Climate Transition Plan 2023

Climate Strategy Update

As a responsible owner we are investing for strong retirement outcomes for our members. We see Climate Change as one of the most significant long-term risks to our portfolio and, therefore, our members' retirement outcomes.

Board Approved July 2023

aware super

Contents

Purpose

Aware Super's Climate Transition Plan 2023 (the Plan or Transition Plan) is an update to our 2020 Climate Strategy. The Transition Plan articulates Aware Super's current climate transition and decarbonisation intent and provides a road map of activities to drive action and help reach our targets.

Aware Super's Climate Journey

In 2015 we developed our first climate strategy, and since then we have regularly reviewed and renewed our approach to climate change in line with advances in understanding and climate science. We have also progressed against our goals and targets along the way.

The 2019/20 Aware Super Climate Change **Portfolio Transition Plan**, and the **2016 Climate Plan** preceding that, have demonstrated Aware Super's climate journey to date.

In 2021, Aware Super publicly committed to reducing its scope 1 & 2 investment portfolio emissions by 45% by 2030 from a 2020 baseline and to strive to achieve net zero greenhouse gas (GHG) emissions in our portfolio by 2050.

Since those initial commitments and updates, several initiatives and projects have been undertaken to better understand the portfolio emissions starting point and climate risk, along with developing methodologies to track our progress, with more recent projects and work focusing on how Aware Super will achieve its climate commitments.

We have provided updates of our progress as part of our annual reporting, and more recently, in the Task Force on Climate-related Financial Disclosures (**TCFD**) aligned reports *(***2020, 2021, 2022**).

Climate Transition Plan 2023

This Transition Plan articulates our high-level targets, and identifies key actionable initiatives under five key strategic pillars to help achieve those targets.

Climate-related targets

Aware Super's overarching commitment is to support an orderly and equitable transition to net zero greenhouse gas (**GHG**) emissions through its investment activities, stewardship and advocacy. Our underlying targets to support that commitment are to:

- strive to achieve net zero GHG emissions in our portfolio by 2050
- support an economy wide reduction in GHG emissions of 45% by 2030
- strive to achieve a 45% reduction in scope 1 and 2 emission intensity of our investment portfolio[1] by 2030[2].

Each Aware Super investment sector will also have its own 2030 Scope 1 and 2 decarbonisation targets, designed to support the targets above.

Pillars underpinning our Transition Plan

The five strategic pillars to help achieve our climate-related targets, are as follows:

1. Decarbonisation

2. Portfolio transition and resilience

3. Investing in climate solutions

4. Being a leader in company climate engagement

5. Having an influential voice in climate policy & advocacy

These pillars align with our purpose of delivering the best returns for our members, as well as our commitment to supporting an orderly and equitable transition to net zero GHG emissions through our investment activities, stewardship and advocacy.

As global climate efforts evolve and new scientific insights emerge, our approach will continue to adapt. We review our climate strategy, and report on our progress, annually, using a TCFD aligned framework. This reporting highlights examples of delivery on projects as well as progress on targets and the governance structure in place to manage these commitments.

Each of the pillars are described in more detail below.

[1] Reduction will be measured against a 2020 baseline, where possible. Reductions for investment sectors where a later baseline has been completed may be pro-rated accordingly. It is noted that not all asset classes have a financed emissions calculation methodology, and it is likely these will continue to be excluded from this calculation and target until a suitable methodology has been determined.

[2] A guiding range of 40-50% has been acknowledged by the Board, in the event that a fund or investment activity may change the portfolio significantly, such as a merger or large acquisition.

Strategic Pillars and Initiatives

Pillar 1: Decarbonisation

The purpose of Pillar 1 is the reduction of scope 1 and 2 emissions within the investment portfolio, through the reduction of emissions in each sector and each underlying investment, as well as the contribution Aware Super makes to reducing emissions within the economy. This extends to tracking and measuring portfolio emissions and projecting decarbonisation progress into the future.

Strategic initiatives:

1. Develop a bespoke, dynamic decarbonisation roadmap and pathway to achieve net-zero portfolio emissions.
2. Set, measure and achieve credible short, medium and long-term emissions reduction targets in all asset sectors.
3. Establish a meaningful framework to measure, manage and forecast investment GHG emissions.
4. Undertake a multifaceted, annual assessment of progress towards decarbonisation goals.

Each of our investment sectors will also have their own scope 1 & 2 decarbonisation targets, which are designed to support the overarching portfolio targets.

The sector targets are:

Sector	Targets and goals Outlining what we are seeking to achieve for each sector
Listed equities	• Strive to achieve a 45% reduction in scope 1 & 2 emissions intensity by 2030 from a 30 June 2020 baseline. • Australian equities and international equities will individually have a 45% scope 1 & 2 emissions intensity reduction target by 2030. • Absolute emissions of the portfolio will continue to be measured annually.
Direct assets	• Targeting scope 1 & 2 emissions intensity reduction by 2030 from a 30 June 2022 baseline of: – 45% for Infrastructure, and – 60% for Property. • In addition to the emissions intensity target there will be a progressive annual coverage target, whereby there will be an increasing percentage of assets with an individual decarbonisation target and subsequently achieveing those targets.
Infrastructure fund managers	• A 45% scope 1 & 2 emissions intensity reduction target by 2030 on a 30 June 2020 baseline for Infrastructure managed investments plus a commitment to measure absolute financed emissions, where possible, in each fund.
Property fund managers	• A 45% scope 1 & 2 emissions intensity reduction target by 2030 on a 30 June 2020 baseline for Property managed investments plus a commitment to measure absolute financed emissions, where possible, in each fund.
Credit income, Private equity and Fixed income	• Will be baselined on FY23 data and appropriate targets will be set for each of these portfolios to support the overarching 2030 portfolio emissions reduction target over 2023 and 2024.
Additional commitments include	• Overall target review in FY25 (following the original FY20 target) and then 5-yearly thereafter. • Annual review of emissions intensity measurement methodology.

Please refer to Appendix A for more information on our target calculation methodologies.

Sector approach to setting targets – Direct Assets:

Our investment team have developed transition plans supported by a practical guide and asset maturity scorecard, to measure progress. The plan sets out the framework for the decarbonisation of our direct asset portfolios. Key aspects include:

- an initial emphasis on reducing operational (scope 1 and 2) emissions from assets in the Infrastructure and Property portfolios;
- clearly defined decarbonisation targets and their boundaries; and
- establishment of a detailed roadmap and plans for expanding future scope.

