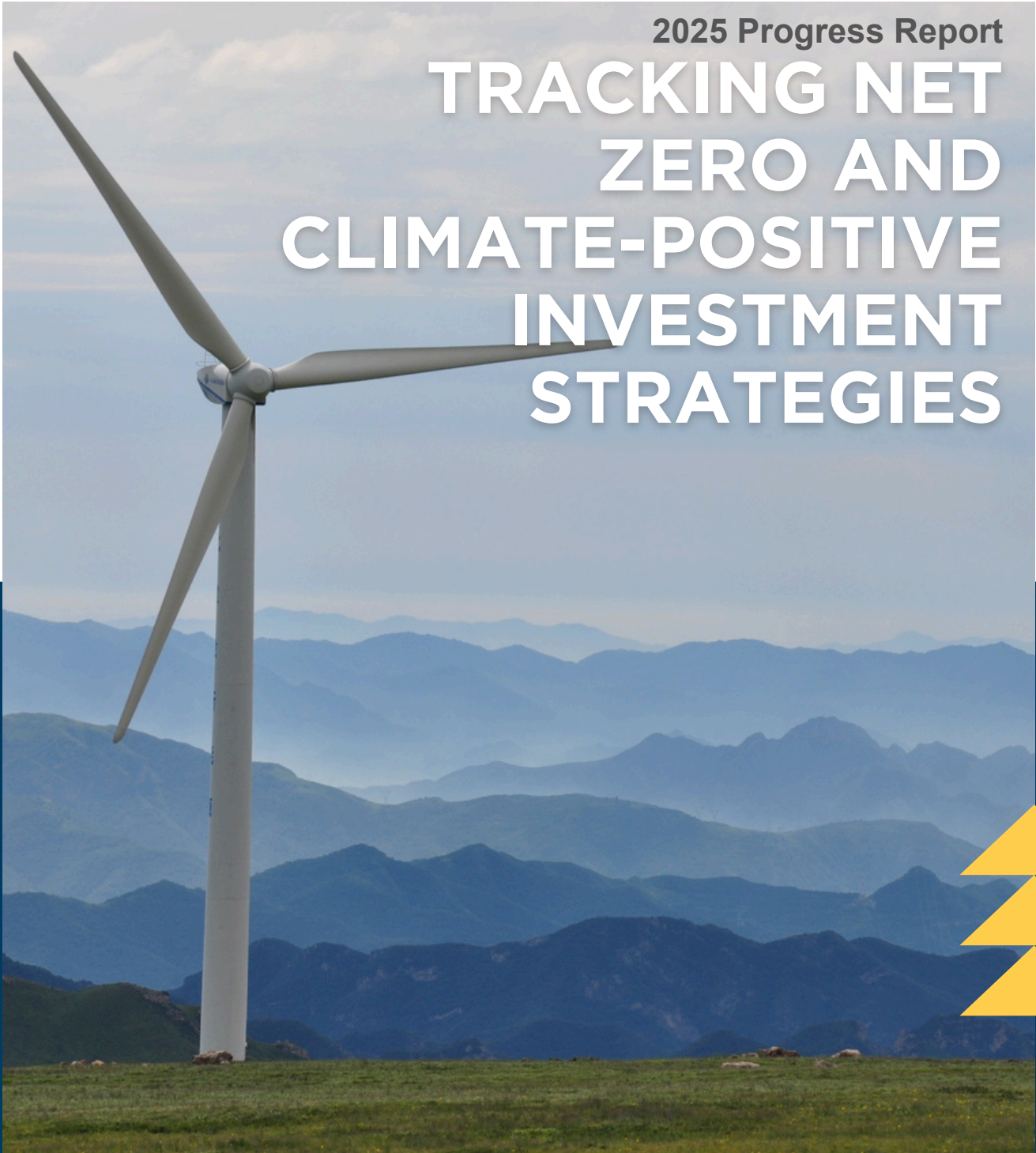




OREGON  
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2025 Progress Report

# TRACKING NET ZERO AND CLIMATE-POSITIVE INVESTMENT STRATEGIES



Prepared By The Office Of  
Oregon State Treasurer Elizabeth Steiner

# Introduction From Treasurer Elizabeth Steiner, MD

I am pleased to present to you the Oregon State Treasury Progress Report: Tracking Net Zero and Climate-Positive Investment Strategies. This report combines information regarding the COAL Act, Net Zero report, and sets the stage for the Climate Resilience Investment Act since the aims of all three are related.

I believe that pursuing profitable, climate-positive opportunities is in the best interest of public employees and all Oregonians. I am proud to say that my team at Oregon State Treasury has successfully embraced climate-positive investments while also producing strong returns that beat the assumed rate year after year. This strategy offers a stable and reliable income for retirees while reducing the climate impact of our investment portfolio.

The results of this strategy are promising:

- Emissions intensity in the Oregon Public Employees Retirement Fund dropped by more than 50%.
- Climate-positive investments within the Real Assets portfolio increased from \$1.2 billion as of January 1, 2022 to \$2.4 billion as of June 30, 2025.
- Although fossil fuel holdings in Private Market funds increased from January 1, 2022, into 2023, that marked the peak for such investments and was the last time there was a year-over-year increase. Since January 1, 2023 fossil fuel holdings have steadily declined.

It is clear that markets appear to be moving toward a cleaner energy future and away from dirty, fossil fuel technologies. These results justify efforts to continue our current strategy of meeting our fiduciary responsibility while simultaneously reducing our emissions intensity.

I want to thank former Treasurer Read for his leadership in developing the Net Zero Plan. The Net Zero Plan laid the groundwork for the Climate Resilience Investment Act, which I was proud to shepherd to successful adoption in 2025 with the support of labor leaders and other beneficiaries, community advocates for climate and sustainability issues, and a bipartisan group of legislators.

This work has not been without controversy. Some feel we have gone too far, too fast. Others feel we have not gone far enough. I remain dedicated to hearing from all constituents who have important opinions about this critical topic. Going forward, reports on progress to reduce emissions intensity will utilize the Climate Resilience Investment Act standards and guidelines as required by the new law.

Thank you for your interest in this important work. We look forward to hearing from you with your thoughts and questions.

*Elizabeth Steiner*

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# Executive Summary

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This progress report documents the goal to reach Net Zero emissions in the Oregon Public Employees Retirement Fund (OPERF or the Fund) by 2050. In 2024 Treasurer Read offered the [Net Zero Plan](#) as a means to track and reduce the Fund's emissions intensity over time.

The data shows encouraging results. The Fund's emissions intensity declined by more than half between 2022 and 2023. Climate-positive investments increased between 2022 and 2025. Going forward, the Oregon State Treasury (OST) will continue to collect and analyze emissions intensity data to track progress and to identify obstacles to overcome.

While these results are encouraging, it is important to recognize the limitations in forming definitive conclusions due to the small sample size of the data. Sustaining and expanding these gains will not be easy, but they are likely to be as important for the Fund's profitable future as they are to OST's success in meeting emissions intensity reductions over time.

## Next Steps in Net Zero Reporting

In the future OST will offer progress toward the Net Zero goal through the reporting guidelines established in Climate Resilient Investment Act (CRIA). CRIA establishes a mandatory reporting provision to the Oregon Legislature, whereas the Net Zero Plan annual reporting guidelines are purely voluntary. CRIA establishes a multifaceted reporting regime, including the requirement to analyze: “the risks of the levels of Scope 1 and 2 emissions of fossil fuel investments within the portfolio.” Beginning in 2026, therefore, OST will incorporate reporting on emissions intensity and climate-positive investment into one report under CRIA guidelines and in partnership with the Oregon Investment Council.





# Progress Report Highlights

## Assessments of Emissions Data

- Scope 1 and 2 emissions intensity in the Fund went down by more than 50% between the baseline year of 2022 when compared to 2023.<sup>1</sup>
- Carbon to Revenue and Weighted Average Carbon Intensity metrics show that the Fund's least emissions-intensive portfolios are Private Equity and the Opportunity portfolios.
- The Fund's most emissions-intensive portfolios are Real Assets and Fixed Income, followed by Real Estate and Public Equity.

