

Building a Resilient Portfolio for the Long Term

Our Climate Change Strategy in Action

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December 2023

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Introduction



For more than 25 years, OPTrust has recognized that upholding our pension promise over the long term means investing in a way that is responsible and sustainable. Our portfolio must be resilient as global financial markets face the pervasive, growing impacts of climate change.

From first formally integrating environmental, social and governance (ESG) factors into our investment policies in 2007, to launching our Sustainable Investing and Innovation team in 2020, to releasing our net-zero aligned climate change strategy in 2022, we've continually taken action to ensure the long-term financial sustainability of the OPSEU Pension Plan.

For investors worldwide, the global economy's path to net zero will be challenging, complex and present significant investment opportunities. This update provides our members with a look at our sustainable investing journey and how we are putting our climate change strategy into action.

Highlights of OPTrust's Climate Change Journey



1997

OPTrust Trustees adopted first proxy voting guidelines.

2008

Two dedicated staff positions established to oversee ESG integration.

2014

First annual Responsible Investing Report released.

2017

Undertook first climate scenario analysis.

2020

New Sustainable Investing and Innovation team launched with mandate to invest in climate innovation.

2022

Released net-zero aligned climate change strategy and participated in Canada's inaugural green bond issuance.

2007

ESG integrated into Statement of Investment Policies and Procedures. First renewable energy investment made.

2010

OPTrust becomes a signatory of UN Principles for Responsible Investment.

2016

Endorsed Task Force on Climate-related Financial Disclosures (TCFD) recommendations – one of the first pension plans to do so.

2018

Climate Change Action Plan released (updated in 2022 and available [here](#)). First green bond investment made.

2021

Implemented framework for evaluating responsible investing in externally managed investments. Updated climate scenario analysis (available [here](#)).

2023

Developed tailored climate metrics and targets framework (available [here](#)). Calculated our first total fund carbon footprint and set targets. Participated in the Bank of Canada's climate scenario analysis for the financial sector. Rolled out our proprietary ESG data program, COMPAS, across all asset classes to systematically capture key ESG metrics.

Our Climate Change Beliefs

OPTrust has five climate change beliefs that guide our decision-making, implementation and evolution of our climate change strategy.



1

WE RECOGNIZE ADDRESSING PLAN SUSTAINABILITY REQUIRES ADDRESSING CLIMATE SUSTAINABILITY

As the global economy transitions to net zero, integrating climate considerations into our investment and risk-management approach across all asset classes will be integral to delivering the returns necessary to preserve plan sustainability.

2

WE MUST ANTICIPATE CHANGE AND EVOLVE

The global transition will be complex and our understanding of climate change's impact on financial markets will evolve with experience and improved data. We must take a proactive approach to best mitigate risk and capture investment opportunities, adopt a learning mindset and evolve together as an organization.

3

WE WILL FIND OPPORTUNITIES ACROSS TRANSITION PATHWAYS

Certain industries will address climate change and transition quicker than others. We may seize opportunities to support these transitions to capture value over the long term.

4

WE ARE ACTIVE OWNERS AND WILL ENGAGE WITH COMPANIES AND IN INVESTOR COLLABORATIONS TO ADDRESS CLIMATE RISKS AND OPPORTUNITIES

In addition to continuing to execute our governance rights in our portfolio companies, we will contribute to, and benefit from, being involved in targeted global initiatives and collaborative investor engagements – aspiring to meet and exceed global standards.

5

WE WILL BE TRANSPARENT TO PRESERVE THE TRUST OF OUR MEMBERS AND STAKEHOLDERS

We will be transparent as we evolve with changing practices in climate disclosure and reporting as part of the commitment to our members and other stakeholders.

Our Climate Change Strategy: Overview

In 2018 we launched our first climate action plan and then updated it in 2022. Our climate change strategy's four pillars are designed to embed climate considerations in our portfolio and across our organization, enabling us to manage climate risk and seize opportunities on the global path to net-zero emissions.

Our strategy, supported by our climate change beliefs, recognizes that we must anticipate the uncertain. Climate change will impact different asset classes, industries and geographies in different ways. In the coming decades, we expect unprecedented changes in the pace and trajectory of climate change, driven by consumer, corporate and regulatory responses across the multiple industries and regions in which we invest. In addition, there will be changes in the quality and availability of climate data and information to guide our decisions, as well as in industry standards on how to best integrate climate considerations across our different asset classes.