The **Climate Transition Guide**:

- defines processes and tasks for the investment teams to operationalise the transition plans;
- covers climate transition risk and decarbonisation management throughout the investment lifecycle; and
- guides use of the asset Climate Transition Maturity Scorecard.

The asset **Climate Transition Maturity Scorecard**:

- provides a consistent methodology to assess an asset's current decarbonisation capabilities and sets out expectations for improvement;
- defines criteria for an asset to be aligned with our climate transition objectives; and
- sets out a scoring approach to track progress by asset and objective.

Portfolio emissions data management project

Aware Super is undertaking a pilot with an emissions data technology platform to commence in early FY24. If successful, this should provide an excellent platform through which to measure, manage and analyse our private markets investments GHG emissions, with roll out to the remaining Private Equity General Partners, Infrastructure, Property and Credit Income over the next 12 months.

Using a carbon management platform will also facilitate strengthening of scope 3 emissions analysis in portfolio companies, required to deepen understanding of a company's pathway to net zero, carbon pricing impacts, potential supply chain transition difficulties, as well as a future reporting requirement.

Aware Super is undertaking a pilot with an emissions data technology platform to commence in early FY24. If successful, this should provide an excellent platform through which to measure, manage and analyse our private markets investments GHG emissions.

Pillar 2: Portfolio transition & resilience

Portfolio transition & resilience refers to:

1. The ability of the portfolio and the investments within it to thrive, maximizing returns and minimizing risk in a global context as the economy, industries and societies shift to be low carbon; and
2. Ensuring that the portfolio and underlying investments avoid where possible, or are better able to cope with, the physical effects and changes from climate change. Building climate resilience means to be better able to "anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate."[i] Strengthening climate resilience must also be considered through the lens of recognition that even current temperature rises, as well as those already locked in for the future through emissions already released into the atmosphere, will result in greater acute events, such as fires, heatwaves, extreme rain events and a higher chance of exacerbated chronic effects such as sea level rise.

Strategic initiatives:

1. Develop and implement a multi-sector investment transition assessment tool.
2. Advance Aware Super's physical climate risk assessment & climate adaptation plans methodology for the most impacted assets.
3. Implement a robust internal carbon pricing methodology across investment sectors.
4. Evaluate listed benchmark options that support transition.
5. Establish a leading climate risk analysis roadmap including climate scenario analysis, asset allocation & stranded asset analysis.

Internal carbon pricing

23% of the world's emissions are currently believed to be covered by a carbon tax or emissions trading scheme.[ii] This number will inevitably continue to climb as countries with emissions reduction targets (140 countries as at November 2022) get closer to their 2030 interim target dates, increasing urgency to take decisive action.

A price on carbon is the most powerful signal to drive emissions reduction and low carbon investment.

As a global investor, a number of our investments will already be subject to a price on carbon. While Australia has a limited price on carbon through the Safeguard Mechanism[3], its recent strengthening is a strong signal for Australian companies that the "polluter pays" principle will increasingly be applied.

Accordingly, while still theoretical for a number of our investments, Aware Super has commenced a project to apply a price on carbon as part of our investment analysis. During FY23, an internal working group was formed with representation from each of the investment sectors, and a sub-group is moving forward with an internal carbon pricing pilot phase, where complex scenario parameters, including carbon prices, escalation over time, pass through by industry and jurisdictional differences in carbon pricing application, will be tested.

Climate scenario analysis

We use climate scenario analysis to gauge financial climate-related risks and uncertainties. While such analyses are complex and theoretical, rigorous analysis can offer a narrative along with quantitative insights. This is valuable when assessing our portfolio's resilience against different possible scenarios.

We first started climate scenario analysis back in 2020.With the belief we could extract deeper insights, we have since established an Investment Climate Scenario Analysis sub-group to better understand global best practice. Following conversations with external consultants, climate analytics providers and fellow institutional investors, we are confident we are able to conduct even more meaningful analysis.

[3] Australia's climate safeguard mechanism: a quick guide – Parliament of Australia (aph.gov.au)

Pillar 3: Investing in climate solutions

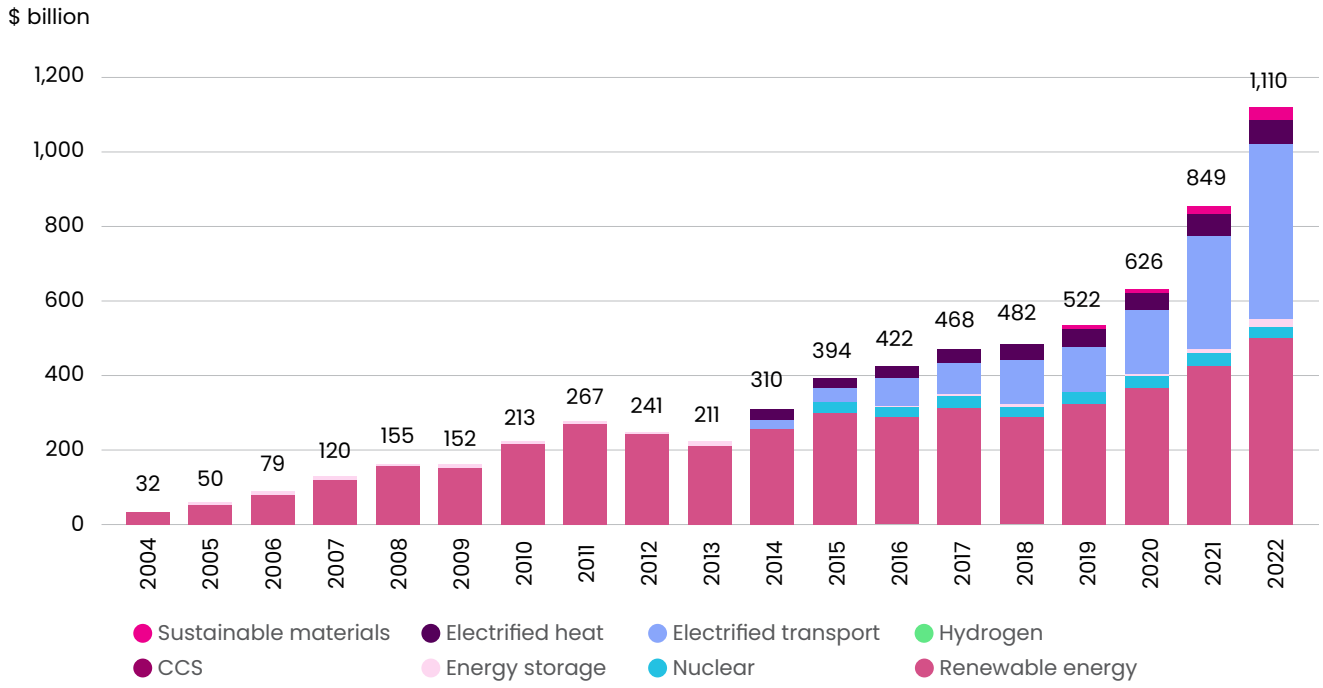
The aim of pillar 3 is to invest in low-carbon opportunities and companies that have a clear decarbonisation pathway.

