TelstraSuper Climate Change Report 2021

April 2022

Message from the Chief Executive Officer

Welcome to the TelstraSuper 2021 Climate Change report. We are pleased to share this inaugural report with you, highlighting the many ways TelstraSuper is committed to attaining the goals of the Paris Agreement.

TelstraSuper aims to support its members to responsibly grow and protect their superannuation savings to enjoy financial security in retirement.

We consider an important factor in achieving this aim is recognising the risks of climate change and carefully making investment decisions with relevant climate-related risks in mind. This is a responsibility we take seriously.

As a long-term investor in Australian and global financial markets across different asset classes and sectors of the economy, we presently manage around $25 billion of assets on behalf of our members.

Large investors such as TelstraSuper have an important role to play in minimising the impact of climate change where possible. As a significant investor, we can, where it is in the best financial interests of our members to do so, seek to influence the future while proactively managing risk in our portfolios.

While we understand it's not possible in all circumstances to exclude climate risk in our investment portfolio completely, we recognise that the risks of climate change must be actively assessed and managed to protect long-term returns for our members.

While governments are responsible for setting policy that determines the longer-term climate trajectory, the private sector, including investors such as TelstraSuper, has a significant role to play in mitigating climate change. We actively search for opportunities where we can invest capital in climate change mitigation and adaptation solutions where those solutions are to the financial benefit of our members.

Net zero emissions goal by 2050

In March 2021, we announced our goal to achieve net zero greenhouse gas emissions within our investment portfolio by 2050, with interim targets of reducing emissions by 45% by 2030. This commitment is consistent with our objective of helping to provide a secure financial future for members.

Our 2050 and interim emissions reduction goals align with what the scientific consensus informs us are required to limit global average temperature increases to well below 2.0°C compared to pre-industrial levels. These goals align with those targets agreed by Australia and other nations under the Paris Agreement.

To deliver on our goals, we have developed and commenced implementing a Climate Change Action Plan. This Plan outlines 25 actions relating to governance, investment portfolio construction, asset manager selection, stewardship and disclosure.

In 2021 we started implementing the Climate Plan, with 21 of the 25 initiatives underway. Most notable is the achievement of a 15% reduction in carbon emissions across our listed equities investment portfolios for the 12 months to 1 October 2021 due to portfolio construction decisions. This means we are well on track to achieve our interim 2025 and 2030 goals.

We also adopted a net zero target for TelstraSuper's own activities as part of the Plan. Pleasingly our business operations were certified carbon neutral by Climate Active in June 2021.

> **"We recognise that the risks of climate change must be actively assessed and managed to protect long-term returns for our members."**

Climate change management and disclosure

Measurement, assessment and disclosure are critical to managing the systemic risks associated with climate change. We support the climate risk disclosure recommendations published by the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) in 2017. We also encourage our investee companies and external asset managers to support and disclose in alignment with the TCFD recommendations.

The Australian Prudential Regulation Authority (APRA) recently released its prudential guidance for managing and disclosing climate change financial risks (CPG 229).[1] While the guide does not prescribe any single way of doing things, we note that requirements for financial institutions such as TelstraSuper are closely aligned to the recommendations proposed by the TCFD.

TelstraSuper recognises the importance of acknowledging the risks of climate change and playing our part in doing what we can to mitigate these for the benefit of our current and future members.

Chris Davies
Chief Executive Officer

[1] APRA, November 2021, Final Prudential Practice Guide CPG229 Climate Change Financial Risks.

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About this report

In 2017, the Financial Stability Board developed the Task Force on Climate-Related Financial Disclosures (TCFD) reporting framework to help companies understand what financial markets want from public financial disclosures regarding climate change risk management. Since its release, the TCFD framework has become the accepted standard for climate-related reporting for financial market participants, including investors.

This is TelstraSuper's inaugural TCFD aligned report. It documents our climate change-related activity and progress to the end of December 2021 and outlines our plans for 2022 and beyond.

Our approach to climate change

TelstraSuper's fundamental objective is to enhance responsibly the financial security of our members in retirement. TelstraSuper seeks to incorporate the analysis of material Environmental, Social and Governance (ESG) considerations in our investment processes. We support the development of a more sustainable global economy and the attainment of the Paris Agreement on climate change.

We believe that climate change is a systemic risk that needs to be pro-actively managed to help provide a secure future for our current and future members. As a large investor, we can, where it is in the best financial interests of our members to do so, seek to influence what the future looks like while managing risk in our portfolios.

In February 2021, we launched our Climate Change Action Plan (CCAP), with the goal of achieving net zero greenhouse gas emissions within our investment portfolios by 2050. The CCAP sets out three high-level goals, as outlined in the diagram below.

A five-pillar framework, as depicted below, was developed to guide TelstraSuper's actions to achieve these goals.

Twenty five actions items have been identified for delivery during the first three years of the plan. These are outlined in more detail in *02 Progress and next steps*.

A more detailed overview of the CCAP, our pathway to 2050 and our progress to date are outlined throughout this report.

TelstraSuper's three climate-related goals

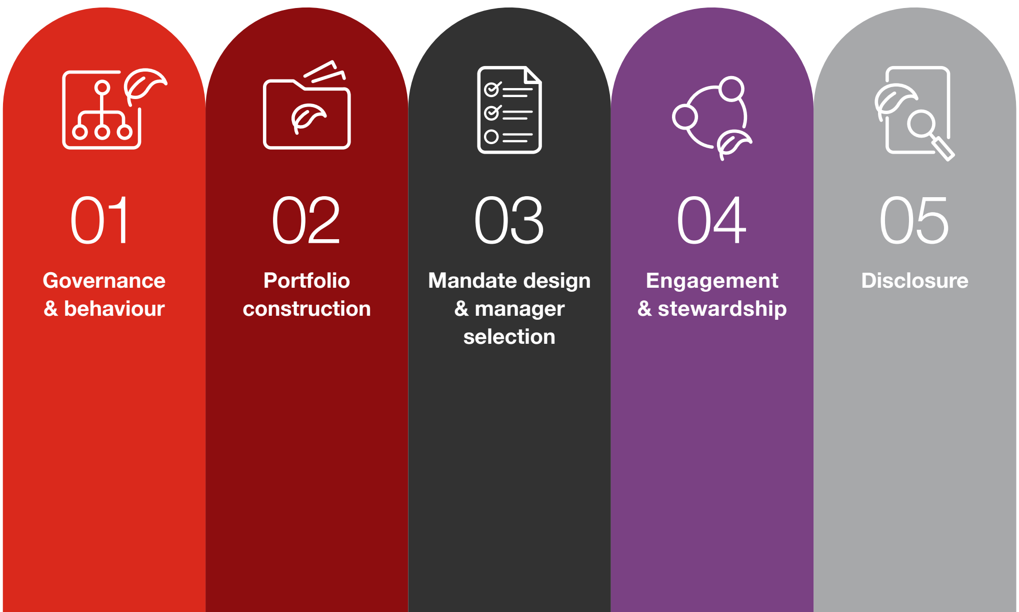
20
50

Achieve **net zero greenhouse gas emissions** by 2050, aiming for a 45% reduction (from current levels) by 2030.

Build **portfolio resilience** to the physical impacts of climate change across asset classes.

Proactively invest in opportunities expected to be net beneficiaries of the transition to a net zero emissions world.

Five-pillar Climate Change Action Plan Framework



Our Net Zero by 2050 pathway

2023

Disclosure of the first total portfolio quantitative report and a targeted **10% reduction** in listed equity assets' greenhouse gas (GHG) emissions.

2025

Further **15% reduction** in combined GHG emissions of listed assets, alternatives (including private equity) and corporate debt.

2030

Further **20% reduction** in portfolio GHG emissions of listed assets, alternatives (including private equity), corporate debt and real assets (infrastructure and property). Advocate and support economy-wide 45% reduction in GHG emissions in Australia.