We aim to deliver our **2022 climate change strategy** in a dynamic way that recognizes the unique composition of our portfolio, size of our investment team and in a manner that is cost effective. We continue to make investments in our in-house climate capabilities, for instance in better tools to capture climate metrics across our portfolio, while also actively benefiting from collaborative efforts involving larger like-minded pension funds globally. Among smaller and mid-size pension funds, we are particularly proud of our track record of collaboration and innovation.



Climate Change Strategy: Pillars



INVESTMENT STRATEGY AND SELECTION



PORTFOLIO ANALYTICS



ASSET MANAGEMENT



ADVOCACY AND DISCLOSURE

Climate Change Strategy: Summary



INVESTMENT STRATEGY AND SELECTION

Focus: Implementing or enhancing tools and approaches to allow us to continually improve the way we evaluate climate-related risks and opportunities at the total fund and asset-class levels.

Commitments:

- **Asset-class diligence:** Integrate climate considerations into due diligence and valuations.
- **Portfolio construction:** Stress-test portfolio using climate scenarios.
- **Allocations:** Develop climate-related taxonomy to track asset allocations and understand implications for investment strategies.



ASSET MANAGEMENT

Focus: Enhancing our commitment to active ownership, including in companies we own, and through collaboration with our external investment managers and engagement partners to encourage climate risk management and reporting aligned to a net-zero world.

Commitments:

- **Stewardship:** Establish stewardship plans for our highest-risk assets and strategies.
- **Reporting and monitoring:** Integrate climate change into portfolio reporting.
- **Corporate engagement and proxy programs:** Maintain and enhance corporate engagement and proxy programs.



PORTFOLIO ANALYTICS

Focus: Continually improving OPTrust's climate data to enable us to better monitor risks and opportunities and track progress from a variety of perspectives.

Commitments:

- **Risk assessment:** Identify sources of high climate risk across asset classes and strategies.
- **Metrics and targets:** Track exposure to climate risks and opportunities and use identified targets to manage exposures over time.



ADVOCACY AND DISCLOSURE

Focus: Actively building out governance, including through investor collaborations and enhanced internal and external disclosures.

Commitments:

- **Investor collaborations and consultations:** Contribute to investor initiatives that advance policy conversations in Canada or elsewhere.
- **Disclosure:** Enhance internal and external climate reporting.

Our Progress and Key Achievements



OPTrust has made considerable progress across the following areas of highest impact to our portfolio:

- 1 Increased portfolio resiliency
- 2 Industry-leading climate research
- 3 Baseline metrics and targets to guide strategy
- 4 Enhanced governance, reporting and engagement



1

We've increased the resiliency of our portfolio to climate change

By increasing our investments in assets poised to benefit from the climate transition we've increased the overall resiliency of our portfolio.

We've grown our investment in Canadian federal and provincial green bonds to \$550 million since 2018. These investments directly support the transition to a low-carbon economy by funding projects such as renewable energy, clean transportation, climate adaptation and energy efficiency.

We've also moved a large portion of our passive equity exposure to a low-carbon index, enabling us to maintain our desired overall risk exposures while minimizing our carbon-risk exposure.

INVESTING IN RENEWABLE ENERGY PLATFORMS

For over 15 years OPTrust has made significant investments in companies that play a role in the global path to net zero across multiple geographies.

BRUC

Spain and Japan



An 8.5 gigawatts renewable energy platform comprised of solar photovoltaic and onshore wind assets, the company is expected to avoid 3.5 million tonnes of CO₂ and power 5.2 million homes with green energy annually.

FIRELIGHT

Canada



A renewable energy platform with 190 megawatts of wind and solar assets in Canada, partnering with experienced developers to build and operate high-quality renewable energy projects.

An early mover in Canada's renewable energy landscape, Firelight began operations in 2010 and developed what, at the time, were three of Canada's largest rooftop solar projects in 2013-14.

ZENITH ENERGY

Australia



A remote power platform that installs and operates standalone energy generation systems, servicing the mining sector and communities across Australia.

The company integrates thermal and sustainable fuel sources and uses decarbonization principles in its funding arrangements, aligned with its strategy to be net zero by 2035.

FLOW POWER

Australia



An Australian electricity retailer and renewable energy developer and operator that works with its customers to accelerate the renewable energy transition.

In 2022 Flow Power serviced almost 1.6 terawatt hours of customer load and had over 30 megawatts of renewable energy assets in operation or under construction.

2023

OPTrust part of the **Decarbonization Deal of the Year** (2023) for Zenith's role in decarbonizing Australia's extractive sector.

BUILDING A SUSTAINABLE REAL ESTATE PORTFOLIO

OPTrust is proud of the leading environmental performance of our real estate portfolio. The vast majority of our Canadian direct operating real estate portfolio has achieved environmental certification (BOMA or LEED¹). More than 30% of our direct development projects are targeting net-zero operational carbon upon completion with all projects designed to achieve environmental certification.