Strategic initiatives:

1. To be at the forefront of investing in climate solutions and thereby supporting a low carbon economy.
2. Developing an Aware Super framework to measure the impact of our investments as contributors to our decarbonisation goals.
3. Establishing an Aware Super framework to assess, manage and invest in nature and biodiversity.

Investment in the energy transition has been accelerating year on year, as shown in the Bloomberg NEF chart below.

Figure 1: Global investment in energy transition by sector



The financing required to fund the economy-wide transition to net zero is predicted to be vast, estimated in one UNFCCC paper to be between 3% to 6.6% of global GDP per annum or between USD3.4 tr and USD8.1 tr (McKinsey & Co estimate) per annum out to 2050.[iii] The variance in forecast demonstrates the uncertainty and undoubtedly presents investors around the world, including Aware Super, with an enormous investment opportunity.

Spotlight

Investing in climate solutions

Investing in climate solutions may typically be thought of as investing in renewable energy and low carbon industries or companies, which while essential in the transition, is not the only opportunity. Investing to contribute to an economy wide transition however means that more narrow investment lens e.g., of companies that are already lower carbon, must be expanded to also include companies that may not be low emissions themselves. This may include products or technologies that help lower emissions elsewhere in the economy but may not be low emitting themselves or may include high emitting companies that need significant financing to help them transition. Without this important capital these companies and industries may not be able to transition as rapidly, or at all. For an asset owner with decarbonisation targets and commitments however this presents a complexity in that investing in these companies may result in noteworthy increases in financed emissions over the short to medium term.

An unintended consequence of having emissions reduction targets however cannot be to reduce diversity of investments, which would introduce greater concentration risk into the portfolio, or to avoid investments in companies or sectors that desperately need investment to transition. If these companies do transition, they will have an overall positive contribution to economy decarbonisation. To avoid this unintended consequence, alternative approaches to investment may be required, for instance within a "transition investment" sector or investment tranche. It is acknowledged that there will likely be year on year volatility of emissions but it is important that Aware Super invests in companies to support their transition and should not avoid investing in an otherwise attractive investment on the basis of current emissions alone. Again, a separate transition investment tranche may further reduce this risk. A final mitigant is that one of Aware Super's key headline targets is to support an economy wide reduction in GHGs of 45% by 2030. If high emitting and hard to abate industries do not receive sufficient investment to enable them to transition, this target will not be achieved.

Case study

Examples of our investment in climate solutions

Private equity: Rumin8

Rumin8 is an Australian start-up agri-tech company which has developed a dietary supplement that reduces methane in livestock. Meat and dairy production emits high amounts of methane - a major contributor to global warming. Rumin8 has plans for a pilot plant which aims to initially produce 25,000 feed supplements a day, with the potential to produce millions of supplements in a short timeframe.

Infrastructure: Generate

We invested in US-based infrastructure projects platform Generate in 2021 and increased our investment in 2022. Generate finances, owns and operates sustainable infrastructure in the areas of power, waste, water, transport and sustainable cities. Its focus is on delivering affordable, reliable resource solutions which positively impact greenhouse gas emissions. It has investments in renewable energy, energy storage and efficiency, microgrids, hydrogen infrastructure and electric vehicles.

Spotlight

Assessing, managing and investing in nature and biodiversity

Aware Super recognises biodiversity as an emerging theme that warrants prioritisation given the impact of climate change on nature and the interconnectedness of these themes. Nature provides most of the capital that commerce requires to produce goods and services. A World Economic Forum report estimates that over half of the worlds GDP is generated by industries dependant on nature.[iv] The World Bank estimates by 2030 if nature loss is not halted, we could see an economic decline of USD2.7 tr or a global GDP decline of 2.3%.

While natural capital is similar to other forms of capital – financial, built (or physical), human and social capital, all of which can produce economic outputs, it is different from other sources of capital in that it is not produced. The term natural capital is also used to describe elements in nature that provide benefits called ecosystem services.

Ecosystems services include CO_2 sequestration, protection from soil erosion and floor risk, wildlife habitat, pollination, and spaces for recreation. The natural inputs that create these systems can be termed "assets".

Biodiversity applies to living organisms and is part of natural capital. The world is experiencing increased levels of extinction of species. In its 2023 Global Risk Report, the World Economic Forum lists biodiversity loss and ecosystem collapse as one of the fastest deteriorating global risks over the next decade, with investors seeking to understand how to manage and address the financial risks to investee businesses. Biodiversity is interlinked with the environment and the climate, and on many levels, drives the change as much as it is affected by the climate changing.

As Aware Super continues to build out its understanding of our investment portfolio's impact on and exposure to biodiversity loss, the fund will engage with investee companies, assets and managers on their approach to measuring, monitoring and managing biodiversity. Additionally, a framework will be developed to ensure Aware Super can meet Taskforce for Nature Related Disclosure (TNFD) reporting requirements, anticipated to be required by FY25.

Pillar 4: Be a leader in company climate engagement

The aim of this is to engage with companies to help them to decarbonise.

Strategic initiatives:

1. Implement an active climate engagement strategy that includes a strong framework approach to:
    a. engagement with listed companies
    b. voting on climate-related issues
    c. engagement with fund managers – listed and unlisted
    d. engagement with directly owned assets.
2. Actively engage on and support a fair and equitable transition for workers and their communities.

We hold investments in thousands of companies spanning virtually every sector and region. Where it will be most impactful, we engage with companies to influence change.

Listed equities, which accounted for over 50% of our financed emissions in 2020, are a priority for us. Direct engagement, collaboration and working with our fund managers is crucial to our decarbonisation.

As we move to net zero, there will be moments when climate-related investment decisions are called into question. For example, where climate engagement efforts fail or prove ineffective.

With our primary obligation to always act in the best financial interests of our members, we will re-evaluate and adjust our allocations in investments, where appropriate, as the future unfolds.

A critical focus on a fair and equitable transition must flow through Aware Super's investments and engagement with those investments, where appropriate. The workstream call out below provides more detail around consideration to an equitable transition and how Aware Super may best facilitate that.