2040

Further **30% reduction** in combined GHG emissions of listed assets, alternatives (including private equity), corporate debt and real assets to achieve Net Zero GHG Emissions.

2050

Remaining 25% in total portfolio emissions to achieve Net Zero GHG Emissions.

Progress and next steps

02

This section outlines the 25 action items of the CCAP and tracks implementation progress. In 2021 we commenced 21 of the initiatives and developed a work plan for the remainder.

Action	Progress	Comment
Governance and behaviour		
Investment Committee oversight and Board approval of the Plan, with annual review.	Executed	Approved in 2021.
Update all investment and climate change policies and purpose statements to reflect the Plan.	Executed	Sustainable Investment Policy updated.
Review incentives to align with the goals of the Plan.	Executed	Achievement of CCAP embedded within investment team variable reward.
Bolster resources to implement the Plan.	Executed	Resources have been added to the Investment Management team.
Develop climate change skills of Board, Investment Committee, management and investment team.	In progress	Over the course of 2021, members of the Investment team undertook structured and informal learning on climate change. The Board attended a climate forum facilitated by the Investor Group on Climate Change in December 2021.
Adopt and implement net zero operational emissions for TelstraSuper's own activities.	Executed	Business operations certified carbon neutral by Climate Active in June 2021.
Portfolio construction		
Update climate change scenario analysis on an annual basis, including a net zero emissions scenario.	In progress	Portfolio level scenario analysis (transition risk) complete. Physical risk assessment is planned to be undertaken.
Review potential portfolio construction initiatives to manage climate risk exposures.	Executed	Equities allocations modified and other asset classes under consideration.
Invest in low carbon opportunities or other opportunities that are expected to benefit from a transition away from fossil fuels.	Executed	Achieved and further investment is being considered.
Divest from pure-play thermal coal producers.	Executed	Prime focus thermal coal produces excluded from listed equities portfolios.
Amend passive benchmarks to reduce greenhouse gas emissions in Australian and International listed equity holdings.	In progress	Optimisation of passive benchmarks is still being explored. Primary focus thermal coal producers have been excluded.
Analyse physical impact risks of the portfolio.	Work plan developed	Formal assessment not yet commenced.

Key Executed In progress Work plan developed

Action (cont.)	Progress	Comment
Mandate design and asset manager selection		
Update guidelines for external mandates to incorporate climate change expectations.	🗎	Work plan developed.
Incorporate climate metrics into in-house management processes.	→	Emissions profile of internally managed portfolios are being monitored.
Evolve external asset manager selection criteria to incorporate climate goals.	→	Ongoing.
Enhance external asset manager review criteria to incorporate climate goals.	→	Ongoing.
Review asset managers and mandates that are not prepared to commit to TelstraSuper's Climate Change objectives.	🗎	Work plan developed.
Engagement and stewardship		
Engage with external asset managers, encouraging adoption of net zero emissions by 2050 goal.	→	Ongoing.
Engage with highest risk companies via CA100+ and through direct engagement.	✓	Ongoing.
Participate in public policy advocacy (ACSI, IGCC, PRI).	✓	Ongoing.
Align proxy voting outcomes on climate-related resolutions.	→	Formalisation of decision-making criteria required.
Engage with service providers to encourage adoption of net zero emissions by 2050 goal.	🗎	Work plan developed.
Disclosure		
Disclose in alignment with TCFD recommendations across all asset classes.	✓	This report represents the first TCFD disclosure report.
Collaborate to improve industry-wide disclosure and action, including participating in the Climate League 2030 initiative.	✓	Signed on to Climate League 2030 and issued the first progress update at the end of November 2021.
Incorporate our climate change actions and outcomes into member communication and engagement.	✓	Commenced and ongoing.

Key ✓ Executed → In progress 🗎 Work plan developed

Governance

As a long-term investor, TelstraSuper believes it is in the interests of our members to assess and manage the economic risks arising from climate change. We also believe we have a responsibility to capture the emerging investment opportunities because of the economic transition to zero or lower carbon. Ensuring we have the appropriate governance structure to oversee our approach is core to our strategy.

Roles and responsibilities

Board

Our Board has identified climate change as a material investment risk and adopted the Climate Change Action Plan in February 2021. The Board determines the overarching investment beliefs and strategy for the fund. It seeks to ensure that climate change and sustainability more broadly are incorporated into the fund's business and investment strategies.

The Audit, Risk & Compliance Committee has responsibility for the oversight of risk assessment and management of material risks for the fund. In determining which risks are material, several factors are considered, including the likely impact, the potential for financial loss, the resource required and the potential for reputational impact.

Investment Committee

The Board has delegated responsibility for ensuring TelstraSuper's investment policies are implemented across all asset classes to the Investment Committee. The Investment Committee requires thorough due diligence processes to be applied on all new investments and the regular monitoring of asset managers following their appointment. The consideration of material ESG risks when making investment decisions is reviewed as part of the asset manager appointment and review process. Climate Change is deemed a material ESG risk.

Responsibility for implementing due diligence and review processes concerning ESG matters, including climate change, rests with the Chief Investment Officer (CIO) and the Head of Sustainable Investing.

Investment teams

We seek to ensure that all asset managers are required to consider climate change and other ESG issues in the investment decision-making process. This requirement is generally embedded into Investment Management Agreements for our external asset managers.

The Sustainable Investment team assists internal investment teams in implementing TelstraSuper's Sustainable Investment Policy. The Head of Sustainable Investment leads this team and reports directly to the CIO, alongside asset class heads.

In 2021, additional personnel were employed within the Sustainable Investment team to implement the CCAP.

Achievement of the CCAP actions has been built into all Investment team leaders' performance objectives starting in the 2021/22 financial year.

External service providers

We engage a range of external service providers to provide advice and guidance concerning climate change. These include asset consultants and industry bodies such as the Australian Council of Superannuation Investors (ACSI) and the Investor Group on Climate Change (IGCC). Services provided include research, company engagement and proxy voting advice.

> **"Climate change is a systemic risk that needs to be proactively measured and managed as part of providing a secure future for our members."**
>
> **Chris Davies, Chief Executive Officer**

Policies

Climate Change risk is captured within the TelstraSuper Sustainable Investment Policy along with other ESG risks. This Policy:

- Recognises that superannuation is a long-term investment
- States that TelstraSuper aims to maximise risk-adjusted returns over the long term and will not pursue strategies that put the sustainability of long term returns at risk
- Requires ESG factors to be incorporated into all aspects of our investment process
- Is regularly reviewed to ensure it remains appropriate.

Our climate change beliefs, over-arching goals and actions are detailed in our CCAP. The Sustainable Investment Policy was updated to reflect the CCAP in August 2021.

Culture and behaviour

Several Investment Team members undertook a climate change education programme developed by Columbia University on behalf of Alliance Bernstein during the first quarter of 2021.

In November 2021, the Board participated in a climate change forum facilitated by TelstraSuper's Sustainable Investment team with support from the Investor Group on Climate Change. The forum provided an overview of the momentum on climate change leading up to the global climate change conference in Glasgow (COP26), investor actions and key reports from the Intergovernmental Panel on Climate Change (IPCC) and International Energy Agency (IEA).

In June 2021, TelstraSuper's business operations were certified carbon neutral by Climate Active for the 2020/21 financial year via the purchase of carbon offsets which supported the following projects:

- Fighting Fire with Fire project (Indigenous fire management in Northern Territory)
- Rainforest Protection (South America, Oceania and Africa)
- Winds of Change project (wind power in India).

Find out more about these projects here.

Strategy

Climate change poses investment risks and opportunities

The scale and complexity of climate change pose risks and opportunities for our investment portfolios, potentially affecting long-term investment performance and returns.

