is sufficient information to understand the company's position and is within an acceptable range of divergence from the pathway.
Westpac Banking Corp	90% reduction by 2030, from 2016 baseline.	No	Aligned. Exceeds pathway.	●	Aligned to Climateworks pathway. Does not have SBTi accreditation.
Woolworths Group	63% reduction by 2030, from 2015 baseline.	No	Aligned to pathway	●	Achieves Climateworks pathway. Does not have SBTi accreditation.

Independent Limited Assurance Statement to the Management and Directors of UniSuper Limited

Our Conclusion

Ernst & Young ('EY', 'we') was engaged by UniSuper Limited ('UniSuper') to undertake a limited assurance engagement as defined by Australian Auditing Standards, hereafter referred to as a 'review' over the Subject Matter defined below for the year ended 30 June 2023. Based on the procedures we have performed and the evidence we have obtained, nothing came to our attention that caused us to believe that the Subject Matter has not been prepared, in all material aspects, in accordance with the Criteria defined below.

What our review covered

We reviewed the following Subject Matter in UniSuper's Climate Risk & Our Investments Report (the 'Report'):

- ▶ 'Fossil fuel look through exposure' (%), defined as the proportion of UniSuper's \$AUM invested in companies deriving revenue from fossil fuel extraction, including production, generation, transmission, transportation, and refining
- ▶ UniSuper's financed emissions intensity (tCO₂e/\$m AUM) and coverage (% of AUM). This includes the aggregated data from the following fund options:
 - ▶ Conservative
 - ▶ Conservative Balanced
 - ▶ Balanced
 - ▶ Sustainable Balanced
 - ▶ Growth
 - ▶ High Growth
 - ▶ Sustainable High Growth
 - ▶ Listed Property
 - ▶ Australian Shares
 - ▶ International Shares
 - ▶ Global Environmental Opportunities
 - ▶ Australian Equity Income
 - ▶ Global Companies in Asia
 - ▶ Defined Benefit
- ▶ Financed emissions intensity (tCO₂e/\$m AUM) of:
 - ▶ S&P ASX300 Index
 - ▶ MSCI World Index

Other than as described in the preceding paragraphs, which set out the scope of our engagement, we did not perform assurance procedures on any other information included in the Report, and accordingly, we do not express a conclusion on this information.

Criteria applied by UniSuper

In preparing the Subject Matter, UniSuper determined the reporting criteria as:

- ▶ The Greenhouse Gas Protocol
- ▶ The Partnership for Carbon Accounting Financials Global GHG Accounting and Reporting Standard (the PCAF Standard)
- ▶ UniSuper's self-declared criteria as set out in the Report and internal management documentation

Key responsibilities

UniSuper's responsibility

The management of UniSuper is responsible for selecting the Criteria, and for presenting the Subject Matter in accordance with that Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the Subject Matter, such that it is free from material misstatement, whether due to fraud or error.

EY's responsibility and independence

Our responsibility is to express a conclusion on the Subject Matter based on our review.

We have complied with the independence and relevant ethical requirements, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Auditing Standard ASQM 1 *Quality Management for Firms that Perform Audits or Reviews of Financial Reports and Other Financial Information, or Other Assurance or Related Services Engagements*, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our approach to conducting the review

We conducted this review in accordance with the Australian Auditing and Assurance Standards Board's *Australian Standard on Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* ('ASAE 3000'), and *Assurance Engagements on Greenhouse Gas Statements* ('ASAE 3410'), as well as the terms of reference for this engagement as agreed with UniSuper.

That standard requires that we plan and perform our engagement to express a conclusion on whether anything has come to our attention that causes us to believe that the Subject Matter is not prepared, in all material respects, in accordance with the Criteria, and to issue a report.



**Building a better
working world**

Summary of review procedures performed

A review consists of making enquiries, primarily of persons responsible for preparing the Subject Matter, and applying analytical and other review procedures.

The nature, timing, and extent of the procedures selected depend on our judgement, including an assessment of the risk of material misstatement, whether due to fraud or error. The procedures we performed included, but were not limited to:

- ▶ Interviewing UniSuper staff to gain an understanding of UniSuper's reporting definitions and processes, including reporting boundaries, data sourcing, and internal data integrity checking processes.
- ▶ Assessing the documentation of UniSuper's reporting methodologies
- ▶ Performing analytical procedures in relation to material quantitative information and where relevant, reviewing source documentation
- ▶ Checking the accuracy of calculations performed
- ▶ Reviewing the presentation of the Subject Matter within the Report
- ▶ Obtaining representation from management on key assertions pertaining to the above.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

Inherent limitations

Procedures performed in a review vary in nature and timing, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a review is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Our procedures were designed to obtain a limited level of assurance on which to base our conclusion and do not provide all the evidence that would be required to provide a reasonable level of assurance.

While we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures relating to checking the aggregation or calculation of data within IT systems.

The greenhouse gas quantification process is subject to scientific uncertainty, which arises because of incomplete scientific knowledge about the measurement of greenhouse gases. Additionally, greenhouse gas procedures are subject to estimation and measurement uncertainty resulting from the measurement and calculation processes used to quantify emissions within the bounds of existing scientific knowledge.

Other matters

Our report does not extend to any disclosures or assertions made by UniSuper relating to future performance plans and/or strategies disclosed in the Report.

Use of our Assurance Statement

We disclaim any assumption of responsibility for any reliance on this assurance report to any persons other than management and the Directors of UniSuper, or for any purpose other than that for which it was prepared.

Our review included web-based information that was available via web links as of the date of this statement. We provide no assurance over changes to the content of this web-based information after the date of this assurance statement.

Ernst & Young

Sydney, Australia
26th September 2023

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Our investment strategies won't necessarily be appropriate for other investors. This Report is not intended to be an endorsement of any of the listed securities named above for inclusion in personal portfolios.

This information is of a general nature only and may include general advice. It does not take into account your personal objectives, financial situation or needs. Before making any decision in relation to your UniSuper membership, you should consider your personal circumstances, the relevant product disclosure statement from UniSuper for your membership category and whether to consult a licensed financial adviser.

UniSuper Limited reserves the right to correct any error or omission in this Report. Information is current as at the date of publication but may change in the future.

This Report has been prepared by UniSuper Management Pty Ltd (USM) (ABN 91 006 961 799/AFSL No 235907) on behalf of and issued by UniSuper Limited (ABN 54 006 027 121/ AFSL No 492806) as Trustee of UniSuper (the Fund) (ABN 91 385 943 850, MySuper Authorisation No. 91385943850448).

UniSuper Limited (USL) is the corporate trustee of the Fund and USM is the administrator of the Fund and provides investment services to USL.

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