Spotlight

Climate engagement with Australian listed companies

We have developed a bespoke Australian Equities engagement plan to support this transition plan, and our overarching engagement strategy.

Climate engagement has two primary goals:

1. To reduce emissions in the Aware Super listed Australian equities portfolio; and,
2. To preserve value in that portfolio in the context of a changing climate and through the energy transition

The engagement plan sets out to:

- explain the purpose of engaging with companies on climate risk;
- identify which companies should be included in the climate engagement universe;
- categorise which companies to prioritise for direct engagement activities versus those companies where engagement via collaborative initiatives, such as with our engagement provider, the Australian Council of Superannuation Investors (**ACSI**), are deemed likely to be more effective;
- define overarching objectives for each priority level of engagement;
- outline how progress will be tracked on objectives including any voting or escalation implications;
- outline the approach to communicating this progress with stakeholders, including fund managers; and
- consider policy and advocacy initiatives Aware Super can contribute to or participate in to facilitate better outcomes.

Overarching climate engagement objectives:

The below three categories do not include every objective for every company, however broadly, they have been grouped as follows:

1. Emissions reductions, transition planning and performance, physical climate risk (where appropriate) and just transition (where appropriate) objectives.
2. Aligning financing to customers who can demonstrate emissions reductions or credible and ambitious transition plans.
3. Emissions disclosures, and transition or physical risk disclosures and management, as well as just transition objectives (where appropriate).

Objectives, regardless of which companies they apply to, must on balance:

1. Contribute to meeting Aware Super's portfolio emissions reductions targets; and
2. Be in the best financial interest of members by preserving investment and portfolio value by ensuring their approach to a transitioning economy and physical risk is appropriately managed.

Spotlight

Actively engage on and support a fair and equitable transition

Aware Super has been an active participant in the development of a framework to guide an asset owner's role in securing an equitable and just transition for as many workers and communities as possible in the investments owned within the portfolio. In 2021, Aware Super, along with other asset owners, commissioned Investor Group on Climate Change (IGCC) and EY to help establish guiding principles for the **role of the investor in a just transition**. As outlined in the Climate Engagement Plan extract above, these principles are applied to listed equity engagement objectives, where applicable. As work force and associated community impacts arise for directly owned assets during the transition, these principles will again be applied.

It is acknowledged that the transition will inevitably not be fair and equitable to every community or displaced worker. Aware Super commits to supporting a just, fair and equitable transition as much as possible within the sphere of influence held, through initiatives such as the ACSI Just Transition working group membership and public policy input via IGCC, ACSI, Responsible Investment Association Australia (**RIAA**) and other relevant collaborations (such as anything forthcoming through the federal governments Net Zero Authority). Aware Super commits to continuing to take guidance from organisations such as the ACTU with their ongoing work to secure a just transition for their workers and industries.

Climate engagement with global listed companies

Engagement on global companies is undertaken by Aware Super's partner Federated Hermes Eos (Eos). Eos' environmental engagement strategy includes issues such as climate change, pollution and waste management, forestry and land use, water, and supply chain management. Eos are currently engaging with 346 companies across their environmental strategy, and are also involved in policy and advocacy work related to climate, as well as being a part of CA100+[4].

Climate engagement with external fund managers

The Responsible Investment team has established a process whereby fund managers are surveyed and assessed on their approach to managing climate related risks in their investment process. The Responsible Investments team will identify and engage with managers where assessment indicates that they are not meeting fund expectations on the integration of climate related risks into their investment processes.

[4] www.climateaction100.org/

Pillar 5: Having an influential voice in climate policy & advocacy

Aware Super is proud to be an active contributor to relevant policy, advocacy, market development and education forums related to climate change and investment. These contributions have been referenced under previous pillars. As more initiatives emerge, with the inevitably increasing focus on climate in investments, developing a clear measure of impact and outcome alignment from these forums will be critical to ensure the most effective use of time.

Strategic initiatives:

1. Having an influential voice through active participation in policy, advocacy, education & communications
2. Actively participate in climate policy development with a focus on government policy specifically IGCC and ASFI Green Taxonomy
3. Convene and contribute to internal and external education forums
4. Deliver clear and transparent climate reporting including TCFD, TNFD & ISSB
5. Proactively participate in climate related communications

Climate advocacy and policy work

Climate advocacy and policy work includes working with the IIGCC by participating in working groups such as the Physical Risk and Resilience, Climate Policy and Energy Transition working groups. Additional engagement is occurring with the Australian Sustainable Finance Taxonomy development and through ACSI and RIAA.

Disclosure

In addition to the annual TCFD reporting on Aware Super's climate action and progress against targets, the forthcoming addition of ISSB (specifically the S2 Climate-related Disclosures module) likely from FY24 and the TNFD, likely from FY25, presents a new world order for climate related risks and opportunities disclosure. While recognising there will be challenges and areas of analysis and reporting that do need to be developed, this must be seen as an opportunity to advance understanding of climate and nature related risks and opportunities in the portfolio and develop meaningful action plans to improve outcomes, with all peers moving towards being on a level playing field.

Refreshing our strategy

In order for us to continuously and positively contribute to decarbonisation and climate resilience; while acting in the best financial interest of members; we will have to embrace continuous change, while considering our fiduciary duty. This will inevitably include how investments are assessed and managed throughout the full lifecycle, and how climate and associated risks are assessed and interpreted, in addition to consideration to society, communities and people, within investment and portfolio-related decisions. The future will bring new challenges and it cannot be expected that the future investment paradigm will remain static and look like that of the past.

Critical Climate Science Updates

The 2020's have been described as one of the most important decades in which to tackle climate change. Consequently, it was felt important to provide a synopsis of the climate science, particularly updates that have occurred since the previous strategy, in the main body of this Transition Plan to support and substantiate the strategy pillars and strategic initiatives recommended in this paper.

The IPCC Chair in 2022 stated "We are at a crossroads. The decisions we make now can secure a livable future".[v] What global economies choose to do in the 2020's from an emissions perspective will determine the warming impact, with every fraction of a degree of warming resulting in greater climate hazards from extreme weather events, biodiversity and human health.

In March 2023, the IPCC released its final summary of its sixth assessment cycle, a culmination of the 3 separate working group reports on 1) The Physical Science Basis; 2) Mitigation of Climate Change; and 3) Impacts Adaptation and Vulnerability.