SEN'ÁKW

Vancouver, BC



A purpose-built, rental apartment project, comprising 3,000 multi-family rental units across seven buildings.

The project is expected to be the largest non-resource private partnership with a First Nation and largest net-zero carbon residential project in Canadian history, with 20% of the units designated as affordable rental.

PORTLAND COMMONS

Toronto, ON



A 560,000 square-foot office development designed to focus on employee wellness, technology and sustainability.

The project will be completed in 2024 and is targeting LEED Zero Carbon, LEED Platinum and WELL² Gold certifications. The project will benefit from Enwave's Deep Lake Water Cooling and has green loan financing in place.

THE GEO

Kingston, ON



A 343-unit student housing development in Kingston, Ontario, serving Queen's University.

The project is expected to be completed in 2024 and will utilize geothermal heating and cooling to reduce greenhouse gas emissions produced by the building by over 70%.

¹ BOMA is the Building Owners and Managers Association, and its certifications recognize excellence in energy and environmental management and performance in commercial real estate. LEED stands for Leadership in Energy and Environmental Design and is a global green building rating system whose certification provides a framework for healthy, highly efficient and cost-saving green buildings.

² WELL is a system that measures and monitors a building's impact on human health and well-being.

AVONHEAD
Mississauga, ON



A fund investment encompassing the development of two industrial buildings totaling 740,000 square feet.

The first phase was certified as Zero Carbon by the Canada Green Building Council, making it the first multi-tenant, zero-carbon certified industrial building in Ontario. The second phase is targeting the same certification.

B6 (1090 WEST PENDER)
Vancouver, BC



A 526,000 square-foot office building, expected to be completed in late 2023.

The project is targeting LEED Gold and other leading health and safety certifications. Sustainability features include triple pane glazing, green roofs and bicycle storage. The project benefits from green loan financing.

84%

Percent of OPTrust's direct operating real estate portfolio with environmental certification (BOMA or LEED), with 100% of new developments designed to achieve certification.

SEIZING EARLY-STAGE OPPORTUNITIES

In 2021, OPTrust's Sustainable Investing and Innovation team initiated an investment strategy to research and identify managers across industries and sectors that are poised to reap long-term benefits from climate-related trends and the global shift toward decarbonization. Our thematic investing strategy has already resulted in several strong partnerships with exposure to investments that support a greener economy and reduce greenhouse gas (GHG) emissions across sectors, including energy, mobility and the circular economy.

LIMINAL INSIGHTS

North America



An innovative electric vehicle (EV)-grade battery inspection and intelligence technology provider that combines ultrasound technology and machine learning. Liminal's technology improves the quality and efficiency of battery production, helping meet the surging demand for batteries and catalyzing the transition to electric vehicles worldwide.

The company has a market potential to reduce 210 million tonnes of GHG emissions by 2030, a ten-times increase from 2022.

TERAWATT

North America



An owner, developer, and operator of EV charging infrastructure for commercial fleets. Through its network of charging centres across the United States, TeraWatt seeks to reduce emissions by enabling a rapid transition to electric transportation.