## Climate-Positive Investments Update

- Climate-positive holdings in the Real Assets portfolio increased from \$1.2 billion on January 1, 2022, to \$2.4 billion as of June 30, 2025.<sup>2</sup>
- After increasing from 2022 to 2023, fossil fuel holdings in private market funds have declined in each subsequent year through June 30, 2025.<sup>3</sup>
- Manager selection and oversight included strategies that focused on profitable investments aligned with sustainable low-carbon approaches.

## Engagement and Advocacy

- Staff capacity for Environmental, Social and Governance (ESG) engagement improved with new positions and enhanced policies.
- Climate-risk oversight strengthened through deeper ESG integration, improved manager evaluations and expanded global engagement capabilities.

## Reducing Climate-Related Risks and Exposures In OPERF

- In 2025 the Climate Resilience Investment Act (CRIA) passed into law in Oregon.
- OST completed a full review of public holdings in carbon-intensive industries and assessed each company's transition readiness to guide future engagement priorities.
- OST worked with the Oregon Investment Council to adopt new climate-positive policies.



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1. 2023 is the most recent year for which comprehensive emissions intensity data is available.

2. June 2025 is the most recent period for which comprehensive emissions intensity data is available.

3. June 2025 is the most recent period for which holdings of fossil fuel data is available.

## Report Outline

### Section 1 - Introduction

Section 2 - Assessments of Emissions Data: This section explains the results of S&P Global review of emissions intensity in the Fund.

Section 3 - Climate-Positive Investments: This section describes the activities to carry out the action steps for climate-positive investments as identified in the Net Zero Plan.

Section 4 - Engagement and Advocacy: This section describes shareholder stewardship that is in alignment with the Net Zero Plan.

Section 5 - Reducing Climate-Related Risks and Exposures: This section outlines the policies and laws that guide implementation.

Section 6 - Conclusion and Next Steps: This section summarizes findings from the report.

## Key Terms

**Absolute Emissions:** The emissions of greenhouse gases of a company, asset, or portfolio over a specified time, and expressed in metric tons of CO<sub>2</sub> equivalent (“t CO<sub>2</sub>e”).

**Climate-Positive:** Investments that lead to a net reduction of greenhouse gas emissions in the atmosphere by actively removing more greenhouse gas than emitted or enabling vast net avoided emissions.

**Climate- and Transition-Aligned:** Investments that are climate-aligned are those that are moving the economy to net zero and climate resilience. Investments that are transition-aligned are those investment portfolios that have a science-based pathway to achieve net-zero greenhouse gas emissions by 2050. It is focused on investment in assets that are essential for operating the economy until it can fully achieve net zero emissions. These investments might emit more greenhouse gases initially compared to a net zero economy but are planned to be gradually reduced or eliminated over time.

**Emissions Intensity:** A measure of emissions calculated as the financed emissions divided by the capital invested (tCO<sub>2</sub>e/\$M AUM). At the company level, it's the ratio of emissions produced per unit of output, like emissions per product unit, revenue, or other relevant company-specific factors.

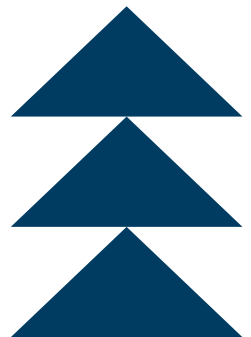
**Fiduciary Duties:** The statutory responsibilities of the Oregon State Treasurer and the Oregon Investment Council (OIC) to act and use the assets of the Oregon Public Employees Retirement Fund (the Fund or OPERF) solely in the best interest and for the exclusive benefit of the beneficiaries of OPERF.

**Financed Emissions:** Greenhouse gas emissions associated with a specific financial institution's (in this case OPERF's) lending and investment activities. It is calculated by attributing the emissions of the company to the financial institution based on its share of the investment. Basically, it is a measure of how a financial firm facilitates greenhouse gas emissions by financing operations that cause the direct emissions.

SECTION 1:

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# Introduction



The Oregon State Treasury's (OST) Progress Report: Tracking Net Zero and Climate-Positive Investment Strategies comes at a pivotal moment.

### **Global Demand for Climate- and Transition-Aligned Technology Grows Despite Headwinds**

Since the publication of Treasurer Read's Net Zero Plan in 2024 the global landscape surrounding climate disclosure and carbon accounting has shifted. The United States is no longer a signatory to the Paris Climate Accord. The current federal administration has thwarted renewable energy development in the United States. The Securities and Exchange Commission and regulators in the European Union, are slowing or scaling back climate-related disclosure requirements. Many companies and financial institutions are therefore retreating from public reporting of greenhouse gas emissions and net zero progress. As a result, market forces previously supported by national policies and incentives have encountered new headwinds.

However, these developments have only tapped the brakes on a global shift in energy production toward clean energy. Today, the costs of renewable energy are increasingly competitive with fossil fuels. Other nations are moving faster than the United States. For example, last year, outside of the United States, wind and solar power met most of the world's increased electricity demand and renewable energy has eclipsed coal as a major source of power generation worldwide.

### **Investment Opportunities in Climate- and Transition-Aligned Solutions**

The global trends mean there will be ample opportunities to make a positive return on climate- and transition-aligned investments now and in the future. Many countries and companies remain committed to a low-carbon future. Innovative firms continue to pursue profitable pathways to lower emissions. Markets will reward enterprises and investors that speed the adoption of climate-positive technologies and mitigate their exposure to investment risks associated with fossil fuels.

OST is committed to pursuing opportunities to reduce emissions intensity and support a disciplined, climate-positive investment approach, consistent with its fiduciary duties to the Fund's beneficiaries.

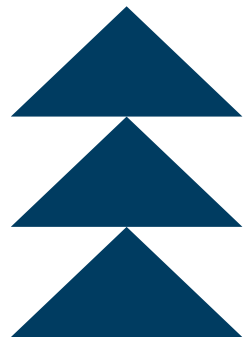
This report documents the results.



SECTION 2:

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# Assessment of Emissions Data



This section describes OST's progress in reducing emissions intensity within the Fund based on a comparison of 2022 baseline to 2023 data, as defined and reviewed by S&P Global.

### Purpose for Re-Baselining 2022 Data

S&P Global recalculated the 2022 baseline originally established in the Net Zero Plan to provide an apples-to-apples analysis comparable for future years. The S&P Global methodology conforms with the Partnership for Carbon Accounting Financials (PCAF). PCAF created an open-source accounting method to measure and disclose greenhouse gas emissions associated with the lending and investment activities of financial institutions.

The Net Zero Plan recognized: "moving forward Treasury will undertake more detailed inquiries and review data providers to determine when and where we can replace estimates with disclosed data or better estimates." (See [2024 Net Zero Plan](#), p. 32).

### Scope 1, 2, and 3 Emissions Definitions

**Scope 1:** Direct emissions from the organization's own operations.

**Scope 2:** Indirect emissions from purchased electricity, heat, and steam.

**Scope 3:** Indirect emissions from the supply chain, including upstream, downstream, and on-site energy production. Scope 3 emissions are significantly more complex and harder to determine but make up 75% or more of a company's total emissions profile. Measuring Scope 3 emissions involves tracking activities across the entire value chain, from suppliers to end users.

### Changes in Emissions Intensity Within the Fund

According to S&P Global:

- Emissions intensity on a Carbon-to-Revenue (C/R) basis went down by more than 50% between the baseline year of 2022 when compared to 2023.
- Total portfolio emissions fell from 82.04 in 2022 to 35.75 tons of CO<sub>2</sub>e/\$M USD of revenue in 2023.
- The Fund's least emissions-intensive portfolios are Private Equity and the Opportunity portfolio.
  - Real Estate and Public Equity were the third and fourth most emissions intensive portfolios.
  - The most emissions-intensive portfolios are Real Assets and Fixed Income.

While these results are encouraging, it is important to recognize the limitations in forming definitive conclusions about emissions intensity in the Fund with just two years of data. In addition, emissions intensity as a metric has limitations. For example, Fixed Income appears to have high emissions intensity, but this is because absolute emissions and revenue are low in this specific portfolio which can then artificially appear to distort the result. Despite the challenges in tracking emissions intensity, it remains the best available methodology to track greenhouse gas emissions in the Fund at this time.