The physical impacts of natural perils, rising sea levels, heatwaves and droughts that may be influenced by climate change, pose potential investment risks to assets held by the fund.

Stringent climate policies, new cleaner technologies, and changing market sentiment may affect economies and business models, which in turn can provide both risk and opportunity for our investment portfolios.

As a long-term investor, with our members' money invested across global economies, companies and sectors, we recognise our responsibility to ensure climate change risks are identified, understood, and mitigated. We consider it in our members' interests to develop resilient investment strategies while benefiting from the shift to a more sustainable, low-carbon economy.

Risks and opportunities for TelstraSuper – Potential short, medium and long-term impacts

Transition risks	Description	Current	2030	2050
Government policy change (including carbon price)	Acceleration or poor implementation of policies aimed at constraining emissions-intensive activities – may impact demand/volume/revenues for portfolio investments. It can also result in higher input costs and/or market supply/demand volatility.	Low	Medium	High
Changes to regulations and/or compliance requirements	Increasing and changing environmental and reporting regulations may lead to higher input/output costs for real assets.	Low	Medium	Medium
Change in member sentiment (Reputation risk)	Actions taken by TelstraSuper today will influence our ability to retain and attract members. In general, members expect climate change to be addressed while at the same time protecting investment returns. Awareness of climate change is likely to increase this decade.	Low	Medium	Medium
Stakeholder scrutiny (Reputation and litigation risk)	Scrutiny from external stakeholders (Regulators, NGOs, industry bodies) will likely increase as community expectations shift. The risk of climate litigation will increase for those who fail to act.	Low	Medium	Medium
Development of low carbon technologies /solutions	Companies and/or assets that fail to adopt new technologies or decarbonise (transition) may face reduced demand for products and services, substitution, diminishing economic returns, loss of value or asset stranding. Companies will also face near term costs associated with the deployment of new technologies or R&D. Market share may also be impacted long term. TelstraSuper needs to identify, assess, and manage this risk across all asset class portfolios.	Low	Medium	High
Change in capital market requirements	Companies and/or assets that fail to transition may also face difficulties accessing capital or an increased cost of capital. This may similarly apply to insurance.	Medium	High	High

Key Low risk Medium risk High risk

Physical risks	Description	Current	2030	2050
Acute hazards	The increasing frequency and severity of extreme weather events such as bushfires, flooding and cyclones can lead to higher costs of business because of disruption to operations or supply chains, impacts to employee health and safety, damage to property/assets. These events may also lead to increased costs associated with insurance.			
Chronic hazards	Gradual changes such as increasing/decreasing average temperatures and rainfall or sea level rise will have lower impacts in the short to medium term but need to be managed over the longer term. TelstraSuper must engage with companies to understand adaptation and resilience to longer-term physical climate changes.			

Opportunities	Description	Current	2030	2050
Resource and energy efficiency	Better management of resources and efforts to increase energy efficiency may reduce operating costs over the medium term and reduce emissions associated with inputs. The profitability of these companies will likely be improved, making them attractive to investors.			
Decarbonise existing assets	Companies and assets that lead the transition and make strong efforts to decarbonise will face lower operating costs in the long term due to reduced exposure to carbon pricing and policy/regulatory constraints, reputational benefits, competitive advantage, and potentially increasing market share, leading to a higher asset value.			
Low emissions energy and technologies	The majority of the energy system will need to transition away from fossil fuels to renewable energy. Developing energy independence by investing in scaled renewable technology may also assist with building resilience to geopolitical risk. Therefore, investment returns for renewables may exceed returns for fossil fuel assets over the medium to long term. TelstraSuper investment portfolios will benefit by actively seeking and increasing exposure to low emissions opportunities.			
New products and services	New low carbon or zero-emission products and services will likely face increased demand and potential for growth in revenues and value. Companies that innovate and develop new low-emission products and services may improve their competitive position and capitalise on shifting market preferences. These organisations or strategies supporting them may provide new investment opportunities for TelstraSuper.			
New asset classes	Investment opportunities in agriculture, sustainable forestry and carbon trading are developing to support decarbonisation. These new asset classes will likely grow in popularity and have the potential to provide investors with attractive returns.			

Key Low risk Medium risk High risk

Portfolio construction actions

During 2021 there were several Portfolio Construction actions executed. These are described below.

Thermal coal exclusion

One of the actions proposed and implemented under the CCAP was excluding primary-focus thermal coal producers from our investment portfolios. This excludes entities where the majority of earnings[2] are derived from thermal coal production. In June 2021, this screen identified 21 companies in the ASX and 83 global listed companies as fitting the exclusion criteria. These companies are no longer eligible for inclusion in TelstraSuper's listed equity investment portfolios managed by both internal and external asset managers. Any existing holdings were divested.

Invest in transition opportunities

We recognise significant investment opportunities from the transition to net zero emissions will arise. Opportunities are likely to exist in the energy, water, transport, and agriculture sectors in addition to renewable energy and new ancillary services such as electric vehicle charging stations, cleaner transportation, and industrial efficiencies. We aim to increase our allocation to companies and assets that generate "green" revenues and those that enable or speed up the pace of change.

In 2021 TelstraSuper invested a further $130 million in climate-related opportunities. This included a co-investment in Tilt Renewables with QIC (see case study on the following page), an allocation to the Californian carbon allowance scheme and a listed equities quantitative strategy targeting best in class carbon emission management.

We also hold several existing investments in renewables outside of Australia, including:

- A portfolio of wind and solar generation facilities across the United States of America serving as a platform for the continuing acquisition and management of wind and solar projects in North America.
- A global developer and operator of utility-scale solar projects across France, Italy, Spain, Puerto Rico, Japan, Chile, the United Kingdom and South Africa and projects in construction and development stages in Japan, Puerto Rico and Chile.
- The third-largest generator of onshore wind energy in the United Kingdom, which has a portfolio comprising 34 wind farms.

Investment portfolio resilience

The ability to identify and mitigate exposure to physical risk is assessed as part of our asset manager review process. A full assessment of physical risk within all our investment portfolios has not been undertaken at this time. A high-level heat map assessment of priority asset classes, such as real assets and listed equities, will be explored further in 2022.

[2] Defined as above 50% of earnings linked to thermal coal production anywhere in the value chain.

Contributing to the energy transition

Tilt Renewables (formerly Powering Australian Renewables)

In July 2021, TelstraSuper co-invested $47 million with the QIC Global Infrastructure Fund (QGIF) to acquire the Australian business of Tilt Renewables.

Through the amalgamation of Tilt Renewables with the existing renewable energy platform of Powering Australian Renewables (PowAR's), Tilt Renewables scale increased to three times its nearest competitor, owning more than 1.3 gigawatts (GW) of fully operational, renewable energy capacity across nine geographically diverse wind and solar generation assets. The deal also included a further 2.4GW of late-stage development projects, expected to be operational by 2027. This level of capacity will allow Tilt Renewables to play a leading role in the decarbonisation of the Australian energy market.

Tilt Renewables Chair Cheryl Bart said, "This exciting transaction is absolutely aligned to our mission of leading the transition to a decarbonised, decentralised and digitised energy system – one that will deliver all Australians clean, reliable and affordable power".

TelstraSuper believes this to be a significant investment opportunity for our members that will deliver strong, stable returns and benefit from the global push to decarbonisation. It also aligns with our CCAP, which is committed to increasing our investment in transition opportunities.

Tilt Renewables (formerly Powering Australian Renewables) is a partnership between the QIC Global Infrastructure Fund and its co-investors (including TelstraSuper), the Future Fund and AGL Energy Limited (AGL).

Source: QIC deepens investment in renewable energy through PowAR's acquisition of tilt renewables; August 2021.