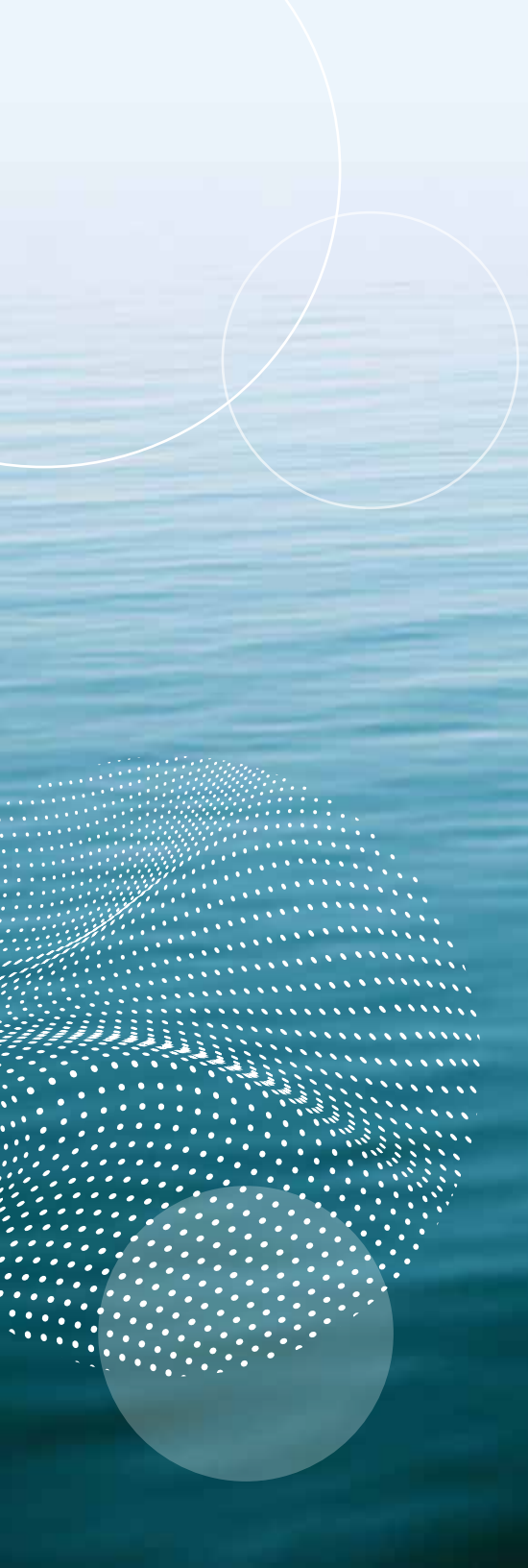
AMP ROBOTICS

North America



A business that modernizes recycling by using an AI machine vision and robotics system to improve sorting in recycling facilities, improving their efficiency, cost-effectiveness and sustainability.

To date, the company's technology has contributed to avoiding GHG emissions equal to the removal of one million cars from the roads per year.



FERVO ENERGY
North America



A developer of carbon-free baseload geothermal electricity generation technology that reduces costs and increases access to geothermal energy.

By harnessing heat within the Earth's crust, Fervo can help scale geothermal capacity, displacing conventional fossil-fuel energy sources.

CERAFILTEC
Europe



A designer and manufacturer of ceramic ultrafiltration membranes for water treatment facilities that removes microplastics and industrial pollutants from water and reduces GHG emissions from the filtration process.

WOLTAIR
Europe



A digital marketplace platform that enables homeowners to seamlessly purchase and install residential energy efficiency solutions, including electric heat pumps and solar storage installations.

The company estimates it will have a cumulative reduction of 143,000 tonnes of GHG emissions by 2025.

2

We've completed and shared industry-leading climate research

OPTrust has played a leading role in research, deepening investors' understanding of the potential economic and financial risks posed by climate change.



OPTRUST CLIMATE SCENARIO ANALYSIS

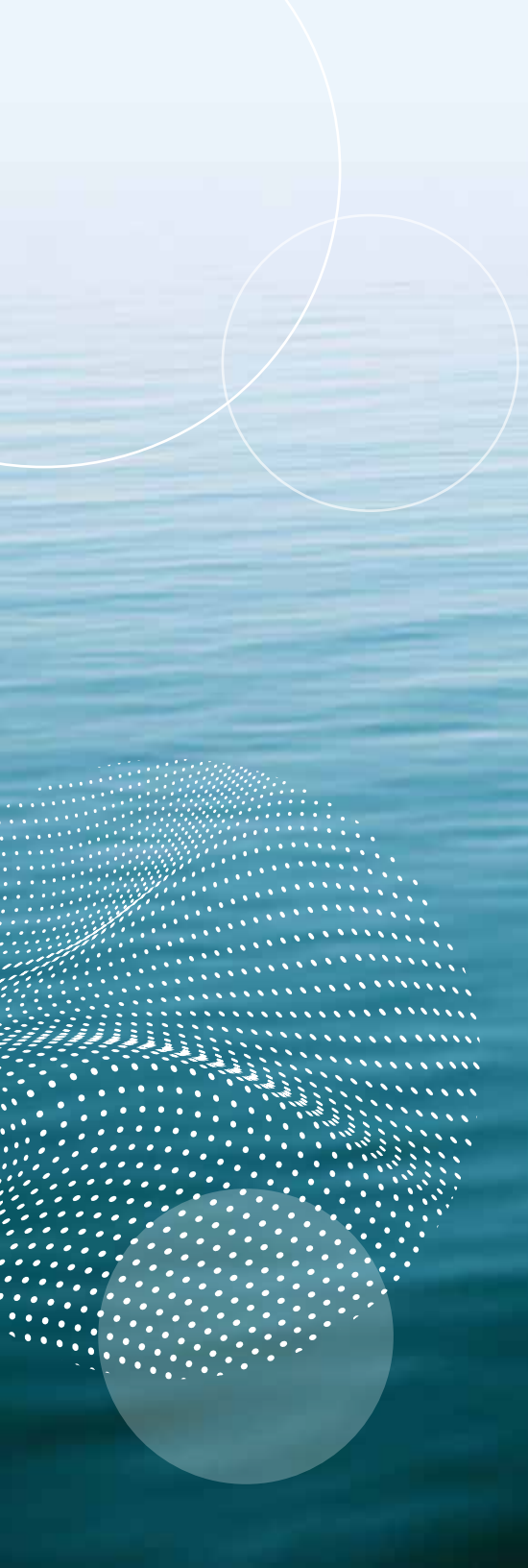
Climate scenario analysis (CSA) is a growing area of research enabling investors to connect climate science to portfolio management. By examining various global warming scenarios developed by scientists, and then connecting them to macroeconomic risk drivers and the asset-liability modelling at the heart of pension investing, we can better understand how climate change's impacts on the global economy can affect our overall financial performance.