Sustaining and expanding these results will not be easy, but it is likely to be as important for the Fund's profitability as it is to OST's measurable progress in reducing emissions intensity.

## Details About Emissions Intensity Data and Calculations

S&P Global calculated the baseline 2022 and the 2023 data using two different formulas to provide a complete picture of emissions intensity.

**Tables 1 & 2** show an aggregation of the data across portfolios to generate a singular total for the Oregon Public Employees Retirement Fund (OPERF or the Fund). C/R expresses a company's or portfolio's emissions exposure in terms of tons of CO<sub>2</sub> per million dollars in revenue, which is not scaled by the size of the Fund's investment in that particular firm or company (charts 1 and 2 takes the next step to scale emissions to the particular firm or company).

**Charts 1 & 2** show the C/R and the Weighted Average Carbon Intensity (WACI). WACI finely tunes how much the Fund owns in a specific portfolio and the emissions that flow from the percentage of ownership in a particular company or firm. WACI is recommended by the Task Force for Climate Related Financial Disclosures as industry best practice for portfolio carbon footprinting.

For more details about definitions of headers in Table 1 and 2 and how WACI is calculated, please refer to Appendices C and D, respectively.

**Table 1: Emissions Intensity in the Fund: 2022**



S&P Global  
Sustainable1

Portfolio Name	Value Provided (mUSD)	Value Assessed (mUSD)	Apportioned Emissions	Apportioned Revenue (mUSD)	Emissions Intensity Calculation
Fixed Income	\$15,789	\$710	96,465	\$276	349.84
Opportunity	\$2,657	\$1,894	3,783,844	\$123,102	30.84
Private Equity	\$29,322	\$26,189	11,464,278	\$242,188	47.34
Public Equity	\$20,198	\$26,189	1,720,207	\$9,590	179.37
Real Assets	\$8,922	\$8,910	18,375,269	\$40,556	453.08
Real Estate	\$21,532	\$1,093	373,557	\$20,812	17.95
<b>Total</b>			<b>35,813,620</b>	<b>\$436,524</b>	<b>82.04</b>

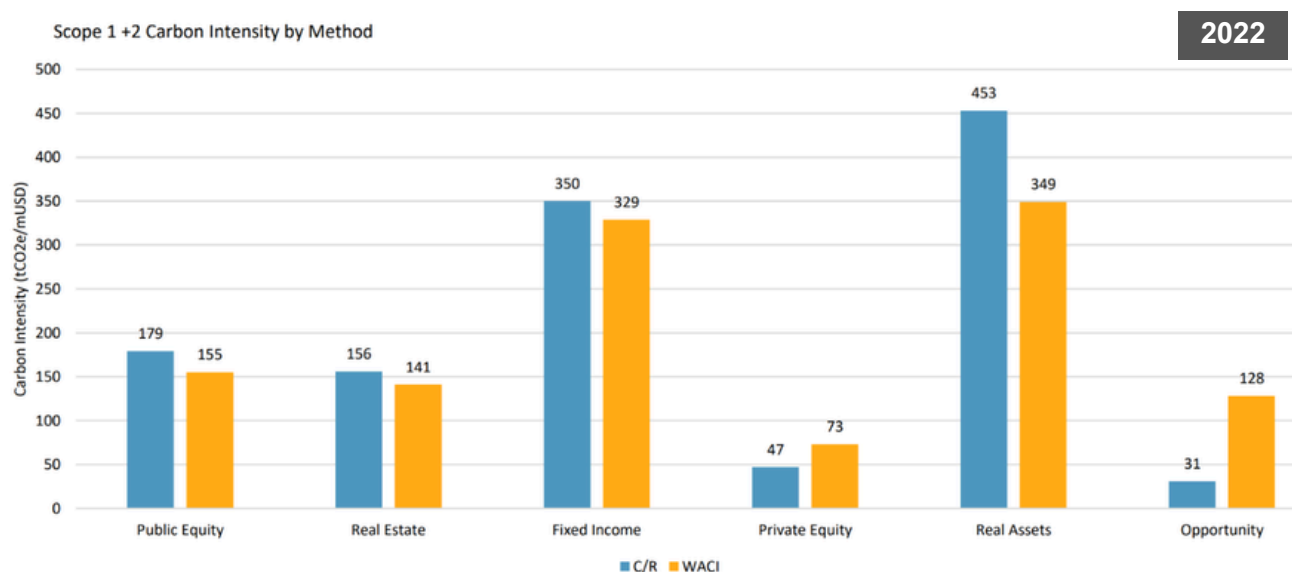


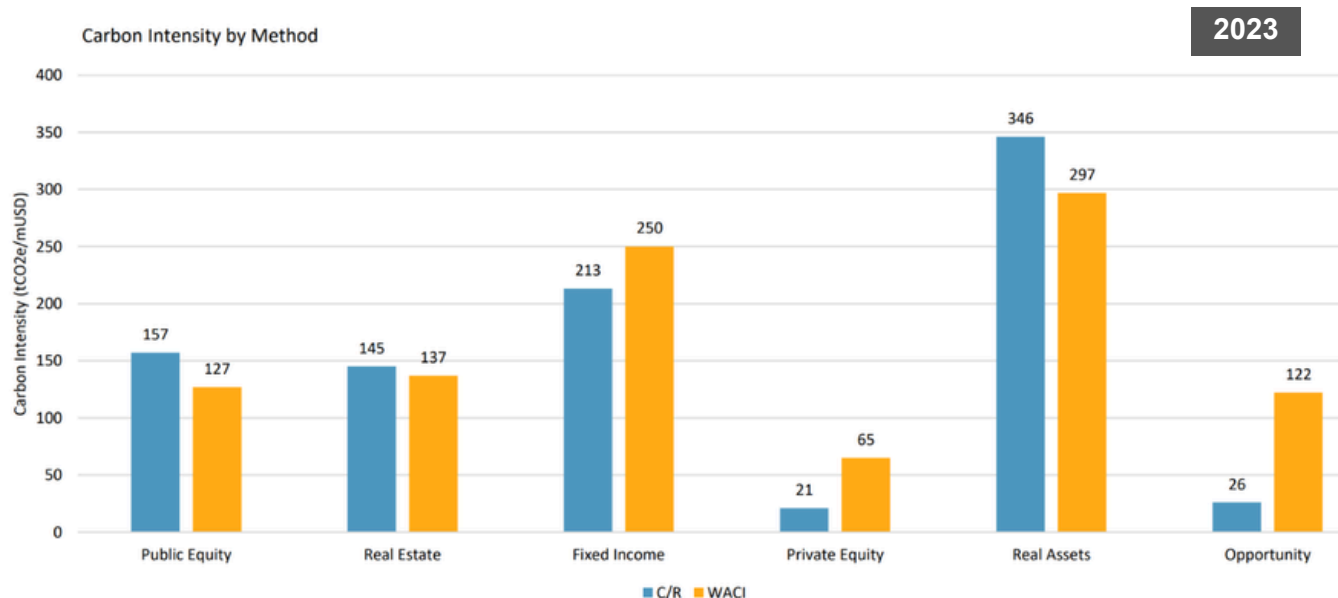
**Table 2: Emissions Intensity in the Fund: 2023**

Portfolio Name	Value Provided (mUSD)	Value Assessed (mUSD)	Apportioned Emissions	Apportioned Revenue (mUSD)	Emissions Intensity Calculation
Fixed Income	\$16,341	\$2,920	248,790	\$1,166	213.37
Opportunity	\$2,622	\$2,516	4,779,539	\$186,292	25.66
Private Equity	\$28,731	\$28,505	21,144,905	\$1,022,038	20.69
Public Equity	\$18,929	\$18,390	1,286,943	\$8,162	157.68
Real Assets	\$9,709	\$9,705	17,227,066	\$49,867	345.46
Real Estate	\$22,015	\$19,986	1,327,472	\$19,723	67.30
<b>Total</b>			<b>46,014,715</b>	<b>\$1,287,248</b>	<b>35.75</b>

**Notes:**

- Intensities are expressed in terms of carbon to revenue with the exception of the Real Estate portfolio - this intensity metric was calculated by combining the value invested from S&P's real estate analysis, and the apportioned revenue from the S&P's corporate analysis.
- As of 12/31/2023, the equity value of the Real Estate holdings was \$13,102,000. The amount shown above reflects the total value of the Real Estate holdings, including debt.

