TIAA

STAYING THE COURSE

EXECUTIVE SUMMARY

2024 | CLIMATE REPORT

Borkum Riffgrund 3, Germany's largest offshore wind farm, jointly owned by Nuveen Infrastructure and Ørsted

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Message from the CEO

TIAA's mission is to deliver financially secure retirement to those that have entrusted their assets to be managed by our firm. Throughout our history, we've traversed through economic difficulties, global turmoil, and catastrophes, as well as positive market runs and technological advancements solving some of the world's most pressing challenges.

We know our country faces a retirement crisis where more than 40% of Americans won't have enough money to retire—and that changes to our climate will affect the way each of us is able to retire with dignity.[1] We also know the effects of a changing climate won't be felt equally across all geographies and economic groups.

Climate change is transforming not only how we generate energy, but also how we access natural capital, affecting nearly every supply chain and creating logistical challenges in the wake of severe and often unpredictable weather patterns and storms. Each of these events, separately and in tandem, creates risks for our clients' investment portfolios, and we recognize the changes that must be made to meet their investment objectives.

We must transform our business, our investment offerings, and our interactions with clients to deliver on our promises to a new generation and generations to come. Our focus on transformation is essential to achieving optimal long-term investment outcomes for our clients, while remaining rooted in the pace of change in the real economy.

To achieve our goals, including our goals to reach Net Zero carbon emissions across different portions of our business, we're focusing on efficient operations, portfolio repositioning, and engagement with companies around the globe. Many of these activities are carried out by Nuveen, the investment management arm of TIAA.

We're pleased to provide updates on these targets and how we'll continue to deliver for this generation and those to come:

1. TIAA General Account: Net Zero by 2050
2. Nuveen Real Estate: Net Zero by 2040
3. TIAA Corporate Operations: Net Zero by 2040

As stewards of our clients' financial futures and the generations beyond, we continue to make meaningful progress against these targets and guide the company through the low-carbon transition.

We continue to further align to the Task Force on Climate-Related Financial Disclosure (TCFD) guidelines and expand the coverage of our disclosures across new asset classes. Our future climate disclosures will evolve over time based on the data available and the industry standards put in place during this transformative time.

Our 2024 report reflects the key areas of our business transforming the way we think about investing and generating retirement income on behalf of our clients:

1. Governance: Our dedication to addressing climate-related risks starts with our Board and firm leaders who set the strategy and monitor progress. This past year we added our Climate Center of Excellence to the central Responsible Investing team and continue to promote collaboration between the investment side of the house and our operations with the Sustainability Action Team.
2. Strategy: By expanding carbon data coverage; engaging deeply with public companies; seeking efficiency improvements in our operations and directly owned assets; and investing parts of our General Account to reflect carbon intensity guidelines. We also began exploring a range of new climate scenarios that may inform future strategic asset allocation in the General Account.
3. Risk management: In 2022, TIAA began a phased build-out of our enhanced climate risk management framework, a map of processes that will help us take a consistent approach to how we invest, adhere to existing and evolving regulations, operate our business efficiently, and represent ourselves in the fast-changing world.
4. Metrics and targets: TIAA and Nuveen are on track or ahead of schedule against all three interim Net Zero targets to date, with reductions in carbon intensity or carbon emissions ranging from 21% to 31% versus 2019.

We're proud of our transformative progress to date, and we'll continue this positive momentum to deliver on our retirement equality promises.

Thasunda Brown Duckett
President and Chief Executive Officer

TIAA General Account:
Net Zero by 2050

Nuveen Real Estate:
Net Zero by 2040

TIAA Corporate Operations:
Net Zero by 2040

1. EBRI, March 7, 2019. See also: *TIAA Retirement Bill of Rights*, tiaa.org/public/learn/retirement-planning-and-beyond/retirement-bill-of-rights.

1 Strategy

TIAA's climate strategy is underpinned by our belief that climate risk is investment risk. Taking action to manage climate risks and invest strategically in climate opportunities is aligned with our fiduciary obligations as an asset owner.

1 BELIEF STATEMENT

The world is transitioning to a low-carbon economy, although the pace is uncertain.

2 BELIEF STATEMENT

How markets react to this transition will bring risks and opportunities that influence how the GA invests.

3 BELIEF STATEMENT

Decarbonizing the GA portfolio will allow us to properly manage transition risks and embrace investment opportunities.