Westlands Solar Park

TelstraSuper's Alternatives investment portfolio has an investment with CIM Group, which is developing the Westlands Solar Park (WSP), one of the largest permitted solar parks in the United States of America. WSP has the capacity to grow to more than 2,700 megawatts (MWs) of renewable energy at full buildout, and the potential to provide clean energy to more than 1,200,000 homes.

CIM Group purchased rights to the land on which the WSP is located, in 2014, when it was contaminated and drainage impaired farmland. Now it is being repurposed for the development of clean energy.

The master-planned energy park encompasses more than 20,000 acres in California's San Joaquin Valley in western Fresno and Kings Counties. It is designed to open in phases to meet the needs of public and private utilities and other energy consumers. WSP has completed a certified environmental impact report for the entire project. WSP is one of the few renewable energy zones identified as a Competitive Renewable Energy Zone (CREZ) through the Renewable Energy Transmission Initiative (RETI) process.[3]

Construction of the 250 MW Aquamarine project began in 2020 and reached commercial operation at year-end 2021. Additional projects are expected to commence operations between 2023 and 2024.

CIM Group's renewable energy projects aim to support the growth of communities through sustainable and environmentally responsible means. For example, WSP contributes to the economic development of the communities in California by helping to reduce greenhouse gas emissions, increasing the supply of emissions-free energy, and bringing new jobs to the area.

Source: businesswire.com, cimgroup.com, businesswire.com

[3] RETI is a state-wide planning process to identify the transmission projects needed to accommodate California's renewable energy goals. The first phases of the RETI project resulted in the identification of CREZs that hold the greatest potential for renewable development.

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Scenario analysis

The Taskforce on Climate-related Financial Disclosures recommends that organisations assess the resilience of their investment strategy using different climate-related scenarios or future states, including a 2°C or lower scenario.

Given that forward-looking assessments are required to understand climate change impacts, analysis is needed to:

- Assess the potential business and investment implications of climate-related risks and opportunities, and
- For communicating with members and other stakeholders on how we are looking to position our investment portfolio considering climate-related risks and opportunities.

TelstraSuper's investment portfolio is spread across all regions and sectors of the economy. Depending on the scenario, transition and physical risks can potentially impact our assets to different degrees.

In 2021 JANA Investment Advisors carried out investment portfolio level scenario analysis for TelstraSuper's three largest investment options using three alternative scenarios over two timeframes (2030 and 2040). The scenarios used are described to the right.

Approach

For each scenario, impacts to Return on Invested Capital (ROIC) were modelled for each asset class to deliver an overall estimated investment portfolio return impact. A "green/brown" factor was incorporated to estimate projected investments into "green" revenue versus "brown" revenue assets. The "green/brown" factor aims to capture the investment portfolio's exposure to assets that will either benefit or be penalised by the low carbon transition.

Scenario descriptions

Current Path (4°C)

This scenario reflects all of today's announced policy intentions and targets, in so far as today's energy-related policy settings, as they are backed up by detailed policies and measures for their realisation. However, it assumes there are no material policy implementation changes. The carbon price per tonne estimate is ~$40 to 2030 and ~$52 for 2040.

Sustained Action (below 2°C)

This scenario reflects the achievement of the energy-related U.N. Sustainable Development Goals.[4] It assumes a surge in clean energy policies and investment that puts the energy system on track to achieve sustainable energy objectives, including the Paris Agreement, energy access and air quality goals. The carbon price per tonne estimate is ~$88 to 2030 and ~$140 for 2040.[5] This scenario puts global emissions on track for net zero by 2070.

Net Zero by 2050 (1.5°C)

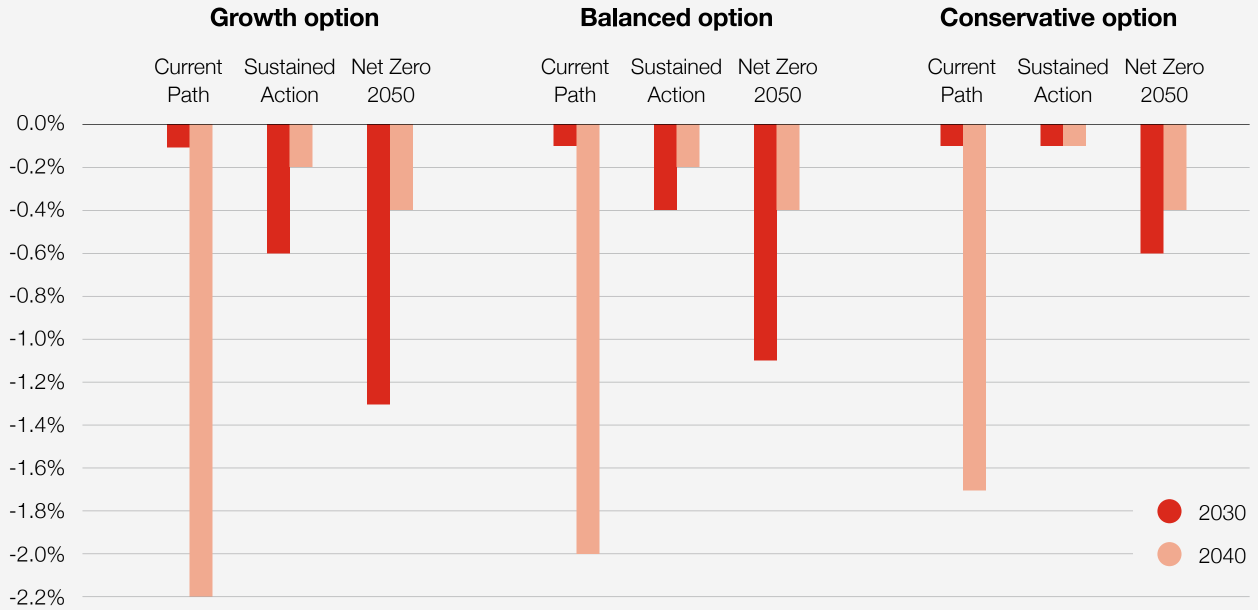
This scenario extends the above Sustained Action scenario assumptions by analysing the impact of a growing number of countries and companies targeting net zero emissions by mid-century. The carbon price per tonne estimate is ~$130 to 2030 and ~$205 for 2040. Net Zero by 2050 includes detailed International Energy Agency (IEA) recommendations for what's needed in the next ten years to put global emissions on track for net zero by 2050 (20 years earlier than the Sustained Action scenario).

The scenarios are based on the IEA scenario assumptions, supplemented by the Network for Greening the Financial System (NGFS) for GDP impacts.

[4] Includes universal energy access (SDG 7), reducing impacts of air pollution (part of SDG 3) and tackling climate change (SDG 13), as well as links between the energy sector and access to fresh water and sanitation (SDG 6).

[5] Based on World Bank estimates.

Reduction to expected return



Outcome

The above chart shows the modelled expected return impact (%pa) in 2030 and 2040 on the Growth, Balanced and Conservative options for the three scenarios relative to long-term expected returns of the mix of assets held in those options. Note that this modelled outcome is based on a range of highly variable and uncertain assumptions. These charts do not represent a forecast of future investment outcomes.

In 2030, the Current Path scenario is expected to have the least impact on investment returns due to policy being less ambitious and disruptive than the Sustained Action and Net Zero by 2050 scenarios. The Net Zero by 2050 scenario results in higher transition risk/lower expected returns than the Sustained Action scenario due to a stronger push to reduce emissions by 2050 (compared with 2070 under the Sustained Action scenario).

By 2040, the Current Path scenario is expected to be the least favourable for investment returns, as physical climate impacts become more significant. The Sustained Action scenario has a slightly lower negative impact on returns than the Net Zero by 2050 scenario due to lower transition risk.