**Chart 1: C/R Coupled with WACI in 2022**

**Chart 2: C/R Coupled with WACI in 2023**

S&P Global also provides a heat map of the Fund's emissions intensity by sector, as illustrated in Table 3. Across the board utilities and materials are the most emissions intensive sectors regardless of the portfolio, the energy sector comes in third. The energy sector comprises companies engaged in exploration, production, refining, marketing, storage and transportation of oil and gas, as well as coal and consumable fuels. The utilities sector includes companies that provide essential services such as electricity, natural gas and water.

These results align with generally accepted emissions trends. Information Technology ranks low in emissions intensity for 2022 and 2023, but this industry is likely to increase its emissions over time as the demand for AI requires more energy for data centers.

**Table 3: Emissions Intensity Exposure by Industry 2022 (top graph) and 2023 (bottom graph)**

	2022									
	Communication Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Information Technology	Materials	Utilities
Public Equity	36	34	60	353	16	17	128	48	631	1,553
Real Estate					2				156	
Fixed Income	10	38	68	369	9	30	26	10	411	1,502
Private Equity	34	53	48	304	7	14	60	16	720	2,391
Real Assets	39	25	110	313			63	29	130	1,059
Opportunity	30	48	90	266	4	21	142	29	1,686	1,523

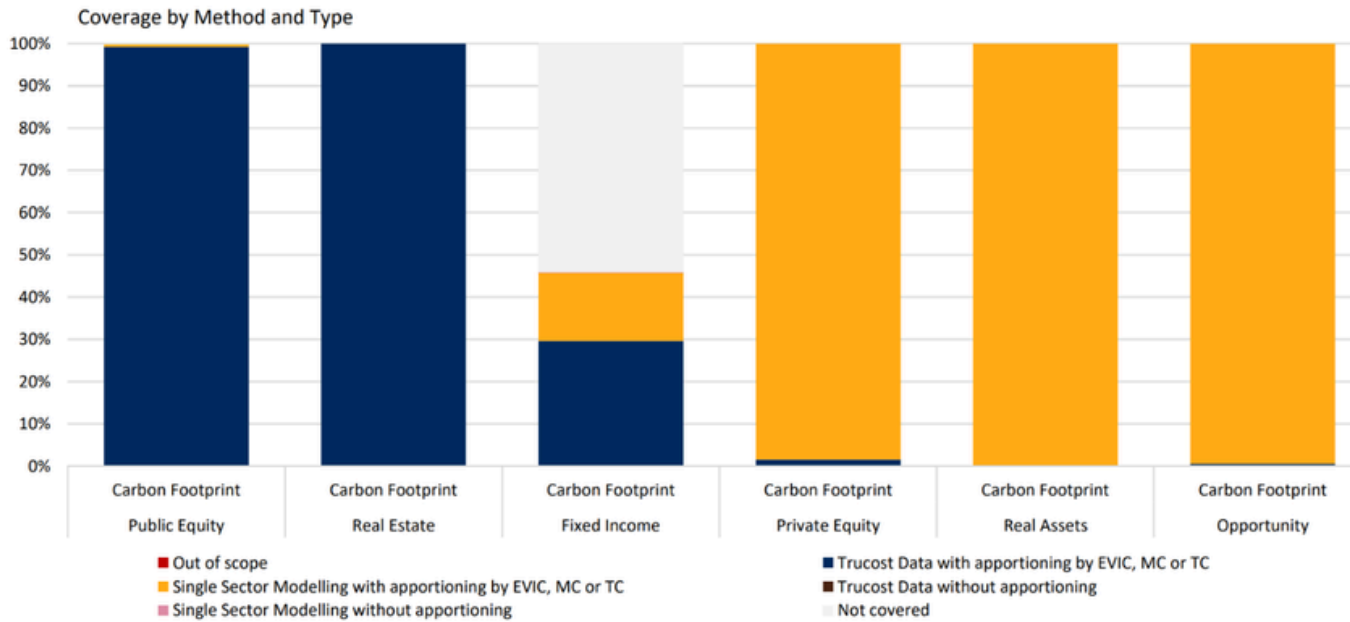
	2023									
	Communication Services	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Information Technology	Materials	Utilities
Public Equity	30	34	48	348	14	14	112	32	959	1,165
Real Estate									145	
Fixed Income	23	61	52	390	9	13	179	25	386	1,732
Private Equity	59	39	48	242	8	17	58	13	878	1,416
Real Assets	37	52	98	199	6		76	24	107	868
Opportunity	35	52	78	228	4	15	58	24	1,435	1,858

Carbon Intensity (tCO2e/mUSD)

Less Carbon Intensive  More Carbon Intensive

To cover most of the portfolios in the Fund, S&P Global created a model to estimate emissions intensity. This is because not all companies or firms report on their emissions numbers. Chart 3 illustrates how much S&P Global modeled each portfolio, versus emissions information that was directly reported from a specific firm or company.

**Chart 3: Reported Versus Modeled Data for Each Portfolio**



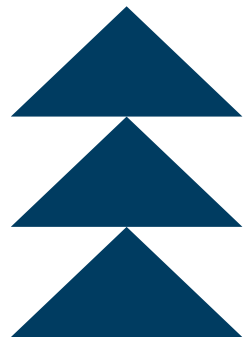
*Note: The only portfolios excluded from this review are sovereign and asset-back securities because historically there was no agreed upon methodology to track emissions for these two portfolios. S&P Global is working on a subsequent review for OST that includes harder to review portfolios.*



SECTION 3:

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# Climate-Positive Investments Update



The Net Zero Plan identified action items to advance the goal of attaining net zero emissions. This section summarizes OST's efforts with the most up to date and available data for each action item.

Action Items from 2024 Net Zero Plan:

### Triple Climate-Positive Holdings from Real Assets and Private Equity by 2035<sup>1</sup>

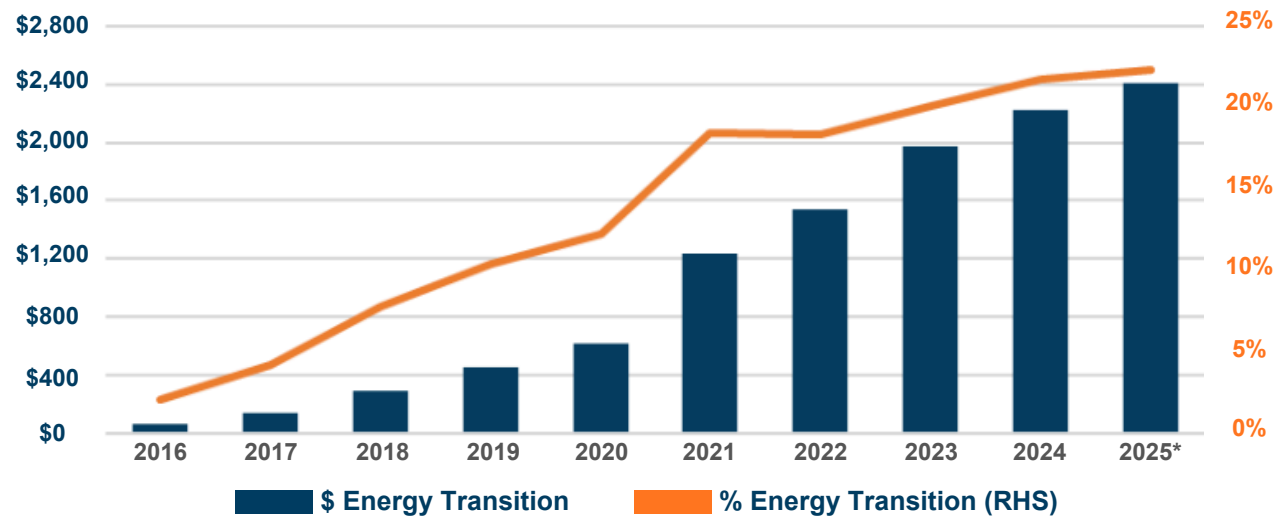
**Real Asset Holdings:** OST is on track to triple the Fund's climate-positive holdings in Real Assets.