OPTrust completed our first CSA in 2017 and again in 2021-22. The analysis confirmed that climate change is a material risk to our pension plan's sustainability, providing us insights to integrate into our asset-liability management framework and climate change strategy moving forward. With the quickly evolving nature of climate models, we will be updating our CSA again in 2024.

Over the coming years we expect investors to increasingly use, and rely on, CSA to understand how changes in climate pathways will impact global investment portfolios. OPTrust was proud to contribute our findings as a case study to the benefit of other global investors.

You can see our approach and findings [here](#).





AN INNOVATIVE MANAGEMENT TOOL TO CAPTURE AND TRACK CLIMATE METRICS

Metrics and targets play a critical role in supporting investors to manage the risks of climate change and to identify opportunities. In 2023, OPTrust developed an innovative framework to track climate metrics across five categories: **carbon exposure, climate exposure, stewardship, solutions and process.**

This year we began to collect data across all categories, which will enable our investment teams to go beyond carbon emissions data to better understand the nuances of climate impacts on their portfolios. As data availability and quality improve over time, we can enhance our risk management, investment planning and data quality.

WHAT DO CLIMATE METRICS SUPPORT?

Risk management:

Understanding an asset's climate profile enables us to more proactively manage risks stemming from the global transition to a lower-carbon economy and physical shocks to our natural environment.

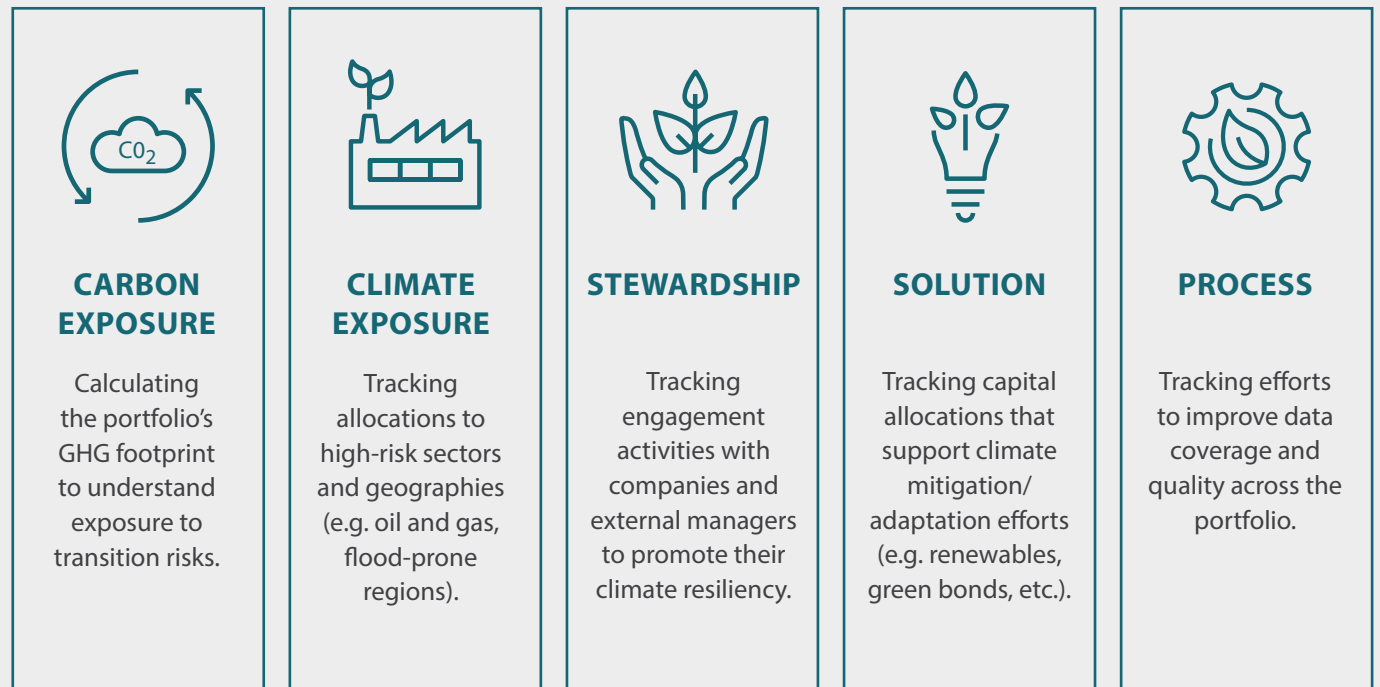
Strategic investment planning:

