Your super and climate change

Climate change is a significant global risk. We take it seriously, as we do with all of the risks that we must consider in order to build robust investment portfolios that can deliver all of our customers a sustainable retirement income. We take an active but integrated approach, considering our entire portfolio net exposures to Environmental, Social, and Governance (ESG), Technology, Resourcing, and Financial risks.

Any single risk cannot be viewed in isolation because risk is fluid and interactive, it changes with regulatory, technological and behavioural trends.

What are the investment risks associated with climate change?

- **Transition risk** arises from the transition to a low-carbon economy. Transition risks include changes in regulatory policy, technological innovation, renewable power and energy advancements, and social adaptation.
- **Physical risk** causes direct damage to assets or property as a result of rising global temperatures. Physical risks, including extreme weather events, have the potential to cause supply chain disruption, resulting in lower productivity as well as potentially lower asset values.
- **Liability risk** stems from the potential for litigation if entities and governing bodies do not adequately consider or respond to the impacts of climate change, and may include the potential breaching of directors' duties.

What is CSC's role?

Robust risk management is the most critical aspect of converting savings into wealth capable of generating sustainable income. It is the heartbeat of our investment team. We were one of the first Australian superannuation funds to implement full risk transparency at the security level in our portfolio more than a decade ago*.

In order to fulfil the financial retirement objectives of all our customers, we work to build portfolios that:

(i) take the right types of risks, in sufficient quantities, to achieve our return targets sustainably; and

(ii) mitigate the types of risks that could impair capital permanently in a material way.

It's critical to our purpose that the financial returns generated from our portfolio of investments meet our compensation hurdles for the risks we take in exposing our customers' savings to them.

*CSC's bottom-up risk system integrating financial, natural and social-resource risks across the entire portfolio has been fully operational since July 2009 and covers both public and private market assets. We have been continuously evolving this to incorporate factor analysis, portfolio attribution and other analytic tools to supplement the primary risk system, recognising the need for specialised complementary or contrarian insights to facilitate better informed decision making.

Commonwealth Superannuation Corporation

Defence Force Retirement and Death Benefits Scheme
ABN: 39 798 362 763

Australian Defence Force Superannuation
ABN: 90 302 247 344
RSE: R1077063

Commonwealth Superannuation Scheme
ABN: 19 415 776 361
RSE: R1004649

Public Sector Superannuation accumulation plan
ABN: 65 127 917 725
RSE: R1004601

Military Superannuation and Benefits Scheme
ABN: 50 925 523 120
RSE: R1000306

Australian Defence Force Cover
ABN: 64 250 674 722

Public Sector Superannuation Scheme
ABN: 74 172 177 893
RSE: R1004595

1922 Scheme
DFRB Scheme
PNG Scheme
DFSPB
CSC retirement income

Making a real world impact on emissions

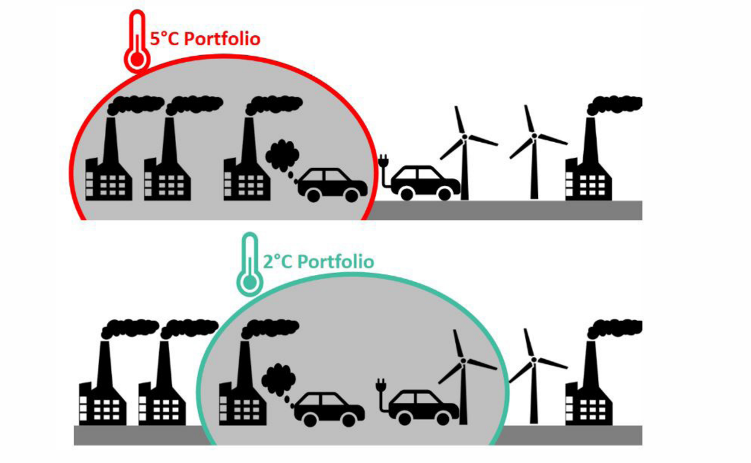
Fundamentally, it is essential to acknowledge the distinction between activities that have:

1. portfolio impact e.g. divestment; vs

2. real world impact which is more complex to achieve.

This is why divestment does not have real world impact according to research from Harvard, Oxford and Zurich Universities, in addition to independent global not for profit sustainable finance group, 2 Degree Investing Initiative.