- Climate-positive holdings in the Real Assets portfolio increased from \$1.2 billion on January 1, 2022, to \$2.4 billion as of June 30, 2025.
- Climate-positive holdings constitute approximately 22% of the Real Assets portfolio. They are the single largest sector in Real Assets.

Climate-positive holdings in Real Assets include items such as renewable generation, EV charging, battery materials and carbon credits, otherwise called “energy transition infrastructure investments.”

**A focus on Real Assets:** To understand the positive trajectory over an even longer time-horizon, it is important to note that OST has constructive relationships with generalist fund managers who more than tripled the Fund's investments in energy transition infrastructure since 2020.

**Chart 4: Growth in Energy Transition Infrastructure Exposure**



\*2025 Year reflects value and percentage as of June 30, 2025, the most recent data available.

Chart 4 highlights the steady growth of energy transition infrastructure investments within OST's Real Assets portfolio. As shown by the blue bars, invested dollars have grown consistently over time, while the orange line shows energy transition infrastructure investments as a percentage of the entire Real Assets portfolio, which as of this report, now represents more than 22% of the portfolio's total investments. Importantly, the chart understates the full scope of climate-positive activity within Real Assets, as it excludes secondary decarbonization strategies – such as diversified companies pursuing emissions-reduction initiatives like renewable generation. While harder to quantify, these strategies remain an important component of the portfolio's overall climate impact.

1. Clarification: The 2024 Net Zero Plan states that the “current holdings” are ~\$2 Billion, which is the value at year end in 2023. This report focuses on baseline 2022 numbers to ensure consistent tracking towards interim and final benchmark, which means progress is gauged by January 1, 2022 as the baseline year.

In total climate- and transition-aligned energy transition infrastructure exposure consists of over 130 assets/companies and spans 33 limited partnerships. This cohort provided a rate of return of 20% over the past five years, which are the strongest risk-adjusted returns in the sector.

Case studies listed in this document are general representations that OST is engaged in and not exact descriptions of any one investment due to applicable confidentiality obligations.

### **Case Studies – Real Assets Portfolio**

**Wind power expansion:** Construction of offshore wind construction projects projected to produce affordable clean power.

**Integration of renewable energy into the US power grid:** Platforms to develop, construct and operate electric transmission infrastructure.

**Sustainable waste management:** Environmental services business focused on sustainable industrial waste management.

**Renewable energy expansion in overseas markets:** Renewables developer of onshore and offshore wind, solar, and battery storage.

**Recycling materials for battery manufacturing:** Financed construction of hydrometallurgical plant to process battery grade metals from black mass recycling + mining/tailings.

**A note on Private Equity:** OST tracks progress in private equity to meet the plan's aspirations through S&P Global emissions intensity data. As climate-positive investment opportunities grow in private equity, the general managers that support OST in investment strategies increase holdings in clean energy, transition aligned and carbon mitigation projects. Recent investment examples include:

### **Case Studies – Private Equity Portfolio**

**Energy efficient shipping:** Automated robotic ship hull cleaning products and services.

**Clean energy capture:** Technology that installs modular data centers behind the inverter of renewable energy projects to utilize surplus or curtailed renewable power.

**Battery improvements:** Vanadium redox flow battery technology.

**Energy efficiency data analytics:** Software provider offering platform that aggregates and provides real-time data from a range of energy-related devices.

**Wildfire risk mitigation:** Wildfire risk software and analytics platform that helps organizations predict, mitigate, and prevent wildfire threats.

## **Allocate 10% of Active and 30% of Passive within Public Equity to Climate- or Transition-Aligned Investments and will Contribute to a Clean Energy Transition by 2035**

As explained in Section 1, emissions intensity in the public equity portfolio declined between 2022 and 2023. This is a promising result that demonstrates an important contribution to climate- and transition-aligned strategies. However, the underlying picture is more nuanced.



Public Equity holdings in the Fund are diversified with exposure to nearly every publicly traded company. Reductions in emissions intensity in the Public Equity portfolio are a reflection of the changing opportunity set within the markets and how investment managers decide to assess valuations against risks.

### **Exclude New Investments in Private Market Funds with Stated Intention to Invest Primarily in Fossil Fuels**

Staff partner with managers that are energy generalists across the full value chain. Although fossil fuel holdings in Private Market funds increased from 2022 to 2023, that marked the peak for such investments and was the last instance there was a year-over-year increase. Since January 1, 2023, holdings have declined each year, reflecting a sustained downward trend through June 30, 2025. The table below summarizes year-over-year changes in fossil fuel holdings within Private Market funds.

**Table 4: Year-Over-Year Change in Fossil Fuel Holdings Within Private Market Funds**

Date	Market Value of Private Market Fossil Fuel Holdings (mUSD)	Year-Over-Year Change (mUSD)
January 1, 2022	\$2,666	
January 1, 2023	\$3,197	+\$531
January 1, 2024	\$3,120	-\$77
January 1, 2025	\$3,091	-\$29
June 30, 2025	\$3,008	-\$83

Staff engages with generalist private market managers who typically have 30-40% of their capital in climate- and transition-related investments and the remainder of any particular fund is an array of opportunities that do not necessarily include fossil fuels. This strategy generates strong returns across a range of investments, while at the same time including climate- and transition-aligned opportunities.

Challenges remain because many of the specialized managers and funds that focus on climate- and transition-aligned investments are small to average size and are first-time managers without track records. This means the investment risk may be too high to engage with such firms. However, staff continues to seek profitable opportunities with investment managers that invest in climate-positive opportunities.

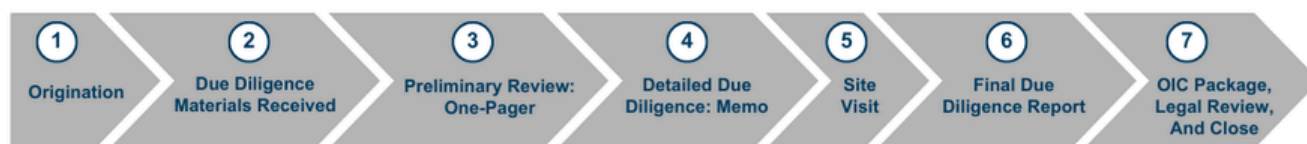
### **Use Leverage as Limited Partner to Push for Credible Transition Plans from Private Market Investments that Derive >20% Revenue from Carbon Intensive Fossil Fuel Activities**

Due to the proprietary nature of private market investments, OST does not have data to determine the percentage of portfolios that derive more than 20% of their revenue from fossil fuel activities.

Staff have taken steps to track credible climate- and transition-aligned plans from managers and firms whenever possible. For example, prior to investing as a limited partner (LP), staff conduct a thorough due diligence process. This includes questions for the prospective manager and/or firm about climate- and transition-aligned strategies as well as any relevant Environment, Social, and Governance (ESG) factors that could affect risk and return-related performance. Staff formally integrated ESG into the private market manager review process eight years ago.

The areas of focused inquiry in the due diligence process vary from manager to manager and the disciplined evaluation involves a staged process that identifies key strengths and potential weaknesses for each investment. It includes an in-person onsite visit and a comprehensive due diligence report followed by an independent consultant's review. The due diligence process is illustrated in the figure below:

**Figure 1: Private Market Manager Selection Due Diligence Process**



### Examples Of ESG Elements Integrated Into Manager Selection Due Diligence



### Increase Share of Portfolio Emissions Covered by Credible Net Zero Transition Plans by 2035, Including 90% of Real Estate Emissions, and 65% of Emissions Across both Real Assets and Private Equity

Staff are committed to supporting firms across all portfolios in developing Net Zero transition plans as it will enable OST to track progress with greater accuracy. This is true despite the fact that many countries and firms are retreating from net zero ambitions and are not public with the data. The challenges are exacerbated by data quality issues, the absence of standardized reporting and OST's position as a minority investor. Despite the hurdles and the prevailing political headwinds surrounding net zero worldwide, emissions intensity within the Fund has declined—which indicates that markets continue to gravitate toward a cleaner energy future.