Beyond 2040 however, we would expect the Net Zero by 2050 scenario to be most favourable for returns – due to mitigation of the most severe physical risks and more stable market and economic conditions. The transition would be achieved by 2050 instead of 2070 under the Sustained Action scenario.

Key conclusions

The key takeaway from the analysis is that regardless of the scenario, there is likely to be a negative return impact relative to long-run expected returns for the three investment options analysed, without active investment portfolio allocation decisions. The significant opportunity (and risk) over the next two decades is to design investment portfolios that have exposure to potential “winners” while avoiding “losers” and constructing investment portfolios that are resilient under a range of scenarios and not overly exposed to one scenario.

Risk management

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Mandate design and asset manager selection

The majority of our investment portfolios are externally managed. We conduct a thorough risk assessment on our asset managers before their appointment and then closely monitor performance via a regular review and reporting process.

During the asset manager appointment process, we review information about how asset managers think about and assess ESG issues, including climate change. This information is used to rate each asset manager's ESG integration capability and identifies areas for future engagement. The asset manager information requests are tailored depending on asset class, investment type, and investment value. More information on the specific approach adopted for different asset classes is outlined below.

We have continued to build on our internal climate risk assessment capabilities to enable more informed discussions with asset managers. In the future, we intend to engage more explicitly on how climate risk exposures (transition and physical) are assessed before asset acquisition and how risks are managed and mitigated on an ongoing basis – as outlined in our CCAP.

Listed equities (internally managed)

As at end December 2021, TelstraSuper had ~$5.9 billion invested in ASX listed companies and ~$6.7 billion invested in international companies, representing 49% of total assets under management. Our internal Australian listed equities asset management team managed approximately $1.4 billion of assets.

Using an internally developed framework, our in-house Sustainable Investment team works with internal investment portfolio managers to analyse ESG factors alongside traditional key asset value drivers. The framework assesses different ESG risk factors depending on the industry sector, and both the company's exposure to and management of the risk is considered.

Climate change is potentially a significant risk for listed companies. Understanding how investee companies manage the risks is important. Therefore, we expect companies to proactively understand and manage climate change risks by setting decarbonisation commitments, implementing plans and disclosing their progress against them.

Some of the actions we take to understand climate risk exposure include:

- Analysing the carbon emissions and intensity of individual stocks and investment portfolios and measuring relative performance against peers and relevant benchmarks
- Assessing individual company transition risk (including the risk of asset stranding)
- Engaging with companies to encourage better management of climate risk, as well as short, medium and long-term target setting, and
- Encouraging best practice disclosure through the adoption of the TCFD.

In addition to our internal research, we also subscribe to external ESG and carbon risk rating data to assist our analysis.

At this point, our analysis is primarily used to inform discussions with our internal equities investment team and our investee companies.

As we develop the processes to deliver the actions listed in the CCAP, we plan to integrate forward-looking datasets and analytics into our assessment process and take a more active stance concerning investment portfolio construction.

Listed equities (externally managed)

Most of TelstraSuper's listed equities investments (~89%) are managed by external asset managers. TelstraSuper maintains responsibility for setting investment guidelines.

As with all asset classes, we seek to ensure that our asset managers consider and integrate material ESG issues into their investment processes. Due to the systemic nature of climate change risk, we expect our asset managers to assess and manage the risk explicitly.

In 2022 we will be engaging with all our listed equities asset managers to encourage them to adopt the recommendations of the TCFD and provide more disclosure on:

- how they assess and manage the investment portfolio's exposure to climate-related risks and opportunities, and
- how they assess the investment portfolio and/or asset level net zero by 2050 alignment.

Once we have finished developing TelstraSuper's internal processes to reflect our net zero goal and interim targets, we will engage with external asset managers to ensure our expectations are reflected in existing and new investment management agreements.

Alternatives – Private markets

As at end December 2021, the private markets investment portfolio represented ~3% of total assets under management. All investments are managed externally, with asset manager selection, monitoring and oversight conducted by our internal alternatives investment team.

The Sustainable Investment team works with the internal investment team to formally assess each asset manager's approach to ESG as part of due diligence. The climate change risks and opportunities specific to the investment are assessed as part of this process. The asset manager's processes for assessing, monitoring, managing and reporting on climate risks are assessed during their appointment and through regular engagement.

Private markets are in the development phase of ESG performance assessment and data collection. This will be an area of focus for TelstraSuper in 2022. We plan to engage with our asset managers to encourage greater disclosure of carbon emissions data to enable us to estimate emissions and establish a carbon footprint baseline.

Real Assets – Property and infrastructure

As at end December 2021, TelstraSuper had ~$3.3 billion invested in property and ~$1.5 billion in infrastructure assets, representing 13% and 6% respectively of total assets under management. These investment portfolios are externally managed, with asset manager selection, monitoring and oversight conducted by internal teams.

Before making investments in real assets or appointing a new asset manager, our internal team, supported by the Sustainable Investment team, assesses material ESG risk factors, including climate change. Risks are reviewed through a formal due diligence process which requires asset managers to complete an ESG questionnaire, followed by direct engagement to discuss the findings. This process improves our understanding of the asset manager's approach to considering ESG issues and climate change. It also enables us to discuss examples of best practices, opportunities for enhanced transparency, and continuous improvement with our asset managers.

In 2021, we conducted a full ESG assessment of all our infrastructure and property asset managers using a standardised assessment framework aligned with the Principles for Responsible Investment (PRI) requirements. This process was conducted to establish a consistent baseline set of information across asset managers and communicate our expectations.

External ESG review of our Unlisted Property Asset Managers

The table below summarises the ratings of external ESG rating agencies on our four largest unlisted property asset managers. Pleasingly, all managers are rated among the top of their peer groups.

<table>
<tr><th></th><th>GRESB (2020)</th><th>NABERS (Energy)</th><th>NABERS (Water)</th><th>PRI Score (Property)</th><th>Climate change commitments</th></tr>
<tr><td>Manager A</td><td>5 stars</td><td>4.9 stars</td><td>3.8 stars</td><td>A+</td><td>Net Zero Carbon by 2030 (Scope 1 and 2) and material scope 3 by 2040.</td></tr>
<tr><td>Manager B</td><td>5 stars</td><td>4.9 stars</td><td>3.9 stars</td><td>A</td><td>Net Zero emissions by 2030 (Scope 1 and 2) across assets within their direct operational control.</td></tr>
<tr><td>Manager C (Retail)</td><td>5 stars</td><td>4.5 stars</td><td>3.6 stars</td><td>A+</td><td rowspan="2">Net Zero Carbon by 2025 (Scope 1 and 2) and absolute zero carbon by 2040 (Scope 1, 2 and 3). 100% renewable energy before 2030.</td></tr>
<tr><td>Manager C (Commercial)</td><td>5 stars</td><td>5.2 stars</td><td>4.5 stars</td><td>A+</td></tr>
<tr><td>Manager D</td><td>5 stars</td><td>No rating</td><td>No rating</td><td>A</td><td>3% per year reduction in emissions between 2018 and 2030 and a Net Zero emissions target by 2050.</td></tr>
</table>

Green-brown assessment

In 2021, we examined our property and infrastructure investment portfolios using a "green-brown"[6] revenue exposure lens. This assessment was designed to identify potential sectoral winners and losers under a low carbon transition scenario. We believe applying this assessment to our Infrastructure investment portfolio will be most useful given the long-term nature of the asset class and the need to understand the sectors exposed to transition risk and opportunity. This is also the asset class where we believe changes could drive real-world positive climate outcomes.

While the green-brown assessment did not highlight any material concerns, it has resulted in greater awareness of the climate transition risk facing some sectors and assets in the infrastructure asset class – and the importance of considering climate risk.