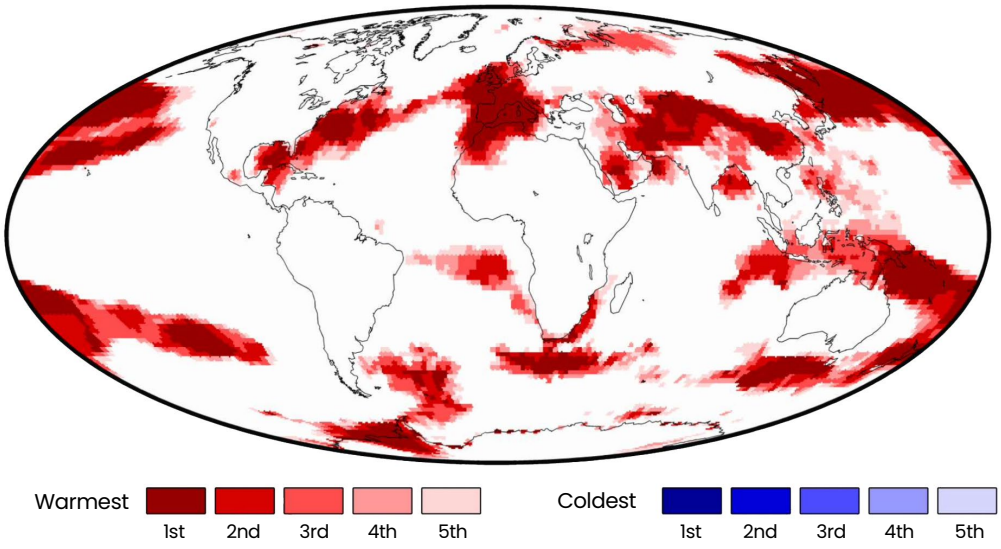
The key take aways from this report were:

- Human activities, principally through emissions of GHG created primarily through the burning of fossil fuels, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850–1900 in 2011–2020
- Global GHG emissions in 2030 implied by country commitments under the Paris Agreement make it likely that warming will exceed 1.5°C during the 21st century and make it harder to limit warming below 2°C
- Most climate-related risks identified in the previous major IPCC report in 2014 (just prior to the Paris Agreement) have been upgraded and are projected to be "multiple times higher than currently observed". The report continued to state that "risks and projected adverse impacts and related losses and damages from climate change escalate with every increment of global warming"
- All modelling showed that to limit warming even to 2°C "involve rapid and deep and, in most cases, immediate greenhouse gas emissions reductions in all sectors this decade." Under the IPCC 2°C, net zero emissions is reached in the early 2070s
- "There is a rapidly closing window of opportunity to secure a liveable and sustainable future." "The choices and actions implemented in this decade will have impacts now and for thousands of years."
- Rapid and far-reaching transitions across all sectors and systems are necessary to achieve deep and sustained emissions reductions. Delaying emissions reduction and climate adaptation will increase risks of stranded assets and will increase risks of loss and damage due to climate
- Finance is essential to enable accelerated climate action. While the IPCC believes there is sufficient global financing to fill the current climate mitigation and adaptation financing gap, to achieve the required climate goals, financing for adaptation and mitigation must be increased by many multiples

In 2021 the International Energy Agency (IEA), an energy forum of 29 OECD countries, released its **Net Zero by 2050** report as a roadmap for decarbonisation for the global energy sector. Some key outcomes were concluded from this work including all unabated coal and oil plants should be retired by 2040 and electricity should be net zero globally by 2040. The most significant recommendation from the paper was that from 2021, no new oil and gas fields should be approved and no new coal mines, mine extensions or unabated coal plants should be approved.

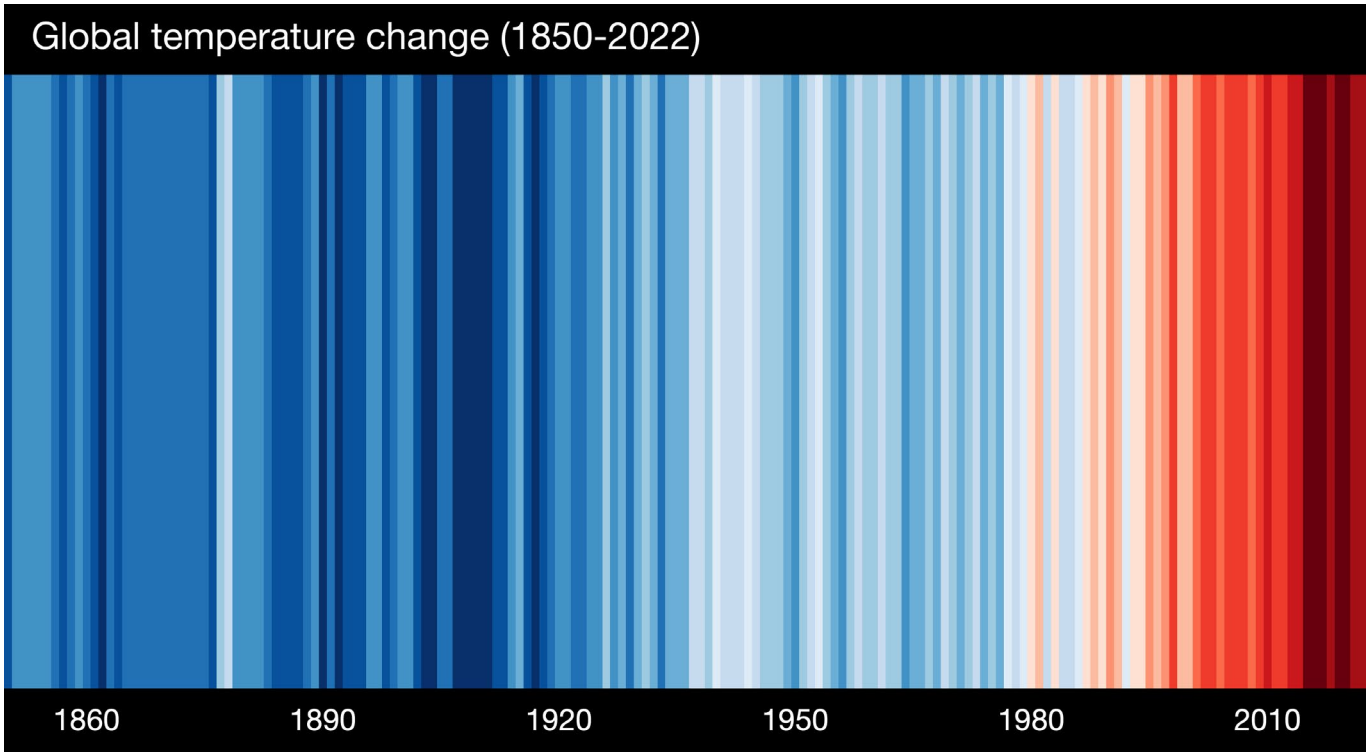
Monday 3 July 2023 was globally the hottest day in recordable history. While one day doesn't create a trend, as El Niño has also been declared for 2023, this temperature record is likely to be broken again[vi]. Additionally, the last eight years were more than 1 degree warmer than pre-industrial times. Of the first 23 years of this century, 22 were the hottest ever (1998 beat 2000) and in 2022, while only the fifth warmest on record, for 28 countries it was the hottest year on record, including China, the United Kingdom, Spain, France, Germany and New Zealand. The trend is very clear.