Better tracking of data enables us to hone in on areas where we have a strategic advantage to intentionally participate in the transition to a lower-carbon economy, support innovation and capitalize on climate-related opportunities.

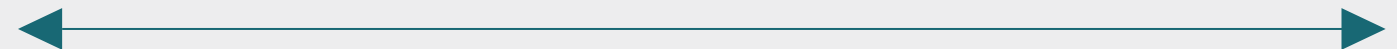
Data enhancement:

Consistently measuring efforts to improve the coverage and quality of climate data across the portfolio allows us to strengthen our understanding of material climate issues and our disclosures.

OPTRUST'S CLIMATE METRICS FRAMEWORK



Metrics can capture various types of information



As part of our commitment to work collaboratively and support the global transition to net zero, OPTrust released our climate metrics framework for use by other investors. You can find it [here](#).



3

We've established critical baseline metrics and targets to guide our climate strategy in the years ahead

Data availability and quality are among the biggest challenges investors face in making progress on climate-related targets. These challenges are heightened for organizations like OPTrust with a portion of assets that are invested by external managers. In these investments, we do not always have a “look through” at all portfolio companies’ data – or control over investment decision-making. This constraint makes setting precise targets and establishing accurate baselines difficult.

Starting in 2021, we began to develop tailored frameworks to enable us to consistently capture better ESG data on our portfolio which eventually will enable a fuller, more accurate disclosure of our portfolio’s ESG performance, including its carbon footprint, across asset classes in the coming years. Today, we’ve successfully put in place the foundations to capture better data – and to be able to act on it in the future.