4 BELIEF STATEMENT

The rate of decarbonization the GA can achieve will depend on government policy and regulatory actions across various geographies and sectors.

STEWARDSHIP

Elevating expectations for companies on climate

We maintain our belief that the world's climate and energy infrastructure is in transition, and transition risks create meaningful investment risks and opportunities that we must address to protect our portfolios and clients. In response to these risks, last year we launched our Climate Risk 2.0 program, in which we explicitly asked 100 portfolio companies that comprise most of our public markets financed emissions to disclose material climate-related information and to establish industry-leading strategies to manage climate risks. As the energy transition matures, so will our assessment of company progress—shifting from standard disclosure to robust planning to implementation.

Progress against a wide range of key performance indicators, summarized on the next page, is assessed biannually and informs our proxy voting and engagement decisions.

Since the launch of the initiative, we've had 306 engagements with the 100 companies included in Climate Risk 2.0. In these engagements and in proxy voting decisions, we've applied a systematic approach to our expectations of companies, focusing primarily on near-term emissions reductions that stem from abatable sources.

As such, we've developed detailed, industry-level expectations, produced by sector experts, that recognize the unique risks and opportunities facing each company. In the fossil fuel sector, for example, conversations between Nuveen and investee companies have covered topics such as management of methane emissions via equipment updates and advanced monitoring technology, as well as emerging opportunities from low-carbon fuels, enhanced geothermal energy and others. In the utilities sector, conversations have focused on new tax credits, financing options and grid modernization technologies that can simultaneously advance reliability, affordability and sustainability. In the industrial, machinery and autos sectors, conversations between Nuveen and investee companies have included topics like product efficiency and electrification, as well as engagement with materials suppliers to support the decarbonization of hard-to-abate sectors.

Transparency: basic disclosure items

Climate risk disclosure	GHG emissions disclosure	Policy engagement
TCFD reporting, including scenario analysis that captures significant physical and transition risk.	Verified GHG emissions reporting, including material scope three categories.	Company discloses climate-related lobbying activities.

Accountability: strategy/plans for risk management

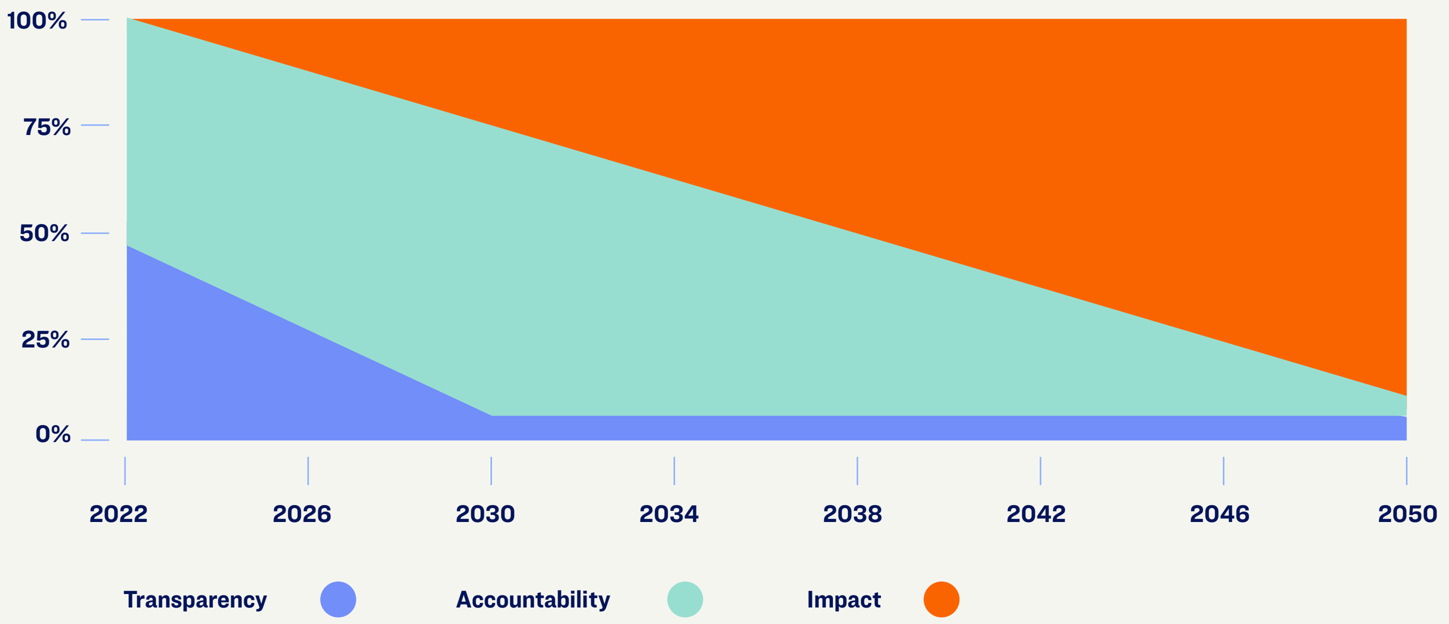
Risk management	Governance	Policy management	Targets	Strategy
TCFD reporting discloses how business planning has been impacted by scenario analysis and how climate is incorporated into ERM.	Board has evidenced climate competence and a committee with climate oversight. Compensation incentivizes achievement of stated targets.	Company reasonably aligns lobbying activities with stated priorities and seeks to address discrepancies.	Company has near and long-term targets for material emissions. Where feasible, targets and third-party verified.	Company strategy aligns with industry-specific standards and capitalizes on emerging opportunities.