Figure 2: Annual average temperature rankings in 2022[vii]



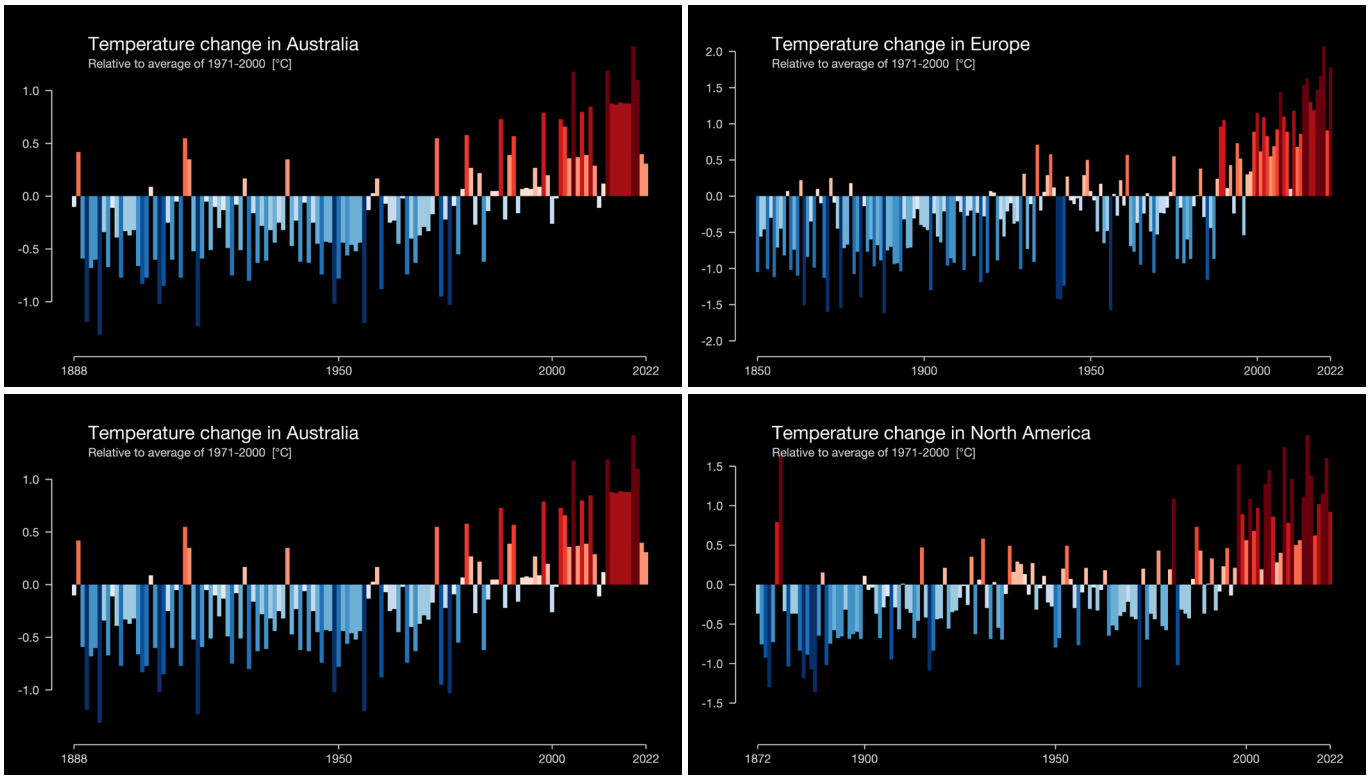
Among the countries that experienced their hottest year on record in 2022 were Afghanistan, China, France, Germany, Ireland, Italy, Morocco, New Zealand, Spain, the UK and Tunisia. Source: Berkeley Earth.

Figure 3: Global temperature changes 1850-2022[viii]



The red stripes in the chart above show the rise in average temperature above the baseline period. The below charts, chosen for our high investment significance areas, demonstrate that this is not limited to one geographical region.

Figure 4: Temperature change charts for Australia, Asia, Europe, North America relative to 1971-2000 average[ix]



What is the significance? Year on year the scientific and physical evidence is building an increasingly unequivocal demonstration that virtually every country and region is on a rapidly warming trajectory. This warming is increasingly associated with unnatural extreme weather events, warming oceans, melting polar ice, species extinction and biodiversity decline and loss.

Emissions

There is little remaining doubt that limiting human derived global warming requires rapid reduction in GHG emissions and to net zero by mid-century, or as close to thereafter.

Globally, in 2022 energy is reported to have produced c.87% of global GHG emissions, due to over 80% of the worlds energy consumption still made up of fossil fuels. In 2022, global energy derived GHG emissions reached record highs, producing 39.3 billion tonnes CO_2e.