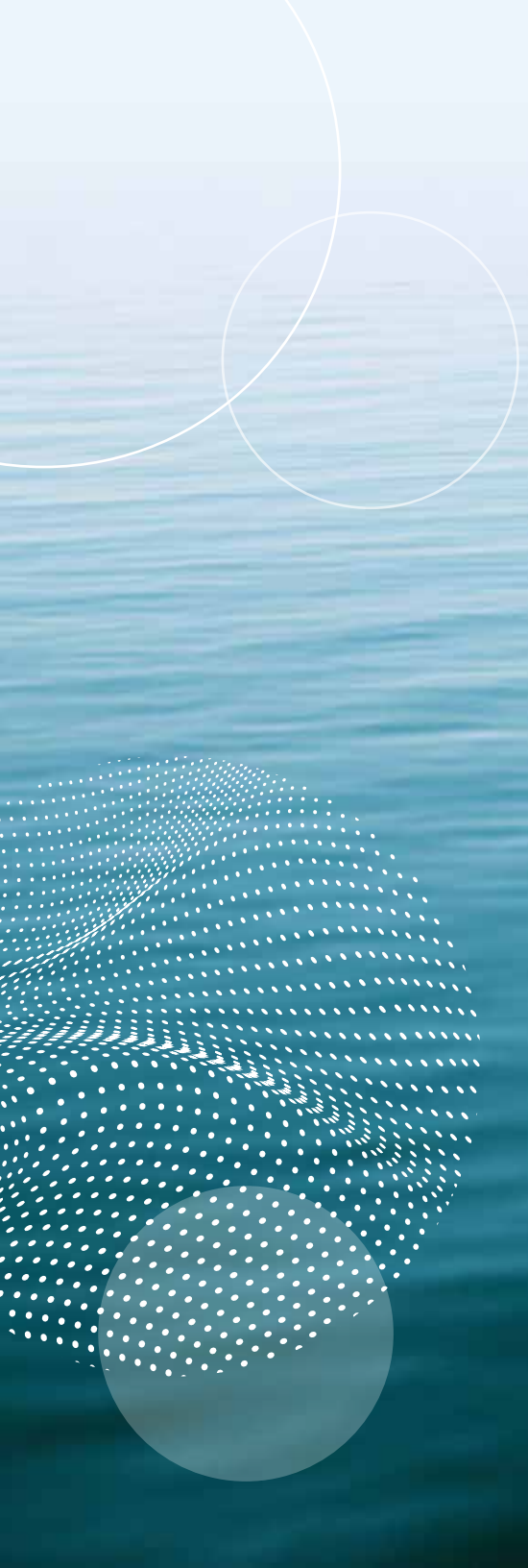
COMPAS

OPTrust’s customized cross-asset class ESG framework

In 2022 we began to pilot a new framework for our investment teams, called COMPAS, which stands for Capturing OPTrust’s Management and Progress Around Sustainability.

COMPAS is enabling our teams to consistently capture quantitative ESG data on our investments (including climate metrics) and then supplement that data with qualitative insights from investment teams. Through our COMPAS framework, we know that nearly a quarter of our external managers and funds have made net zero by 2050 commitments.

Moving ahead, we’ll be integrating climate metrics from COMPAS into our internal portfolio reporting, providing an integrated picture of our ESG and financial performance across asset classes.



SETTING AND EVOLVING OUR NET-ZERO TARGETS

As OPTrust's data quality and coverage continue to improve, we will be able to refine and evolve climate targets for our portfolio. We have set targets to track both our carbon footprint and the progress of our stewardship and process efforts – important first steps in enabling our climate ambition.

Tracking stewardship and process efforts is critical as they help us assess improvements in our partners' climate approaches and in our data, which we need to continually improve our abilities to identify, track, report and manage climate risk and opportunities across our portfolio.

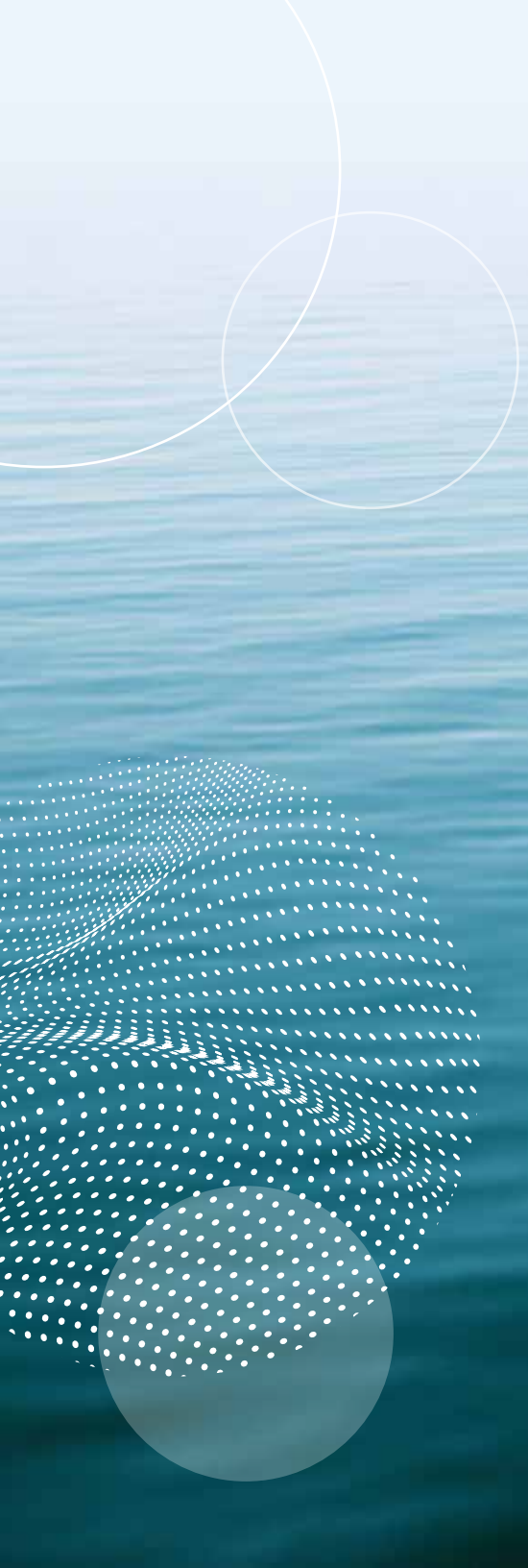
We have set initial targets to guide our efforts, recognizing that we will update our baseline and targets regularly as we have more comprehensive and more accurate data. Our initial targets by 2025 and 2030 include:

Carbon footprint

- From a 2022 baseline, reduce our overall carbon footprint by 30% by 2030.