Impact: materialization of plans

Realized decarbonization

Company demonstrates progress toward targets year-over-year.

How TIAA assesses a company's approach to climate risk over time



Nuveen's climate-aligned investment products and platforms

Client objectives	Product features	Nuveen products and platforms	Asset class
Avoid exposure to carbon-intensive assets in portfolio	• Lower carbon footprint than the benchmark • Limited exposure to fossil fuel reserves	Social Choice Low Carbon Equity	Public equity
		Nuveen ESG ETF Suite	Public equity
		Low Carbon Value ESG Equity SMA	Public equity
		Large Cap Responsible Equity Fund	Public equity
		International Responsible Equity Fund	Public equity
Reduce carbon emissions of assets	• Decarbonize over time at a Paris Agreement–aligned rate • Targeted company engagement program to reduce emissions (Scope 1, 2 and 3)	Nuveen Real Estate[1]	Real estate
		Global Real Estate Carbon Reduction Fund	Public equity
		Global Clean Infrastructure Impact Fund	Public equity
Scale climate solutions	• Support projects that support climate change mitigation and adaption • Capitalize on opportunities in the low-carbon transition • Balance emissions exposures with lower or net-negative carbon offerings • Low carbon intensity, with potential to generate verified carbon credits	Green Bond Fund	Fixed income
		Core Impact Bond Fund[2]	Fixed income
		Short Duration Impact Bond Fund[2]	Fixed income
		Global Core Impact Bond Fund[2]	Fixed income
		Emerging Markets Impact Bond Fund[2]	Fixed income
		Nuveen Global Impact Fund	Private capital
		Nuveen Green Capital[1] (C-PACE)	Private capital
		Nuveen Natural Capital[1]	Real assets
		Nuveen Clear Infrastructure[2]	Real assets

1. Denotes Nuveen investment specialists with overarching sustainability programs that align with the corresponding client climate objectives. Each specialist offers multiple investment strategies; for details, please see http://www.nuveen.com/about-us/investment-specialists.
2. This fund is not available for purchase in the United States and is being shown to illustrate our capabilities only.
3. Please note that climate-related investments make up less than 50% of the assets under management in the Core Impact Bond, Short Duration Impact Bond, Global Core Impact Bond, and Emerging Markets Impact Bond funds. These funds all employ Nuveen's Global Fixed Income impact framework and ESG Leaders investment criteria, of which climate objectives are part of a broader responsible investing mandate.