Why 'aligning with climate goals' doesn't equate to 'contributing' to them



Source: 2 Degree Investing Initiative

The exclusion of all fossil fuel producers from portfolios may reduce the risk of any potential write down in the value of portfolios should all those assets become stranded, i.e. if they become worthless. CSC has managed to reduce the risks to customer portfolios by divesting from what we consider to be potentially stranded fossil fuel assets defined as companies that have little prospect of transitioning because they derive 70% or more of their revenue from thermal coal production and generation.

Thus divestment can be relevant to financial outcomes. However, it has no impact on the amount of greenhouse gas emitted into the world because divestment is not a withdrawal of funding from the company. It’s merely selling a stake to another buyer who by definition values the company more.

Some customers may also want to use this action to send a signal to these companies to reduce emissions. However, divestment does **not actually reduce** greenhouse gas emissions into the world, a phenomenon that we've long understood but that is now increasingly recognised by scientists, investors and activists alike as green wishing.

Addressing energy demand makes a real economy impact—limiting supply just benefits fossil fuel companies.

More importantly, divestment is ineffective and regressive because it focuses on the company supplying fossil fuels instead of focusing on demand. **Demand** is about energy efficiency and improving that. Supply constraints drive higher fossil fuel prices and higher fossil company or industry profits. Profits that investors and companies themselves, encouraged by long-term investors, could recycle into new renewable infrastructure.

Any impact that rations the use of an inelastic product through price by focusing on supply is effectively like a regressive tax. This is because demand for energy can't be shut off quickly, costlessly or easily because every company in the world outside of nuclear jurisdictions relies on fossil fuels to make the things that the world consumes. It prevents parts of the developing world from accessing refrigerated transport for vaccines. It makes it unprofitable to transport or even to make some wind turbines but it’s unlikely to have much effect on people who use private jets for a personal shopping for example.

We manage climate investment risk in three ways

We believe that our strategy will genuinely support a smooth transition to a lower-emission world.

1. Renewable investments

We invest in renewable-energy assets and strategies because renewable energy is the most likely future of our global energy system.

2. Robust transitions from fossil fuels

We support robust transitions away from fossil fuels by focusing our exposures in the relatively cleaner producers in Australia who are also self-investing in renewables and operate with high human and community safety standards. As long-term investors, we can support a transition that respects: the practical demands for energy in our country and around the world simply to continue to operate; the labour force impacts; and understands that divesting to shorter-horizon shareholders is unlikely to reduce the climate risk at all.

3. Impact on climate footprint over time

Our approach considers the current state of a company's carbon footprint and the market's appreciation of that (as reflected in its share price), as well as its capability to improve that footprint over time. And to measure that at a net portfolio level, because the risks and opportunities from different climate actions in our domestic and international assets are interdependent.

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Portfolio facts that evidence our strategy

1. Investing in renewables

The UN Sustainable Development Goals (SDGs) are global aspirations for a better world. In the case of climate change, the relevant goals are *SDG 7: Affordable and Clean Energy* and *SDG 13: Climate Action*. CSC has been investing in new-energy-system assets for over two decades both directly, through our private asset portfolio, and via tailored public market indices. By being a first mover, we have been able to avoid trade-offs and instead capture strong financial returns for our customers while delivering positive impact in the world into which our customers will retire.

At present we have over A$1.012 billion invested in high-quality private and public assets including wind farms, waste management infrastructure projects and renewable energy initiatives that add to the net new supply of facilities (as at 30 June 2022).

These investments reduce our portfolio carbon emissions by over 251,000 tonnes of CO^2 per annum, compared to having this money invested passively to meet a similar level of energy demand (for financial year to 30 June 2022).

We take a **value-for-money** approach when assessing investments in renewable assets. Often, this leads to investments in new renewable developments rather than mature operating assets. This contributes to the transition to a lower carbon world because we can add to the overall stock of installed renewable projects, rather than simply trade shares in existing assets.

In September 2015, we invested in Macarthur Windfarm, then the largest windfarm in the Southern Hemisphere. As renewables became highly sought after assets amongst institutional investors, we were able to sell this to other investors in March 2022. During this period, this investment provided 14% per annum gross return to customers We must ensure that any investment we make meets our customers financial objectives by offering a fair return for the risks and costs involved in the investment.

We have now recycled this profit into an investment with Akuo, in partnership with Intermediate Capital Group, a global developer of renewable assets, diversified across types (wind, solar, biomass, hydrogen, storage) and geographies (15+ locations around the world). In addition, we have diversified across two other renewable-development platform investments. Because all three of these opportunities add to the net stock of new alternative energy assets, they make a genuinely additive contribution to the journey to net zero.