### Additional Actions (as offered in the Net Zero Plan)

- *Monitor Manager Selection to Ensure Alignment of Investment Strategy with Broader Net Zero Progress:*

OST expanded its manager selection and oversight processes by identifying external managers that specialize in or are closely aligned with sustainable climate- and transition-aligned investment approaches. This includes external managers with demonstrated climate expertise who not only facilitate robust engagement at the portfolio level but also evaluate individual investments, deliver proprietary data on climate impacts and offer tailored insights to inform decision-making that drives measurable progress toward net zero goals.

- *Expand Engagement Activities, Including Partnerships with Other Pension Funds, to Support Company Transitions, Clean Energy Investments and Incorporation of Just Transition Principles:*

Staff meet and compare notes with pension funds across the United States and around the world. In this past year staff have participated in meetings with pension plan leaders from Canada, New Zealand, Australia, Hawaii, Maryland, New York, Washington, California and Vermont. To broaden the circle and deepen connections staff also continue to engage with managers and firms that are leaders in climate and transition aligned investment opportunities.

Staff also partner with climate finance and investment experts across the country and internationally. For example, OST is a member of Ceres (a nonprofit focused on a just transition to a clean energy future) so that staff can participate in informational meetings and learning platforms.

In addition, OST is a member of the Council of Institutional Investors (CII) which is, “a leading voice for effective corporate governance, strong shareowner rights and sensible financial regulations that foster fair, vibrant capital markets.” Treasurer Steiner is also a member of the National Association of State Treasurers (NAST) and For the Long-Term, both associations allow OST to collaborate with other public pension funds and fiduciaries from across the United States.

- *Increase Data and Reporting Capacity to Track More Thoroughly GHG Emissions Associated with Our Investments*

In 2025, OST contracted with S&P Global to serve as the data provider on emissions intensity. Staff selected this partnership based on S&P Global extensive breadth of experience, deep data expertise and ability to cover the private markets portfolio.

OST is adding new engagement and investment team staff to continue to incorporate climate-positive opportunities into all portfolios into the future.

- *Establish Net Zero Beneficiary Advisory Council*

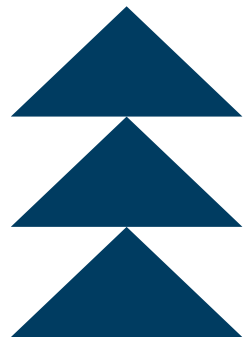
The Treasurer convenes a Beneficiary Advisory Council (BAC) that meets quarterly to discuss climate risks and opportunities within the OPERF portfolio. BAC members include leaders from labor unions that have a significant number of beneficiary members with an interest in OPERF. The BAC also includes two members of the public who have retirement assets in the Fund and are tasked with offering perspectives that the beneficiaries in general may feel about the Fund and investment strategies. The meetings are facilitated using the Chatham House rules to allow for open and trusting conversation between participants.



SECTION 4:

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# Engagement and Advocacy



OST leverages its influence and encourages companies to take meaningful action on climate- and transition-aligned activities through 1) the manager selection process, 2) expanding OST's staffing capacity to address climate risk across the portfolio, and 3) proxy voting.

### **Elevating ESG Factors in Manager Selection**

The formal integration of ESG factors into OST's manager selection process began in 2018 with the hiring of the first ESG Investment Officer (although a less formal ESG analysis in the manager selection process has existed for some time). In 2021, OST enhanced the integration of ESG by requiring every investment officer to formally address the topic during meetings with investment managers rather than the responsibility being solely dependent on the ESG Investment Officer.

### **Expanding Corporate Engagement on Climate Risks Across the Portfolio**

During the 2025 Oregon legislative session, the legislature allocated additional resources to enhance engagement efforts by approving new positions for the OST engagement team. The legislature and Governor also passed CRIA, which enhances OST reporting responsibilities and broadens staff's ability to address climate risk in the portfolio. In October, the Oregon Investment Council (OIC) adopted policies necessary to comply with and better implement both the COAL Act (HB 4083 - 2024) and CRIA.

As the collective abilities grow at OST, staff are evaluating internal and external capabilities to maximize impact and reach. For example, staff are exploring options to partner with managers and provide expanded engagement, particularly with non-US firms. This will aid in assessing climate- and transition-aligned plans and in researching innovative incorporation of climate risk measurement and mitigation in the Fund and investment process.

When conducting due diligence about potential managers, staff examine a manager's philosophy and approach to integrating ESG factors into the investment process. OST expects managers to have a systematic method for identifying and assessing material ESG risks and opportunities.

### **Proxy Voting**

OST addresses climate change through various proxy items including shareholder proposals, board composition and executive compensation. This strategy reflects a recognition of climate change as a critical financial and operational risk that requires attention at all levels of corporate decision-making.

Between December 1, 2024 and November 30, 2025:

- OST voted on over 53,000 individual items at 5,245 meetings.
- Environmental concerns factored into 41% of OST's votes against directors, leading OST to oppose 9% (4,188) of all nominees.
- OST voted against 31% (2,325) of executive compensation proposals (Say-on-Pay) due to ESG concerns.
- OST comprehensively supported 85% (219) environment-related shareholder proposals, 87% (105) of which were related to climate issues.

Due to the large size of the portfolio, OST relies on Glass Lewis, a proxy advisory company, to consolidate disparate information into usable reports and to distill complex voting measures. Glass Lewis populates and executes votes based on the ESG policy selected by Treasurer Steiner. Staff monitor voting based on the Glass Lewis recommendations and OST has policies in place that allow for the exercise of independent voting that, at times, may not be aligned with the Glass Lewis recommendation. OST retains proxy voting and engagement rights for substantially all of its public market investments.

OST's approach to mitigating climate risks through proxy voting is complemented by its overall ESG policy. The policy supports staff in advocating for diverse board composition, links executive compensation to sustainability metrics and corporate political spending disclosures. These measures, while not exclusively climate-focused, contribute to a governance structure more likely to address risks associated with climate change.

- In director elections, OST takes a nuanced approach based on the company's climate risk profile and disclosure practices.
- For companies with significant climate risk OST votes against the chair of the board if the company has not adopted a net zero emissions target and failed to produce reporting aligned with the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.
- For all other companies, OST votes against the board chair if the company has not established any forward-looking GHG emissions reduction targets or produced sufficient sustainability reporting.

This strategy aims to ensure climate risk management and transparency at the highest levels of corporate governance.

In compensation "Say-on-Pay" votes, OST votes against remuneration plans if compensation is not linked to ESG metrics, including climate change targets. This approach incentivizes corporate leadership to prioritize climate action. This is a more significant concern in the U.S. than non-U.S. markets, with more votes against proposals in U.S. markets compared to non-U.S. markets.

OST's approach to ESG demonstrates a commitment to shareholder power that encourages companies to address climate risks and opportunities.

SECTION 5:

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# Reducing Climate-Related Risks and Exposures



In 2025 OST and the OIC adopted policies in support of implementing the CRIA and the COAL Act.

CRIA safeguards the Fund's long-term value by directing staff to reduce exposure to risky fossil fuel investments, to strengthen climate resilience and to produce regular reports to the legislature (see Appendix B for CRIA language).

### Thermal Coal Portfolio Exposures

The COAL Act offers guidance to transition from thermal coal exposure in the portfolio. The exposures detailed below reflect holdings as of November 30, 2025, and should not be considered static. The number of companies and their corresponding investment values will vary over time as markets change, indices rebalance and investment managers adjust their positions in accordance with their strategies and mandates. OST uses the following definition for coal:

**Thermal Coal:** Companies deriving 20% or more of revenue from the mining of thermal coal (including lignite, bituminous, anthracite and steam coal) and its sale to external parties. This excludes revenue from metallurgical coal, coal mined for internal power generation, intra-company sales and coal trading.

Staff determined that as of November 30, 2025, the portfolio had \$15 million worth of investments in 12 securities identified as “Thermal Coal” companies, a decrease from \$28,979,710.04 worth of investments in 21 securities reported by staff in 2024. Table 4 below lists the investments by company.