Figure 5: World consumption of primary energy

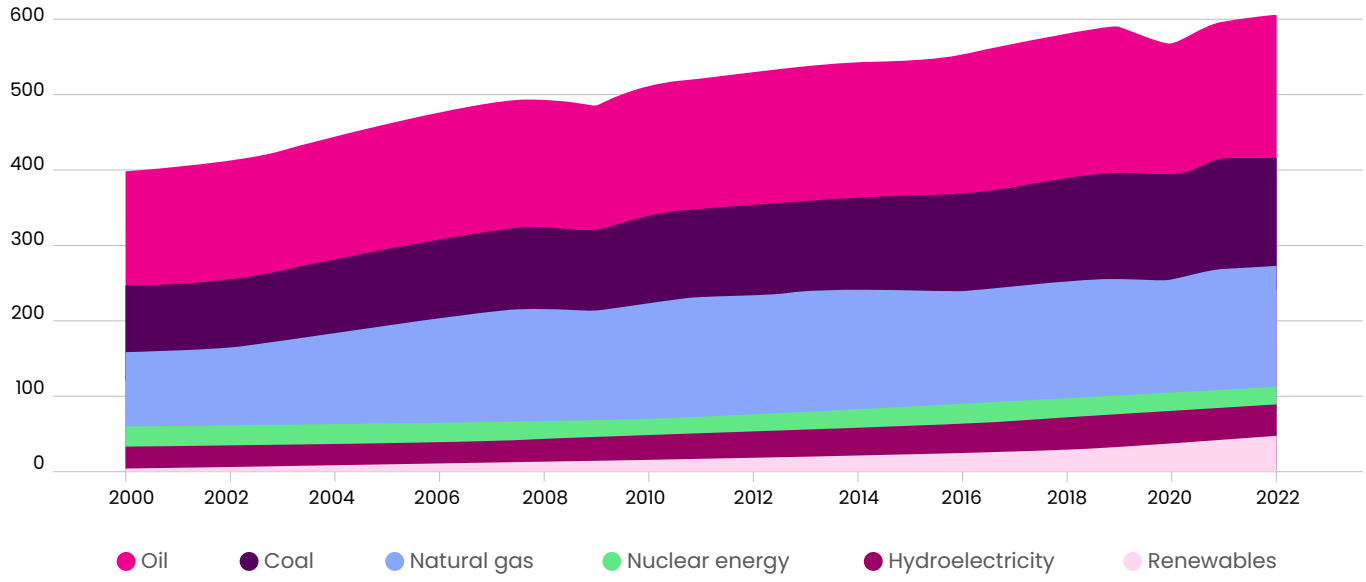
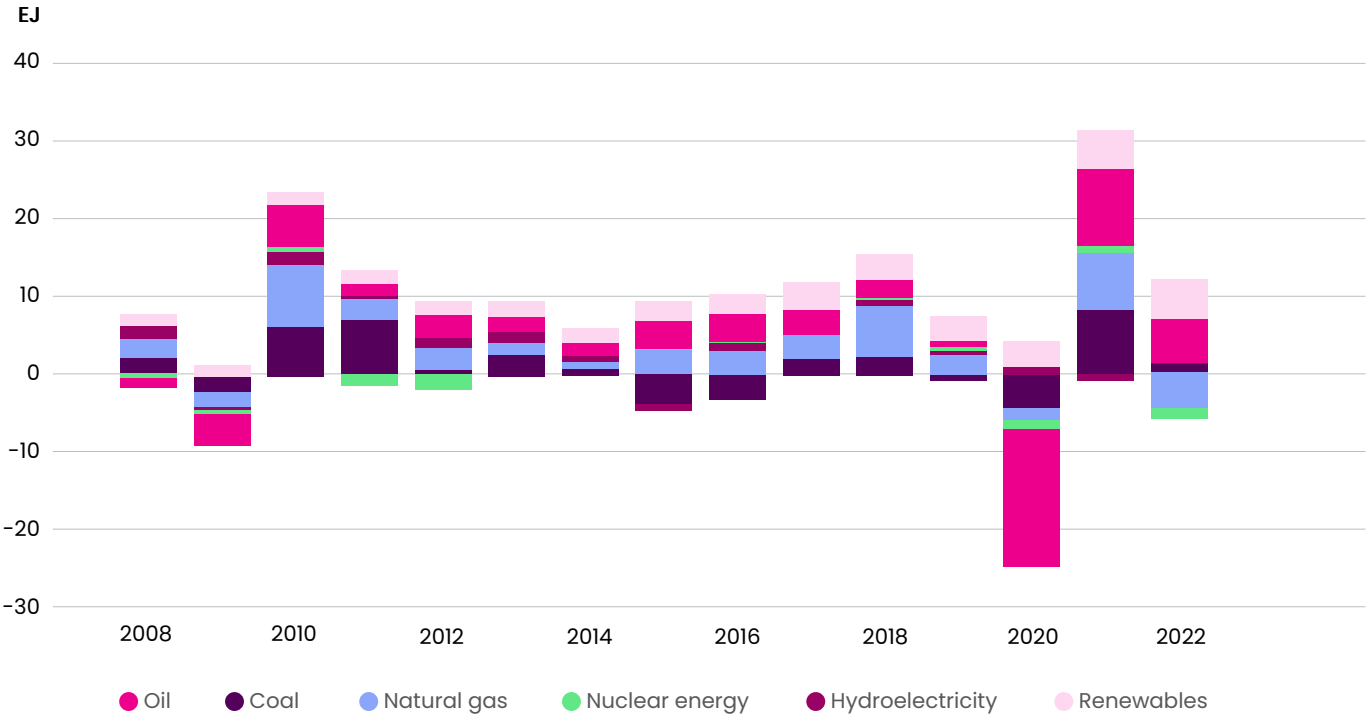


Figure 6: Change in primary energy by fuel



The conclusion that should be taken from the current climate science is that to avoid the most catastrophic impacts on the world and society there is significant urgency to convert intent into action to tackle global emissions and corresponding temperature rise.

While progress on renewables has been noteworthy, they still only produce c.7.5% of global energy consumption (excluding hydro), noting that in Australia, 35% of the National Electricity Market electricity generation was produced by renewables in 2022, however c.96% of Australia's energy consumption (e.g. electricity plus industrial) continues to be coal, oil and gas.[X]

On a positive note, however, economic growth is reported to have been 3.2% versus a 0.9% growth in emissions, on the back of a 1.1% increase in energy demand. This may encouragingly indicate early signs of economic and energy demand decoupling.[X1]

Taken from the IPCC report however, the emissions produced this decade essentially will determine if global warming can be limited to between 1.5 and 2°C, which is looking less likely given forecast CO^2e emissions from existing, unabated fossil fuel infrastructure alone would exceed the remaining carbon budget for 1.5°C.

The conclusion that should be taken from the current climate science is that to avoid the most catastrophic impacts on the world and society there is significant urgency to convert intent into action to tackle global emissions and corresponding temperature rise.