Notwithstanding that significant capital investment in new-energy-system assets is required (US$ 1 trillion + annually) to meet ambitious climate targets, the development of new-energy-system projects globally is limited by physical constraints rather than lack of capital. These include grid capacity, planning constraints, supply chain issues and labour availability. Under such constraints, it is more challenging to find new-energy-system assets that contribute to real world carbon emissions reduction and offer attractive investment opportunities for our customers' retirement savings. We consequently remain highly selective and continue to monitor new opportunities.

2. Supporting robust transition away from coal

Australia (and the rest of the world) still require fossil fuels during the transition to low carbon to operate, but this is reducing. To ensure this process is smooth and as fast as it can be, we support robust transitions away from fossil fuels, constrained today not by any lack of renewable energy, but by an inability to store and distribute it reliably.

There is value in engaging with companies both directly (via dialogue) and indirectly (via voting all our stock). Our ability to do this derives from an investment governance process that began for us back in 2003. Our efforts were recognised then by the United Nations in the form of an inaugural innovation award for impactful efforts on sustainability[*].

Over many decades, the CSC Board has evaluated and experienced the advantages and disadvantages of different approaches to encourage sustainability in the long term value and quality of our customers' savings. We have compared the impact we can make through:

- **Divestment is a last resort**: We use divestment only when engagement with companies cannot reduce the risks to the long-term viability of the business and/or because the activity is contrary to Australian government regulations, sanctions, treaties or conventions such as tobacco producers, cluster munitions or undiversified companies that derive 70% or more of their revenue from thermal coal production/extraction.
- **Active engagement** (we engage both directly and indirectly with all our most material public companies).
- **Proxy voting** (we vote all of our stock domestically and internationally consistently and according to our principles).
- **Collaboration** with global leaders (see Appendix for details).
- **Integration** of analysis of all risks into our formal investment processes and decision-making frameworks.

Engagement for impact through change

As owners, we retain certain rights that enable us to influence businesses. Engagement is one means of achieving this, where the changes we seek are commensurable with business performance over the long term. We focus, in particular, on ensuring that companies have appropriately skilled directors on their boards, able to understand the complexity of developing a robust decarbonisation plan that can be measured and monitored.

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For example, at a recent AGM, after many years of engagement, a majority of shareholders (including CSC) voted to elect new directors to its board, on a platform of more rapid investment in decarbonising the business than was previously planned.

Real decarbonisation of this type requires emitters to invest in the new energy system so that they can permanently replace their old technologies. Large diversified resource companies are generally more capable of such changes.

Our engagement activities prioritise effectiveness. We have the large-scale, climate-focussed investor initiatives where some of our investment partners are co-leaders. These co-ordinate, consolidate, and communicate investor expectations and concerns with greater effect than it would be possible for us to have if we acted alone.

In addition, we require our investment management partners to engage the material actively-held companies they hold on our behalf. If the management and board skills are not present to ensure quality and pace of the companies' progress versus the investment requirement, our investment managers may elect to redeploy those funds to comparatively better corporate opportunities.

Our managers would divest if they believed that:

- company was investing at returns below their expectations or their own cost of capital (such as in an asset with high 'stranded asset' risk); and
- company showed a refusal to engage with their concerns regarding any ESG-related items.

On occasion, we have escalated such concerns (where unaddressed after engagement) via voting that more assertively communicates our concerns to the board; and by voting for board composition that adds the necessary skill, diligence and/or commitment to decarbonisation.

*An inaugural citation developed by the UN Environment Program Finance Initiatives (UNEP FI) and the Royal Awards for Sustainability, recognising CSC's innovative and impactful consideration of ESG factors. We identified the criticality of long-term thematic risks and poor operational practices.

3. The journey is just as important as the destination

We aspire to achieve net zero emissions as soon as possible, while also managing the social impact of a JUST, robust and smooth transition to consumers, employees and other stakeholders affected, e.g. capital needed to retrain workers and manage the impact on societies especially increasing inequality and threats on social cohesion, and the technology to allow extend the use of renewables 24/7.

We seek genuine, authentic steps that can achieve impact consistently and incrementally, rather than grandiose gestures.