One of the goals stated in our CCAP is to increase our investment in companies and sectors that will be net beneficiaries of the transition. The obvious "green" sectors such as renewable energy, electric vehicles and energy storage technologies will benefit. However, we also expect other companies to be able to decarbonise their operations and pivot their business strategies to harness gains from the energy transition. We believe these companies can also emerge as "winners" from the transition. We are committed to staying invested in these companies to support the transition and meet our net zero goal.

We developed the following transition risk categorisation framework to assist our internal property investment team to identify the degree to which different sectors and assets are exposed to transition risk and the options for mitigation.

Transition risk categorisation framework

Category 1	Fossil fuels are the primary fuel source and source of revenue. High emissions intensity – generating by scope 1 emissions.
Category 2	In the fossil fuels value chain. Revenues linked to fossil fuel demand. Repurposing likely required in future.
Category 3	High upstream or downstream emissions potential (scope 3). Potential for volume/revenue impact as result of shift in market preferences.
Category 4	Material scope 2 emissions (high electricity usage). Potential to decarbonise using energy efficiency, fuel switching, renewable energy.
Category 5	Positive revenue impact likely as the economy transitions to low carbon. Increased opportunities due to being a key input or enabler of decarbonisation.
Category 6	Neutral – negligible direct impacts from the transition.

[6] Examples of green revenue exposed assets include biofuels, renewable energy, electric vehicles, electricity networks, sustainable water, etc. Brown revenue exposures were focused on fossil fuel (across the value chain).

Selecting asset managers whose goals align with our own

First Sentier Investors

First Sentier has committed to achieving net zero investment portfolio emissions for all funds by 2050 or sooner by encouraging investee companies to set targets and outline plans to reduce emissions as far as it is technologically and financially viable and offsetting residual emissions.

First Sentier will also increase investment over time in businesses that help meet the goal of global net zero emissions by 2050 and those that contribute to climate adaptation.

In addition to setting these high-level goals, First Sentier has developed an action plan for all investee companies, implemented between now and 2023, called Climate Action 1, 2, 3! Several investment portfolio companies have already completed or are well progressed on the required steps.

The three steps of Climate Action 1, 2, 3! are:

1. Devise a road map for achieving alignment with a net zero emissions pathway, including short- and medium-term emissions reduction targets.
2. Complete a detailed climate change impact assessment and integrate conclusions into business plans.
3. Put in place key measures to achieve strong governance of climate-related risks and opportunities.

QIC Global Infrastructure – Pathway to Net Zero Emissions

ESG is core to QIC's investment philosophy and integrated as part of QIC's active asset management approach. QIC engage directly with investee companies and integrate ESG through the asset management team and board representation.

In September 2021, QIC committed to net zero emissions for the QIC Global Infrastructure Fund (QGIF) and the QIC Infrastructure Portfolio (QIP).

The commitment has three targets:

1. At least a 50% reduction in scope 1 and 2 carbon emissions by 2030 (from a 2020 baseline).
2. Net zero emissions for scope 1 and 2 across both portfolios by 2040.
3. An active contribution to our assets' broader industry net zero emissions ambitions.

For QIC's infrastructure assets, the net zero pathway incorporates four pillars to address decarbonisation – *Reduction, Transition, Advancement and Offset*. They also stress the importance of collaboration and partnerships to their assets' broader industry net zero ambitions.

For example, Pacific Energy is working with its Western Australian subsidiary companies to trial Australia's first renewable hydrogen demonstration plant in a remote power system in Denham. They are also constructing an efficient gas power station, battery storage system and renewables hub in Esperance, which is projected to reduce the remote town's yearly carbon emissions by close to 50%.

QIC is tailoring decarbonisation pathways to each asset – managing across various factors, including sector, geography, and availability of technologies. Progress will be quantified using regular carbon tracking metrics against key milestones and independently verified. A TCFD report outlining QIC's assessment of transition and physical risks and opportunities is publicly available.

Engagement and stewardship

As long-term investors, we believe we must act as stewards of our assets and use our influence to promote good behaviour and management of ESG issues. We believe our stewardship activity can help prevent value destruction for our members and reduce any negative impacts the assets we invest in may have on the environment and society.

Collaborative engagement

Engaging on climate change is an integral part of active management and stewardship. Given the volume of our investments and the relatively low control and influence we have as minority investors, we believe we can generate change faster by joining forces with other investors to encourage climate change risk management through collaborative initiatives.

In addition to being a signatory to the U.N. supported Principles of Responsible Investment (PRI), we are members of several responsible investment-related organisations such as the Australian Council of Superannuation Investors (ACSI) and the Investor Group on Climate change (IGCC). We participate in their working groups and other climate-related investor collaborations, such as the Climate Action 100+ and Climate League 2030.

PRI Principles for Responsible Investment

ACSI

Joined Member Council June 2020

CLIMATE LEAGUE 2030

Investor Group on Climate Change

Member of the Physical Risk and Resilience Working Group

Climate Action 100+ Global Investors Driving Business Transition

Climate Action 100+

TelstraSuper is a supporting investor in the Australian chapter of the Climate Action 100+ initiative.

Launched in 2017, Climate Action 100+ is now the largest ever investor engagement initiative on climate change. The initiative consists of over 600 investors, engaging with 167 global focus companies, deemed the world's heaviest emitters, contributing over 80% of global industrial greenhouse gas emissions. The initiative has been shaped and led by its participating investors, who determine the engagement strategy for each company.

Early in 2021, CA100+ developed the Net Zero Company Benchmark, which has been used to assess the level of ambition and progress on climate change for all sectors and regions of the world. The benchmark assesses each company against ten indicators and 22 sub-indicators plus individual metrics examining climate change targets, strategy, capital allocation, policy, and governance. It provides a granular and standardised assessment for each CA100+ company.

As well as informing the ongoing engagements with companies, the framework has been adopted by a broad range of consultants and service providers assessing companies and/or sectors on their net zero alignment and decarbonisation progress. Before the initiative, only five companies had net zero targets. As of the end of August 2021, 111 of the CA100+ focus companies have set a net zero or equivalent target. It's estimated that in 2030, the targets set by these 111 focus companies will reduce greenhouse gas emissions by 3.7 billion metric tonnes of carbon dioxide equivalent (GtCO2e) annually. By 2050 this increases to 9.8 billion metric tonnes annually (just under China's current annual emissions).[7]

In Australia, all focus companies have set net zero 2050 targets. These companies have also adopted the TCFD recommendations for their climate-related disclosure.

[7] BloombergNEF, *Two thirds of the world's heaviest emitters have set a net zero target*, September 2021.

Investment portfolio company engagement

Company name	% emissions contribution to portfolio	Net Zero (2050) target	Interim target (2025-2030)	CA100+ engagement target
South32 Ltd	16%	Yes	2035	Yes
Qantas Airways Limited	12%	Yes	Yes	Yes
AGL Energy Limited	10%	Yes	Yes	Yes
Alumina Limited	10%	No	Yes	No
Santos Limited	7%	Yes	Yes	Yes
BHP Group Ltd	5%	Yes	Yes	Yes
Bluescope Steel Limited	5%	Yes	Yes	Yes
Origin Energy Limited	5%	Yes	Yes	Yes
Incitec Pivot Limited	3%	No	Yes	Yes
Woodside Petroleum Ltd	3%	Yes	Yes	Yes
Beach Energy Limited	2%	Yes	Yes	No
James Hardie Industries	2%	No	Yes	No
Rio Tinto Limited	2%	Yes	Yes	Yes
Viva Energy Group Ltd	1%	No	No	No
Woolworths Group Ltd	1%	Yes	Yes	Yes

The table above outlines the decarbonisation targets of the top 15 emitters in our Australian listed equities investment portfolio (at 1 October 2021). These companies contribute around 85% of the investment portfolio's emissions; hence our engagement efforts are focused on the decarbonisation efforts and climate-related disclosure of these companies.