**Table 5: Thermal Coal Portfolio Exposure as of November 30, 2025**

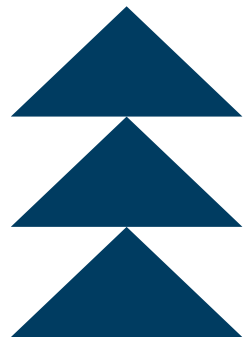
Company Name	Shares/Par Value	Base Market Value (as of 11/30/2025)
Adaro Andalan Indonesia PT	1,165,100	\$524,662.26
Bukit Asam TBK PT	2,816,576	\$390,650.89
Coal India LTD	1,312,627	\$5,519,937.91
Core Natural Resources INC	15,062	\$1,204,960.00
Hallador Energy Co	86,540	\$1,764,550.60
Indo Tambangraya Megah TBK P	36,731	\$48,629.15
Peabody Energy Corp	35,213	\$959,202.12
Semirara Mining And Power Co	1,692,200	\$839,679.77
Shaanxi Coal Industry CO LA	713,500	\$2,285,860.79
Thungela Resources LTD	53,980	\$255,693.91
United Tractors TBK PT	729,713	\$1,226,776.58
DMCI Holdings Inc	24,784	\$4,758.88
<b>Total:</b>		<b>\$15,025,362.86</b>



SECTION 6:

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# Conclusion and Next Steps



As this report shows, emissions intensity declined in the Fund between 2022 and 2023. These reductions were due to market forces which underscore the fact that clean energy is likely to continue to claim a growing share of the world's energy production.

This report reflects OST's initial, comprehensive effort to gather and analyze new forms of emissions and climate-related investment data across the portfolio. While the data and methodologies will continue to evolve, this work establishes a foundation for more refined, accurate, and consistent reporting in future years. This effort marks the first of a multi-decadal engagement to track progress in emissions intensity. Staff remain open to dialogue with experts to identify and clean up any inadvertent mistakes. OST is committed to continuing to improve the work into the future.

Moving forward, OST is committed to:

- Upholding its fiduciary duties to the Fund's beneficiaries.
- Fully implementing CRIA and transparently reporting on emissions intensity data.
- Staying true to the intent of the Net Zero Plan.
- Using the best available science to track progress over time (which may include updating methodologies as climate modeling and emissions calculations evolve).

The next update will incorporate information about Oregon's progress towards the Net Zero goal in the CRIA report to the legislature, as required by the new law.

OST remains committed to tracking emissions intensity within the Fund, shielding investments from climate risks, and seizing the profitable climate-positive opportunities that the global transition brings to a clean energy economy future. OST will continue to keep beneficiaries and all Oregonians informed along the way.

# Appendix

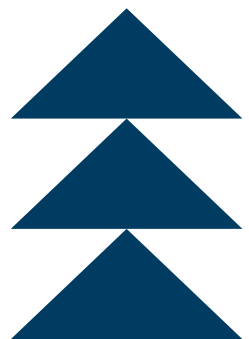
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**Appendix A - Scope 3 Emissions**

**Appendix B - Oregon House Bill 2081-A (Climate Resiliency Investment Act)**

**Appendix C - Glossary For Tables 1 & 2**

**Appendix D - A Special Note on Weighted Average Carbon Intensity (WACI)**



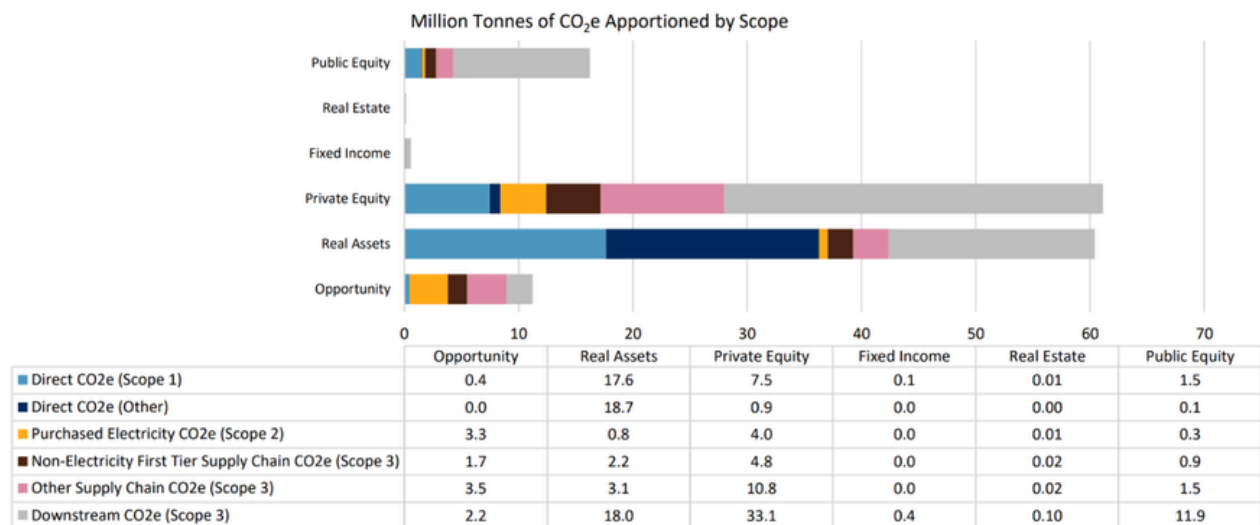
## Appendix A - Scope 3 Emissions

In addition to a focus on Scope 1 & 2 emissions, S&P Global tackled Scope 3 emissions information in the Fund. OST asked S&P Global to track Scope 3 emissions because it is believed to be 75% or more of a company's total carbon emissions.

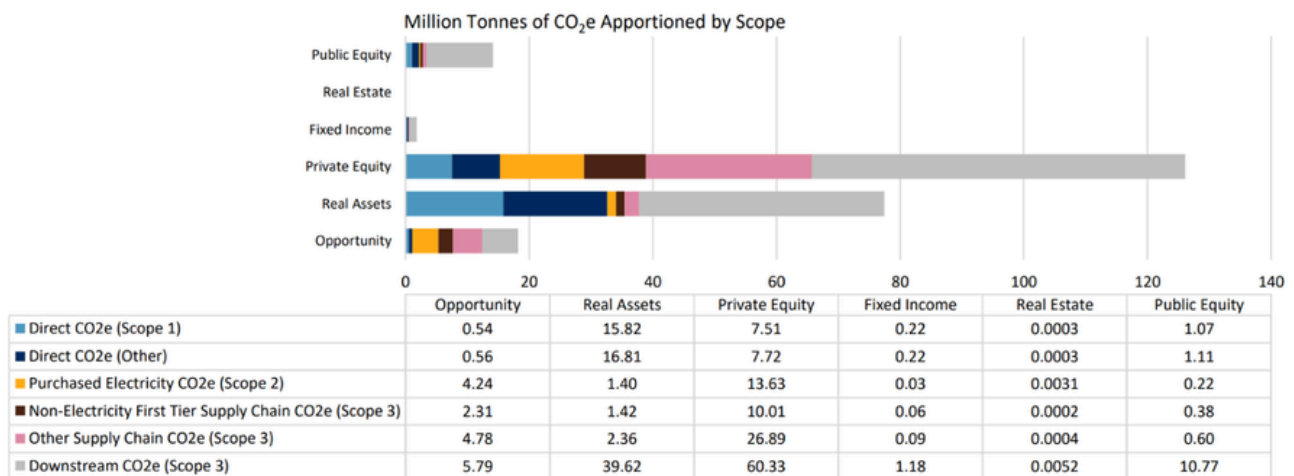
Unfortunately, Scope 3 emissions, which include indirect emissions from a company's supply chain and their extended business work streams, are difficult to estimate because they reflect a vast, decentralized web of external actors, inconsistent methodologies and limited global regulatory oversight. As more information about Scope 3 is made available by scientific institutions, staff will ask S&P Global to incorporate the information even more fully into future disclosures as the data improves. The preliminary data from 2022 and 2023 show that Private Equity and Real Assets have the greatest exposure to Scope 3 emissions, whereas Real Estate and Fixed Income have the least exposure.

Enough questions remain about accuracy in the underlying data for Scope 3 emissions that OST remains cautious about strong conclusions, but did want to share the information.