Appendix A

Target calculation methodology

45% reduction in scopes 1 & 2 emissions intensity in our investment portfolio by 2030

- Emissions intensity is a calculation made that expresses the volume of Aware Super's share of the investee company's emissions, weighted by the AUD million share of Enterprise Value (including cash or EVIC) that Aware Super holds.
- Emissions intensity is expressed as tonnes CO_2e / AUD M invested.
- The company's emissions Aware Super is responsible for is based on the company's emissions being shared equally throughout the capital structure e.g., shared equally per dollar invested in debt or equity
- Following extensive consultation, the target metrics selected used the emissions intensity methodology. This was chosen as a consistent target measure across all relevant Aware Super investment sectors for the following reasons:
  - Ease of comparability of companies and portfolios to each other and to the relevant benchmark.
  - Accommodates year on year differences in investment size, acquisitions and divestments, as it's an averaged number for any given portfolio of assets. This makes it a significantly more simplistic calculation than adjusting baselines for changes in portfolios occurring in subsequent years, such as fund mergers, or large investment changes.
  - Relatively simple to communicate.
  - Simple to compare data year on year.
- The key negatives of this methodology are:
  - Changes in underlying companies' market capitalisation can be misinterpreted, particularly for listed equities. The calculations are made on a designated day – the emissions are typically annual however the financed emissions, or Aware Super's share of those emissions, are calculated on value typically at market close on a given date e.g. financial year end. Particularly in listed equities this introduces significant volatility which can flow through to the emissions intensity calculation, whilst having nothing to do with actual changes in real emissions. Indeed, sizeable increases or decreases in an individual company's emissions intensity may occur without any real-world impact on absolute emissions.
  - Emissions intensity may decrease however it does not guarantee absolute emissions reduction and therefore may not contribute to the necessary economy-wide decarbonisation.
- While a number of the targets have been proposed using emissions intensity, this should not be a set and forget. As part of this strategy, Aware Super will look to undertake a target review at the end of FY25, including a methodology review, compared to current best practice at that time

Absolute Emissions

- Absolute emissions are calculable greenhouse gas emissions associated with a portfolio, expressed in tonnes CO_2e. As an asset owner, these absolute emissions will be apportioned relative to the investment percentage held of the capital structure.
- An absolute emissions target typically consists of a set quantum of metric tonnes of emissions a company must reduce by from a baseline year by a given target year. This may be expressed as a % of the baseline amount.
- The benefits of this methodology are that real world changes in emissions can be more transparently seen. On the downside however real complexity is introduced when portfolio adjustments to the baseline year need to be made e.g., as a result of fund mergers or large asset acquisitions / divestments.
  - It was this complexity that led Aware Super targets to be first and foremost emissions intensity.
  - A recommendation to track absolute emissions across each sector however has also been made, as a way to better understand the contribution of Aware Super to a broader economy wide decarbonisation effort.

Ideally both calculation methodologies would include all GHGs, however it is recognised that as data calculation methodologies are still in their relative nascence for most companies, CO_2 will likely remain the prominent GHG calculated in the near term.

Net Zero by 2050

- For Aware Super, net zero must consider all GHGs, not just CO_2, due to the warming potential all GHGs have on the atmosphere. Additionally, it must cover all sectors in the economy, including the hard to abate sectors and sectors currently frequently excluded such as agriculture
- It is acknowledged that the pathway to net zero is not clear at this stage. Technology advances, global politics and policies and the future physical impacts of climate change will all influence the final net zero pathway and these are currently not certain
- Equally it is recognised that it is unlikely all GHGs can be removed from the economy by 2050, however 2050 should see a significant proportion of overall emissions reduced
- Net zero does not just mean at 2050, it means there needs to be a credible pathway of decarbonisation occurring from now through to 2050
- It is recognised that not all global emissions can be eliminated, even in a low carbon economy. In a net zero world, and to achieve a net zero portfolio, any residual emissions through financing activities must be neutralised through "activities that permanently remove an equivalent amount of atmospheric carbon dioxide".[xii]
- The Science Based Targets Initiative (SBTi) states that companies may choose to offset their emissions as they transition towards net zero, however companies must reduce their emissions by at least 90%. The residual <10% that cannot be removed from the business may be offset through an equivalent quantum of permanent carbon removal.

The pathway to net zero will inevitably be uneven and Aware Super's net zero trajectory could regularly change as a result of both organic growth and mergers with other funds. There are going to be ongoing risks to achieving the climate target milestones and Aware Super will not be alone with this risk. The cost on the planet of doing nothing and the negative impact we would inevitably see on members long term returns means doing nothing to reduce real world emissions is not an option.

Sector targets additional detail

Listed equities

Rationale for a scope 1 and 2 emissions intensity target is the simplicity of accounting for fund manager additions and divestments, as well as new super fund mergers. As outlined, continued measurement and management of absolute financed emissions is also important to understand how Aware Super's listed investments are contributing to real world emissions.

- The calculation methodology for the listed equities target has been updated from the previous 2019–2023 target, in line with developments in globally accepted calculation methodologies.
- The proposed updated calculation methodology, alongside an inflation adjustment has been agreed with the belief that this is the most appropriate, at this time. Recognising this is a dynamic space, close attention will be paid to directives/recommendations, particularly in Europe as a leader in this space. It is proposed an annual methodology review be undertaken at annual reporting time.
- This target should be formally reviewed at FY25 and at a minimum every 5 years thereafter, in line with global standards. An interim target is anticipated to always be in place for the listed equities portfolio as it moves towards the 2050 net zero target.

It is recognised that:

- this target should deliver our members the best financial returns in a decarbonising world and economy;
- year on year there will inevitably be fluctuations up or down in the listed equities portfolio[s] emissions intensity due to changes in fund managers, market valuations and investment strategies (decarbonisation and non-decarbonisation related, as we have seen in FY22/23 with the resources strategy); and
- Proactive and effective climate engagement and climate engagement targets will be a fundamental part of achieving this target, particularly for our highest emitting and hardest to decarbonise listed equities and fund managers.

Direct Assets

- The Infrastructure and Property Direct Assets 2030 targets have been set following detailed bottom-up work with the individual assets and the investment teams.
- The individual targets for infrastructure and property reflect the aggregate of the current assets in each of the portfolios, their projected growth and their projected decarbonisation on the basis of board approved targets and pathways.
- Emissions intensity targets have been chosen to achieve a balance between decarbonisation effectiveness and ease of implementation, particularly around asset divestment and acquisition.
- In addition to the emissions intensity targets outlined for Infrastructure and Property investments, there will be a progressive, annual coverage target, whereby there will be an increasing target for the percentage of assets having, and achieving, their individual decarbonisation targets. The coverage targets will be set annually. This approach is consistent with the best guidance such as the Net Zero Investors Framework.

Infrastructure and Property Fund Managers

- For Property Fund Managers, a 45% emissions intensity reduction target, plus a commitment to measure absolute financed emissions, has been proposed. This is in contrast to the 60% emissions intensity reduction in the direct assets. This differential is a result of having a lower look through, forecasting and influence for the managed assets versus a relatively higher degree of control in its direct assets.
- Further engagement and collaboration will be undertaken with both Infrastructure and Property fund managers to better understand their emissions reduction targets and proposed roadmap to achieve those reductions. This will, along with future annual financed emissions measurement, enable the Aware Investment and Responsible Investment teams to calculate a more realistic bottom-up target to 2030 and beyond and establish appropriate engagement plans with the fund managers.

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