In addition to the engagement meetings initiated by the CA100+ with many of the companies during 2021, representatives from TelstraSuper have met with all but one of these companies directly and/or in collaboration with ACSI.

Further information on company engagement themes, statistics, and case studies is published in our six-monthly Sustainable Investment Bulletins, available on the TelstraSuper website.

Proxy voting

Voting is one of the cornerstones of TelstraSuper's stewardship approach. The exercising of our right to vote is one of the most effective tools for holding boards to account and encouraging good governance and improved ESG standards.

We actively consider and vote for all AGM resolutions for our internally managed Australian equities investment portfolios. Each vote decision is determined on a case-by-case basis, considering proxy research where available, the outcomes from engagement meetings, discussions with peers and our external asset managers' perspectives.

External asset managers exercise proxy votes relating to the Australian and international companies they hold per their investment mandates and proxy voting policies. Appointed asset managers have the discretion to determine how they vote on the stocks within their investment portfolios. However, TelstraSuper retains the right to specifically instruct or override external asset managers' voting. We review the appropriateness of each asset manager's proxy voting policy as part of the due diligence process before their appointment.

The CCAP requires that our Proxy Voting Policy be updated to incorporate our climate change goals and expectations for our investee companies. This means we will likely be more supportive of shareholder resolutions seeking to align a company's actions to reach net zero emissions by 2050 and/or encouraging best practice disclosure in alignment with the recommendations of the TCFD.

However, this doesn't mean that climate-related shareholder resolutions won't be properly scrutinised. Instead, as per all shareholder resolutions, we intend to actively review and assess each resolution based on members' best financial interest, the appropriateness of the "ask", practicality of implementation, and the company's performance relative to its peers.

Once we have reviewed and updated our Proxy Voting Policy to reflect our climate change commitment, we will communicate any relevant changes to our external listed equity asset managers.

In 2021, BHP gave investors a "Say on Climate" vote

BHP was the first Australian company to introduce an advisory vote on their Climate Change Transition strategy. This type of vote is referred to as a "Say on Climate". The vote provides a forum for shareholders to provide constructive feedback to the company on its strategy for managing climate change and how this is disclosed. As part of this initiative, BHP proposed that formal voting would recur triennially.

TelstraSuper supports BHP's Climate Change Transition Plan, and we are confident that BHP's Plan is aligned as much as it could be at this juncture to a 1.5ºC pathway – given the level of uncertainty that exists out to 2050.

While TelstraSuper supports BHP's climate change transition plan, we raised our concern directly with the company that the proposed three-year cycle for investors to review the climate strategy was too infrequent given the high degree of change in environmental and technology factors that may occur over that timeframe. The other concern was that this approach might establish a benchmark for other companies that would hold a similar "Say on Climate" vote in 2022.

Before casting our AGM vote, we met with representatives from BHP to raise our concern with the timeframe and seek further assurances regarding the opportunity for investors to provide more frequent feedback on BHP's Climate Transition Plan and overarching decarbonisation strategy.

We were pleased that BHP recognised that some investors had raised concerns regarding the "Say on Climate" vote timeframe at its AGM. They gave public assurances that investors would be given more frequent opportunities to provide feedback on the climate change strategy as material changes occurred.

Metrics and targets

Our Net Zero by 2050 pathway on page 5 outlines the interim timeframes, targets, and milestones in our CCAP.

By 2023 we aim to disclose the emissions footprint of our total investment portfolio (inclusive of all asset classes) and reduce the emissions associated with our listed equities investment portfolio by 10% on an absolute basis relative to our initial measurement in 2020.

In addition to this milestone, we also listed several actions for completion within the first 12 months of initiating the CCAP. These actions and our progress to date is outlined below.

12 month goal	Current progress
Establish net zero emissions before 2050 goal.	Complete.
Target specific investments in low carbon opportunities.	Ongoing – over 2021, TelstraSuper made several new investments, including our co-investment in PowAR through QIC.
Divest from pure-play thermal coal assets across asset classes.	We have divested these companies from our Australian and International listed equities investment portfolios.
Re-design passive listed equities benchmarks to reduce GHG emissions.	We have engaged with our passive asset manager and are actively exploring alternative listed equities benchmarks. Pure-play thermal coal producers have been excluded from the passive investment portfolios and benchmarks.
Measure and disclose baseline emissions for the listed equities investment portfolios.	We have established emissions baselines for our listed equities investment portfolios. We are currently exploring alternative data solutions to expand on our suite of climate metrics.
Develop guidelines for asset manager assessment and mandates.	In progress – to be completed in 2022.

Listed investment portfolio carbon footprint

The CCAP commits us to measure and disclose our baseline investment portfolio GHG emissions and report on progress annually. This is to be done using Scope 1 and 2, and Scope 3 on a best-endeavours basis. We recognise, on its own, carbon foot printing has limitations with respect to informing about climate risk exposure. Nonetheless, we consider undertaking regular measurements as a necessary prerequisite to improvement.

In 2020 we undertook the first baseline measurement of the carbon emissions associated with our listed asset investment portfolios, and we have repeated the process in 2021.

This has enabled us to understand the emissions profile of each investment portfolio managed on our behalf and engage with the asset managers whose investment portfolio emissions profiles are higher than the average.

TelstraSuper's carbon footprint for our Australian and international listed equities investment portfolios and our listed infrastructure and property investment portfolios were measured using external data from Sustainalytics supplemented by individual company reporting where material. Formal measurement will continue to occur annually to track and report on progress against our fund-level investment portfolio decarbonisation goal.

Metric definitions

	Carbon emissions	Carbon footprint	Weighted Average Carbon Intensity (WACI)
Metric	Total investment portfolio emissions (tCO2e).	tCO2e/AUD$m invested.	tCO2e/US$m revenue.
Description	The absolute GHG emissions associated with the investment portfolio.	The investment portfolio's GHG emissions as a proportion of the value of the portfolio.	The weighted average of individual holdings carbon intensity as a proportion of revenue.
Purpose	Able to track absolute changes in aggregate and individual asset manager investment portfolio emissions.	Suitable for comparison across different asset managers and investment portfolios.	Measures exposure to carbon-intensive companies Recommended for disclosure by the TCFD. This metric is a measure of carbon risk exposure.

Metric calculations include scope 1 and 2 emissions and have been calculated based on equity share (as a proportion of market capitalisation).

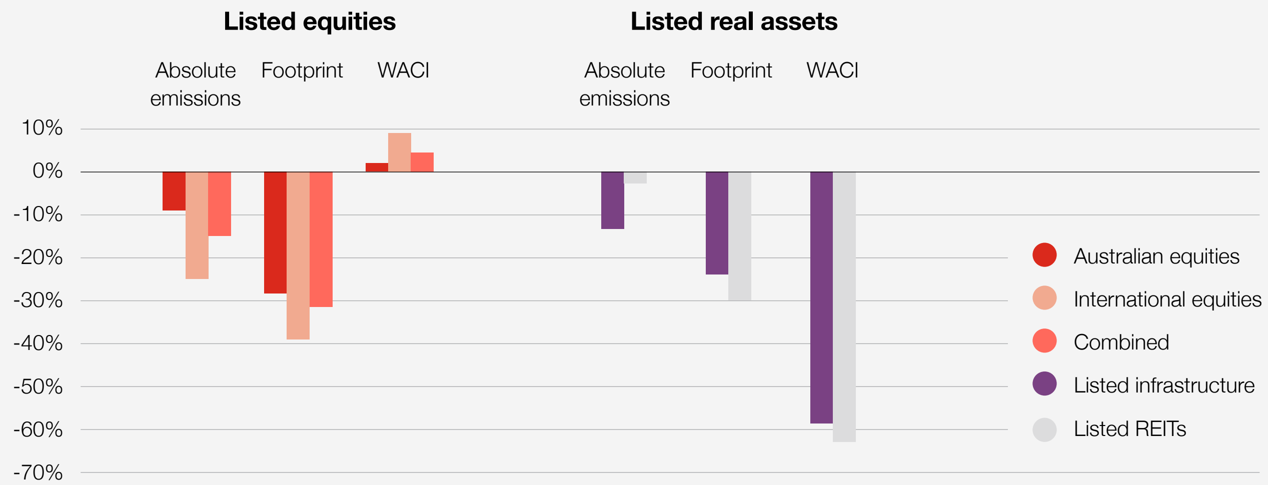
Listed investment portfolios carbon emissions data

Absolute emissions contributed by the combined Australian and international listed equities investment portfolio and the listed infrastructure and listed property (REITs) investment portfolios on 1 October 2021 was 817,145 tCo2e.