**Chart 5: Scope 3 Emissions by Asset Class 2022**



**Chart 6: Scope 3 Emissions by Asset Class 2023**



*Note: The scale for each chart is slightly different to show difference in emissions information between the two years.*

As explained in the original Net Zero Plan, Private Equity is a portfolio that is not included in emissions reviews by most public pension plans in the United States and across the world. Despite this, OST remains committed to covering Private Equity to the greatest extent possible in its emissions intensity tracking over time, subject to contractual confidentiality obligations. S&P Global modeled Private Equity firms by comparing them to similarly situated publicly traded firms that report on their emissions intensity to glean information about relative emissions intensity in this portfolio. This is to gain a better picture of specifically what the Fund's carbon intensity entails.



## Appendix B - Oregon House Bill 2081-A (Climate Resiliency Investment Act)

83rd OREGON LEGISLATIVE ASSEMBLY--2025 Regular Session

# Enrolled House Bill 2081

Introduced and printed pursuant to House Rule 12.00. Pre-session filed (at the request of House Interim Committee on Revenue for Representative Nancy Nathanson)

CHAPTER .....

### AN ACT

Relating to state finance; and prescribing an effective date.

Whereas the purpose of the Public Employees Retirement Fund portfolio is to seek strong returns for beneficiaries, as per the fiduciary relationship described in ORS 238.660, 293.721 and 293.726 and in consideration of ORS 192.355 and contractual obligations; and

Whereas the expected global economic shifts due to a rapidly changing climate call for investment solutions that are likely to encourage a transition to a net-zero future; and

Whereas fluctuations in federal policy and market trends can have a long-term impact on an investment strategy to address the financial risks related to a changing climate; and

Whereas the increasing frequency and severity of extreme weather events pose significant risks to infrastructure, operations and supply chains across multiple sectors; and

Whereas the urgency justifies taking every possible action in the fund portfolio to reduce investment risks associated with a rapidly changing climate; now, therefore,

**Be It Enacted by the People of the State of Oregon:**

**SECTION 1. (1) As used in this section:**

(a) “Just transition” means efforts to ensure that the transition to a low-carbon economy is fair, collaborative and inclusive.

(b) “Scope 1 emissions” means emissions from sources that a firm owns or controls directly.

(c) “Scope 2 emissions” means emissions from the production of energy used by a firm.

(2) The Oregon Investment Council and State Treasurer, in the State Treasurer’s role as investment officer for the council, shall act reasonably and in a manner consistent with ORS 238.660, 293.721, 293.726 and 192.355 and contractual obligations to:

(a) Actively analyze and manage the risks of climate change to the Public Employees Retirement Fund, including reporting on and analyzing the risks of the levels of scope 1 and scope 2 emissions of fossil fuel investments within the fund;

(b) Analyze how the integration of climate change analysis will help to achieve overall portfolio return objectives;

(c) Pursue the goal of reducing the carbon intensity of the fund through a preference for investments that reduce net greenhouse gas emissions in order to participate in the energy transition; and

(d) Provide a report, in collaboration with beneficiaries of the fund, to the Legislative Assembly each biennium about the progress toward an investment program that addresses

the impact of climate change factors on the investment portfolio, which may include, without limitation:

(A) Reporting on progress toward carbon intensity investment goals as established by the State Treasurer;

(B) Reporting on progress toward investing in public equity holdings that incorporate the tenets of a just transition in their overall priorities and portfolio; and

(C) Incorporation of pertinent advancements and methodologies in measuring progress towards goals and benchmarks, recognizing that the science and methods of carbon intensity measurement are regularly evolving.

(3) The Oregon Investment Council, jointly and individually, the State Treasurer and employees of the office of the State Treasurer shall be indemnified and held harmless by the State of Oregon from all claims and damages incurred pursuant to this section.

(4) Nothing in this section requires the Oregon Investment Council or the State Treasurer to take any action pursuant to this section unless the council or State Treasurer determines in good faith that the action is consistent with fiduciary responsibilities as described in ORS 238.660, 293.721 and 293.726.

**SECTION 2.** This 2025 Act takes effect on the 91st day after the date on which the 2025 regular session of the Eighty-third Legislative Assembly adjourns sine die.

Passed by House May 1, 2025

.....  
Timothy G. Sekerak, Chief Clerk of House

.....  
Julie Fahey, Speaker of House

Passed by Senate June 16, 2025

.....  
Rob Wagner, President of Senate

Received by Governor:

.....M.,....., 2025

Approved:

.....M.,....., 2025

.....  
Tina Kotek, Governor

Filed in Office of Secretary of State:

.....M.,....., 2025

.....  
Tobias Read, Secretary of State

## Appendix C - Glossary For Tables 1 & 2

Term	Definition
<b>Value Provided</b>	Represents the amount of assets held within a respective portfolio or fund at the time when the evaluation was conducted.
<b>Value Assessed</b>	The asset value using PCAF guidelines for emissions assessment.
<b>Apportioned Emissions and Apportioned Revenue</b>	<p>Apportioning, as an approach, begins with the principle of ownership. That is, if an investor owns 1% of a company, then they also 'own' 1% of the company's emissions. This concept has since been extended to cover all sources of financing, whether equity, bonds or loans in order to calculate an investor or lender's share of 'financed emissions'.</p> <p>Portfolios with larger assets under management will often have larger absolute footprints than smaller portfolios. In order to compare between portfolios, benchmarks and across years, it is important to normalize the totals, either by revenue or by value invested. Two of the most common approaches to normalization are either C/R or WACI.</p>
<b>Emissions Intensity</b>	An emissions metric identified through calculating a company's or respective portfolio's C/R. Calculated at the highest level, C/R is measured by taking the apportioned Scope 1 and 2 emissions for a company and dividing it by that company's apportioned total revenue.

## Appendix D - A Special Note on Weighted Average Carbon Intensity (WACI)

**Definition of WACI** - A measure of the emissions intensity of a portfolio, weighted by the value of investment of its assets. It allows investors to evaluate a portfolio's exposure to its underlying holding companies' emissions.

It is useful to calculate WACI in addition to C/R. C/R offers information about an investor's contribution to climate change by each individual company that it owns. In contrast, WACI shows the investor's exposure to carbon intensive companies compared and weighed specifically to the investment portfolio of interest. One can think of WACI as a fine-tune of the C/R calculation. An explainer about how to calculate WACI is offered below.

The below example illustrates how WACI is calculated using an example investment portfolio.\*

### Example of Calculating Portfolio WACI

*\*Companies listed below are general for the purpose of this example and do not reflect any actual Fund holdings*

Portfolio Companies	Value Provided (mUSD)	Revenue (mUSD)	Scope 1+2 Emissions
Company 1	\$10	\$900	100,000
Company 2	\$30	\$800	200,000
Company 3	\$40	\$700	300,000
Company 4	\$50	\$600	400,000
Company 5	\$100	\$500	10,000
<b>Total Value of Portfolio Holdings:</b>	<b>\$230</b>		

#### Step 1: Calculate each portfolio company's individual Carbon to Revenue (C/R)

C/R is calculated by dividing the individual company's scope 1+2 emissions by its revenue.

##### Example calculation for portfolio company 1

**100,000** = Scope 1+2 emissions

**\$900 (mUSD)** = company revenue

**111.11** = portfolio company 1's C/R

#### Step 2: Calculate The Emissions For Each Individual Company's Portfolio Weight

Portfolio weight is calculated by dividing the value provided in an individual company by the total value of portfolio holdings.

##### Example calculation for company 1

**\$10 (mUSD)** = values provided

**\$230 (mUSD)** = total value of portfolio holdings

**4.3%** = company 1's portfolio weight

*Continued on next page.*

**Example of Calculating Portfolio WACI cont.****Step 3: Multiply Each Individual Company's C/R by its Respective Portfolio Weight**

Example calculations for all portfolio companies

Portfolio Companies	Company C/R	Rebalanced Weight			
Company 1	111.11	X	4.3%	=	4.77
Company 2	250.00	X	13.0%	=	32.50
Company 3	428.57	X	17.4%	=	74.57
Company 4	666.67	X	21.7%	=	144.67
Company 5	20.00	X	43.5%	=	8.70

**Step 4: Add the Five (5) Individual Company Scores Together to Calculate WACI for each Portfolio**

Portfolio Companies	
Company 1	4.77
Company 2	32.50
Company 3	74.57
Company 4	144.67
Company 5	8.70

Portfolio WACI = 265.21