There are many facets involved in managing the risks of climate change effectively in the best interests of our customers. We're preparing our portfolios to manage the risks and opportunities to our customers' savings should any particular climate scenario (of the many possible scenarios) eventuate—e.g. uncertainty about the timing and quantity of government intervention such as carbon tax and at what price, actions from all producers or consumers of old and new energy.

We're preparing our portfolios to manage the risks and opportunities to our customers' savings should any of the many possible climate scenarios eventuate.

Portfolio-level impact for system consideration

CSC manages portfolio-level impact not company-by-company impact as every company operating outside a nuclear jurisdiction, whether energy company or any other company, relies on fossil fuels to produce the things the world consumes. Indeed, fossil fuel remains an important input into the production and distribution of renewables and the infrastructure required to make them firm (ensure sufficiency and reliability).

In the transition period towards reliable and sufficient renewables energy supply, fossil fuel rationing should arguably differentiate between those companies converting fossil fuels into, for example, non-discretionary consumables (food, healthcare, etc) and renewables infrastructure and away from those companies converting fossil fuels into items that represent next year's land fill (eg. discretionary consumption; crypto trading; etc.). So energy companies that are well-governed; have strong human capital management capability; and boards focused on genuine transition plans, are actually important ingredients into a robust transition.

The Paris Agreement involves national commitments capable of supporting global decarbonisation. In practice, this requires varied, non-linear emissions reductions pathways for different assets, sectors and regions; the Agreement does not specify decarbonisation objectives for any individual company (or investment portfolio).

If simply extrapolated, the risk mitigations we have taken in portfolios to date actually do put them in line with what others measure as Paris Alignment. That's a 50% reduction in the public company carbon emissions from our portfolios by 2030 and 100% by 2050 if the current pace can be maintained, which is dependent on policy, market and other external variables.

The CSC Board of Directors has and continues to have detailed discussions about how climate change risk can be genuinely managed not just in our investment portfolio, but also within our own organisation. To that end, we are developing a formalised organisation wide climate-risk management policy, some of which has already been implemented for some time.

Climate risk portfolio management

The CSC investment team assesses and manages climate-related issues through the portfolio by:

- Understanding and measuring the climate-related exposures through the portfolio by seeking partnerships with external research and data providers, incorporating exposures to physical, transition and liability risks related to climate.
- Conducting stress and scenarios analysis, such as forward looking scenarios of different transition pathways to a lower carbon economy, carbon price implications, stranded assets analysis and physical climate scenarios. For example, our pro-active and integrated response to the results of our climate and ESG stress tests led to in the use of two new international shares mandates:
  (i) a passively-implemented decarbonisation index to reduce our carbon emissions by 50% vs public listed equity benchmark; and

  (ii) an optimisation mandate that reduces misuse of scarce natural resources, e.g. 50% less carbon emissions, 50% less water use, 50% less waste.
- Incorporating CSC's active owner and climate-risk policies within external manager mandates. In an environment of developing policy responses, active management is likely to be very important.
- Engaging actively and constructively with investee companies on climate change issues.
- Dedicating capital expenditure budgets within each of its directly-held property assets to minimise physical climate risks. We invest in global benchmarks to support and guide those budgets and their focus.

- Actively evaluating renewable energy and other sustainable opportunities and provide private capital to those which have high potential of generating sufficiently high risk-adjusted return, particularly in regions requiring significant infrastructure investment to capitalise on climate change.
- Disclosing climate change exposures to stakeholders.

...provide private capital to those which have high potential of generating sufficiently high risk-adjusted return, particularly in regions requiring significant infrastructure investment to capitalise on climate change.

Examples of climate change risks to investment sectors considered

We are methodically and comprehensively considering which companies, industries and countries will benefit from transition to a lower carbon world compared to the ones that will lose value.

While fossil fuels are the main companies the media and investors typically focus on, our full investment team (across all asset classes and markets) have extended our assessment to a broader assessment of potential impacts, for example:

- **Energy:** transitioning from coal and oil to renewables + energy storage and responsive demand management.
- **Autos:** transitioning from combustion engines to electric motors.
- **Construction**: the impact on real estate assets of increases in energy efficiency standards will require refits for homes and offices and increasingly higher construction standards for bushfire prone areas.
- **Agriculture:** Productivity increases required to offset deforestation, especially in emerging markets, use of agricultural chemicals particularly in developed countries, transitioning away from reliance on animal proteins.
- **Consumer sectors:** increasing restrictions on plastic will impact many consumer staples companies.
- **Waste:** Transition to a circular economy will see new infrastructure and utilities systems benefit from a more sustainable approach to limited resource usage.
- **Water:** water shortages and droughts driving water efficiency and increasing competition between users.
- **Infrastructure:** transition towards decentralised networks in favour of lower emitting (but slower) transportation methods.