This is a 15% decrease on the previous year's baseline emissions (956,217 tCo2e). This resulted from investment portfolio construction decisions around asset manager style resulting in a reallocation of assets to external asset managers with improved investment portfolio carbon emission characteristics.

	2020	2021	Difference
		Australian equities	
Carbon emissions (tCO2e)	615,540	557,813	-9%
Carbon footprint (tCO2e/$AUDm invested)	136	97	-29%
WACI (tCO2e/$USm revenue)	236	241	+2%
		International equities	
Carbon emissions	304,427	227,826	-25%
Carbon footprint	59	36	-39%
WACI	96	104	+9%
		Total listed equities	
Carbon emissions	919,967	785,640	-15%
Carbon footprint	95	65	-32%
WACI	161	169	+5%
		Listed infrastructure	
Carbon emissions	33,135	28,518	-14%
Carbon footprint	190	142	-25%
WACI	1,373	582	-58%
		Listed property (REITs)	
Carbon emissions	3,115	2,988	-4%
Carbon footprint	10	7	-30%
WACI	243	87	-64%

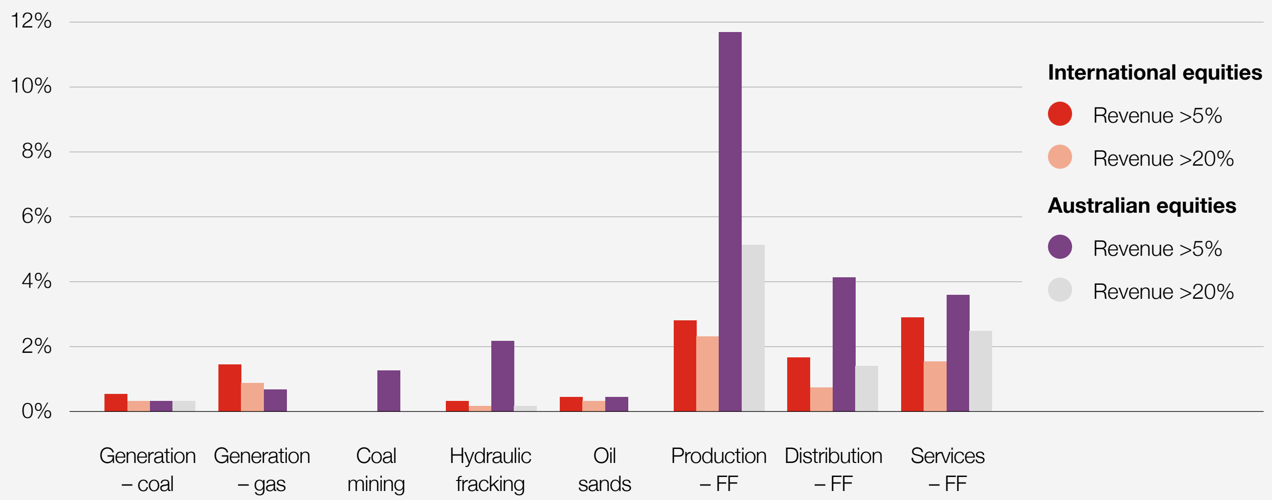
Listed equities investment portfolio emissions



The combined **listed equities** investment portfolio has a lower emissions profile in 2021 compared to 2020. Absolute emissions were reduced by 15%, and carbon footprint (emissions per $ invested) was reduced by 32%. WACI increased by 5% in 2021.

The **listed real assets** investment portfolio has a lower emissions profile in 2021 compared to 2020. Absolute emissions were reduced by 14% and 4%, respectively, for infrastructure and REITs. The carbon footprint (emissions per $ invested) was reduced by 25% and 30%, respectively. WACI reduced by 58% and 64%, respectively.

Listed equities fossil fuel exposure



The chart above shows the % of our listed equities investment portfolios with exposure to companies generating revenues from fossil fuel-related activities.

Unlisted investment portfolio carbon footprint

We have started measuring the footprint of our real asset (infrastructure and property) investment portfolios and requested portfolio and/or asset level emissions data from each of our asset managers. We are consolidating and assessing the data for gaps. We aim to publish the emissions footprint of our real asset investment portfolios in next year's report.

In the meantime, we will continue to encourage our asset managers to improve asset-level data and transparency, commit to targets and develop emissions reduction plans and initiatives.

For the private markets' investment portfolios (debt and equity), we are determining what emissions data is available (either reported or estimated). We have been able to source some of the private assets emissions data from an external provider, but considerable gaps remain.

In 2022, we will identify the assets and/or asset managers whose emissions are likely to make a material contribution to the investment portfolio and request emissions and/or financial data needed for estimation directly from each asset manager.

Private markets: Innovating to help solve the world's energy needs

Beginning in the United Kingdom over two decades ago, I.P. Group was established to commercialise great ideas into world-changing businesses via partnerships with universities at the edge of scientific innovation. In 2017 the Group established its presence in Australia, and TelstraSuper made an initial investment of $35 million, adding to the investment in 2021.

The funds we have invested have contributed to developing new forms of clean energy, sustainable transport and energy transition while providing capital to Australian university researchers to help commercialise their technology. Two examples of Australian technology that I.P. has invested in are Vertiia and Hysata.

AMSL is an aeronautical engineering company based in Australia. The business has developed Vertiia, the world's most efficient electric, vertical take-off and landing (eVTOL) aircraft. eVTOLs help decarbonise transport and offer a solution for climate change and urbanisation. They are fully electric, with a patented lightweight structure and designed to accommodate hydrogen power.

The high cost of producing green hydrogen is a major barrier to developing and take-up of hydrogen as an alternative fuel source. Hysata is an Australian business developing a new type of hydrogen electrolyser with the potential to significantly reduce costs associated with green hydrogen production, bringing affordable green hydrogen within reach and potentially accelerating the global transition to net zero emissions.

TCFD Recommendations Index

The table below aligns our reporting with the recommendations of the TCFD framework. This is TelstraSuper's first year of implementing the CCAP. Our progress against the TCFD recommendations will continue to evolve.

TCFD pillar	Disclosure recommendation	Reference
Governance	Describe the Board's oversight of climate-related risks and opportunities.	*01 Our approach to climate change* on page 4. *03 Governance* on page 8. See also CCAP
	Describe management's role in assessing and managing climate-related risks and opportunities.	
Strategy	Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	*04 Strategy* on page 10.
	Describe the impact of climate-related risks and opportunities on the organisation's business, strategy, and financial planning.	*04 Strategy* on page 10.
	Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	*05 Scenario analysis* on page 14.
Risk management	Describe the organisation's processes for identifying and assessing climate-related risks.	*06 Risk management* on page 16.
	Describe the organisation's processes for managing climate-related risks.	*06 Risk management* on page 16.
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	*06 Risk management* on page 16.
Metrics	Describe the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	*07 Metrics and targets* on page 23.
	Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions and related risks.	*07 Metrics and targets* on page 23.
	Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	*07 Metrics and targets* on page 23.

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