Stewardship and process

- Implement enhanced climate due diligence on 100% of new direct investments and external investment partner commitments by 2025.
- Phase in climate evaluations on core, strategic investment partners starting in 2024 for completion by 2025.
- Engage with 100% of core, strategic investment partners and higher-risk directly owned assets by 2025 to advocate for collection and reporting of emissions data.



We anticipate that our stewardship and process targets will reduce our reliance on proxied data and help us meaningfully increase the number of our private equity and infrastructure companies that collect and provide emissions data to us. We anticipate achieving real emissions coverage for over 50% of our portfolio by value and over 75% of portfolio emissions by 2025. By that year we also anticipate that 80% of our directly owned real estate properties will report energy use.

In 2024, we plan to be in a position to report more comprehensive information on our carbon footprint, including on our private funds in real estate, private equity and infrastructure. We also plan to report separately on sovereign bonds.



WHY WILL OUR CARBON BASELINE AND TARGETS CHANGE?

Today, many investors rely on third-party organizations to provide climate data on public and private companies. While these data provide directional estimates, they are based on industry averages and are not as accurate as the data that could be provided directly by the company.

Given the importance of accurate data, investors continue to advocate for better disclosure by companies. As more and more companies begin to disclose more and better ESG information, including on their emissions, we will integrate that into our understanding of OPTrust's climate exposure to gain a more accurate picture.

More detailed information on our methodology and approach is available in our [2022-23 Task Force on Climate-related Financial Disclosures](#) (TCFD).

4

We've enhanced our climate governance, reporting and engagement

Addressing climate change requires significant governance changes both within and among organizations. We strengthened climate governance at OPTrust and played an important role contributing to global discussions on climate governance and transparency.

STRATEGY INTEGRATION

Since 2022, we've formally integrated climate change considerations into OPTrust's corporate strategy and the annual qualitative performance objectives of every department. Achievement of performance objectives is ultimately tied to compensation. This formal integration ensures that we consider climate in all material parts of what we do and how we invest.

ACTIVE ENGAGEMENT

OPTrust is a relatively small investor, yet we are committed to continue making a meaningful contribution to global initiatives. We are actively engaging in several investor climate collaborations including Climate Action 100+, Ceres and its net-zero working groups, UNPRI's private equity advisory committee and SHARE.



TRANSPARENCY AND REPORTING

In 2016, OPTrust endorsed the newly released Task Force on Climate-related Financial Disclosures (TCFD) framework and in 2017 we adopted the TCFD framework in our own responsible investing reporting. The TCFD framework is the leading disclosure framework for global investors and public companies to provide transparency on climate related risks and opportunities.

We will continue to strengthen our TCFD reporting by including disclosures of more data across the portfolio as our climate change strategy advances and our metrics and data collection continue to improve.

You can read our latest TCFD report [here](#).

Our Focus in 2024


What's ahead: Climate change strategy implementation priorities

Our ambition is to successfully navigate the global transition towards net zero over the coming decades. We must remain nimble to adapt to global changes, while at the same time tailoring our approach to what matters for OPTrust. Our yearly implementation priorities are designed to focus our efforts on the highest-impact areas.

2024 PRIORITIES

- **Climate due diligence:** In addition to enhanced climate change due diligence frameworks that support our teams in selecting external managers, we will roll out industry-specific due diligence toolkits for direct investments.
- **Climate data:** We will continue to collect ESG and climate-related data across all assets, and better integrate that data into our investment decision-making, risk monitoring and external reporting.
- **Identifying climate risks and opportunities:** We will continue to develop how we identify and track our exposure to green assets, transition assets and carbon-intensive assets across the fund, enabling us to have a better “snapshot” of climate risks and opportunities.
- **Targeted engagement:** We will work with select companies with higher-risk climate profiles to engage on their climate and transition plans and build greater resiliency within our portfolio. We will also contribute to collective engagements in collaboration with our peer investors.





*Our mission is to pay pensions today and
preserve pensions for tomorrow.*

With net assets of almost \$25 billion, OPTrust invests and manages one of Canada's largest pension funds and administers the OPSEU Pension Plan (including OPTrust Select), a defined benefit plan with over 106,000 members. OPTrust is a global investor in a broad range of asset classes including public and private equities, fixed income, real estate and infrastructure, and has a team of highly experienced investment professionals located in Toronto, London and Sydney.

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For more information about OPTrust's climate
change-related principles and actions, visit:

- [Climate change webpage](#)
- [2022-23 TCFD report](#)
- [2022 Responsible Investing Report](#)
- [Statement of Responsible Investing Principles](#)