We have been pioneers in considering non-financial ESG issues for many years and continue to engage with industry participants, specialist managers and service providers in increasing disclosure, transparency and availability of quality data to price and quantify these emerging risks. For example, UN Innovation award in 2003, AsianInvestor for Excellence in Governance (2018), Innovation (2019 and 2021) awards, ESG engagement (2020 and 2021) and COVID response (2020), Bretton Woods II top 20% of the biennial world's most Responsible Asset Allocators in 2017, 2019 and 2021.

We will continue to assess all risks and opportunities arising from climate change, as we do with all of the risks that we must consider in order to build robust investment portfolios that can deliver all of our customers a sustainable retirement income.

Appendix: Collaboration with global leaders

Since 2001 CSC has been instrumental in collective efforts to address climate change (and other ESG) risks, via membership of the Investor Group on Climate Change (IGCC).

CSC views participation in such collective efforts as the most effective way to minimise overall ('non-diversifiable') climate change risk to customer portfolios, as (aside from considerations mentioned above) we do not regard CSC's investment decisions as capable, in isolation, of affecting the economics of large-scale industrial activities such as fossil fuel-based energy production.

CSC is currently also committed to the Montreal Carbon Pledge, Principles of Responsible Investment (PRI), and the Global Investor Governance Network (GIGN). We publicly support the global best practice Taskforce for Climate-related Financial Disclosures (TCFD), committing to increased transparency and disclosure of climate related financial risks and encouraging our investment managers and service providers to do the same. The ultimate aim of increased transparency is to make markets more efficient, and economies more stable and resilient.

We also participate in the Carbon Disclosure Project's (CDP) non-disclosure campaign via our external investment managers. This collaborative effort seeks to increase response rates from previously non-disclosing companies to provide investors with greater transparency and comparability of high-impact companies across global markets, with respect to environmental issues.

We are also a signatory to the Partnership for Sustainable Capital Markets. The Partnership involves some of the world's largest asset owners and represents a firm commitment to long-term investing and the consideration of environmental, social and governance factors. It also poses a warning to companies seeking capital, stating "companies that seek to maximise corporate revenue without considering their impacts on other stakeholders — including the environment, workers and communities—put their long-term growth at risk and are not attractive investment targets for us." The letter also provides a similar message to financial partners.

In our view real world impacts require practices aimed at aligning markets in their pursuit of a fair financial return to their purpose of creating value in the real economy and we have long defined value both by tangible things like plant and equipment as well as intangible things like institutional integrity, healthy population and clean air. They're prerequisites to a sustained and inclusive prosperity.

To that end we work collaboratively with global peers, so other investors around the world, but also with development banks, scientists, NGOs, entrepreneurs and others towards developing sustainable investment vehicles that meet our customers' requirements for return and mobilise fresh capital that is additive to building a zero emissions economy.

Where can I get more information?

CSS — **Commonwealth Superannuation Scheme**

EMAIL members@css.gov.au
PHONE 1300 000 277
FAX 02 6275 7010
MAIL CSS
GPO Box 2252
Canberra ACT 2601
WEB csc.gov.au

PSS — **Public Sector Superannuation Scheme**

EMAIL members@pss.gov.au
PHONE 1300 000 377
FAX 02 6275 7010
MAIL PSS
GPO Box 2252
Canberra ACT 2601
WEB csc.gov.au

PSSap — **Public Sector Superannuation accumulation plan**

EMAIL members@pssap.com.au
PHONE 1300 725 171
FAX 1300 364 144
MAIL PSSap
Locked Bag 20117
Melbourne VIC 3001
WEB csc.gov.au

ADF Super — **Australian Defence Force Superannuation**

EMAIL members@adfsuper.gov.au
PHONE 1300 203 439
FAX 1300 204 314
MAIL ADF Super
Locked Bag 20116
Melbourne VIC 3001
WEB csc.gov.au

Military Super — **Military Superannuation & Benefits Scheme**

EMAIL members@enq.militarysuper.gov.au
PHONE 1300 006 727
FAX 02 6275 7010
MAIL MilitarySuper
GPO Box 2252
Canberra ACT 2601
WEB csc.gov.au