2 Risk management

TIAA's climate risk management framework

Summary of climate data and uses

Types of data	Sources	How it is used
Carbon emissions	**Public markets:** MSCI and internal estimates **Private markets:** Persefoni, Watershed, investee disclosures, modeled estimates and internally gathered data	**Enterprise:** Both public and private data is housed in TIAA's enterprise risk data platform for enterprise disclosure reporting. **Nuveen Equities & Fixed Income:** Data is housed in Nuveen's RI data platform for client reporting. **Nuveen Real Assets:** Data is housed in databases managed by the investment teams and used for client reporting and regulatory disclosures.
Physical risk	**Public markets:** risQ for municipal bonds, Moody's for public corporates **Private markets:** Verisk Maplecroft, Munich Re, First Street Risk Factor, ClimateAi and The Climate Service	**Enterprise:** Physical risk exposures are used to identify areas that require climate risk controls. Scenario analysis is performed to assess potential financial impacts to TIAA. **Nuveen:** Physical risk exposures and/or scenario analysis are incorporated into investment processes. Integration is actively being explored for other asset classes.
Transition risk	**Public markets:** MSCI Implied Temperature Rise and Climate Value at Risk, SBTI-verified company targets, government climate targets **Private markets:** Investee disclosures, industry/sector Net Zero pathways, and qualitative risk assessments	Data is being evaluated for risk assessments and Net Zero implementation for the TIAA GA and other clients.

How we use climate data

Our Climate Risk Management Framework will help us take appropriate actions and develop strategies for mitigating and managing the effects of climate change on behalf of our clients. Climate change is creating investment risks and opportunities, but assessing its impact on financial markets is inherently complex. Many variables—including economic, geopolitical and societal forces—will affect the speed of decarbonization. What follows are snapshots of the ways TIAA and Nuveen teams are adopting tools and datasets into their processes.

Scenario analysis is key to integrating climate risks. TIAA Risk Management chose the Network for the Greening the Financial System (NGFS) scenarios to guide scenario analysis design across TIAA and Nuveen. NGFS used integrated assessment models to examine the global energy system under different potential trajectories of temperature and emissions—i.e., models that assume orderly transition, disorderly transition and transition under current policies.

Scenario analysis has been completed at both the enterprise level for the GA, as well as the Investment team level for all assets under management.

3 Metrics and targets

TIAA is committed to reducing carbon emissions and we've set Net Zero goals for our own operations (2040), assets managed by Nuveen Real Estate (2040), and assets managed in the GA (2050).

OPERATIONAL EMISSIONS

Tracking progress: Net Zero by 2040

In line with our commitment to transparency and continuous improvement in environmental, social, and governance (ESG) reporting, we're using Envizi for our ESG data management platform. The decision to use Envizi was driven by the need for a robust, scalable, and comprehensive solution that can handle the increasing complexity and volume of our sustainability data.

Envizi provides us with an advanced, integrated platform for capturing, analyzing, and reporting on ESG data across all our operations. With its real-time data visualization and enhanced analytics capabilities, we can now gain deeper insights into our environmental impact and identify opportunities for further improvements. The platform's customizable dashboards and automated reporting features also streamline our data management process, enabling more efficient and accurate disclosures in alignment with global reporting frameworks.

By leveraging Envizi's capabilities, we're better equipped to track our progress toward our climate goals, improve our decision-making, and engage stakeholders with clear, data-driven insights. This upgrade marks a significant step forward in our sustainability journey, reinforcing our commitment to responsible business practices and long-term value creation.

TIAA Global Corporate Services reports on Scope 1, 2 and a portion of Scope 3 emissions. Our Scope 3 emissions include business travel, employee commuting, fuel- and energy-related activities not included in Scope 1 or Scope 2, as well as waste and water-related emissions.[1]

Our total 2023 emissions of 72,353 mt CO_2e emissions are a 2% decrease from 2022 emissions of 73,868 mt CO_2e and are 28.7% lower than our 2019 base year emissions of 101,449 mt CO_2e. Further, our Scope 1 and Scope 2 emissions are 28.0% lower than similar base year emissions and are on track to meet our 2030 interim goal of a 46% reduction in Scopes 1 and 2 carbon emissions as we continue to increase energy efficiencies, electrify our properties, and expand our renewable energy strategies for both onsite and offsite procurement solutions.

Two general factors contributed to our 2023 emissions data compared to 2022. Office consolidations to improve business efficiencies as well as our divestiture of TIAA Bank, now known as EverBank, reduced our overall operational footprint and led to a decrease in emissions. Business travel emissions were higher YoY as the pandemic still impacted travel during the first half of 2022. While domestic travel began recovering noticeably at that time, international travel remained restricted in many regions. By mid-year 2022, business travel resumed normal operations. Therefore full-year 2022 business travel was artificially low when compared to our full-year 2023 operations.

[1] We'll look to report Scope 3 emissions from investment activity in future reports as data quality and availability improves.

RISK MANAGEMENT

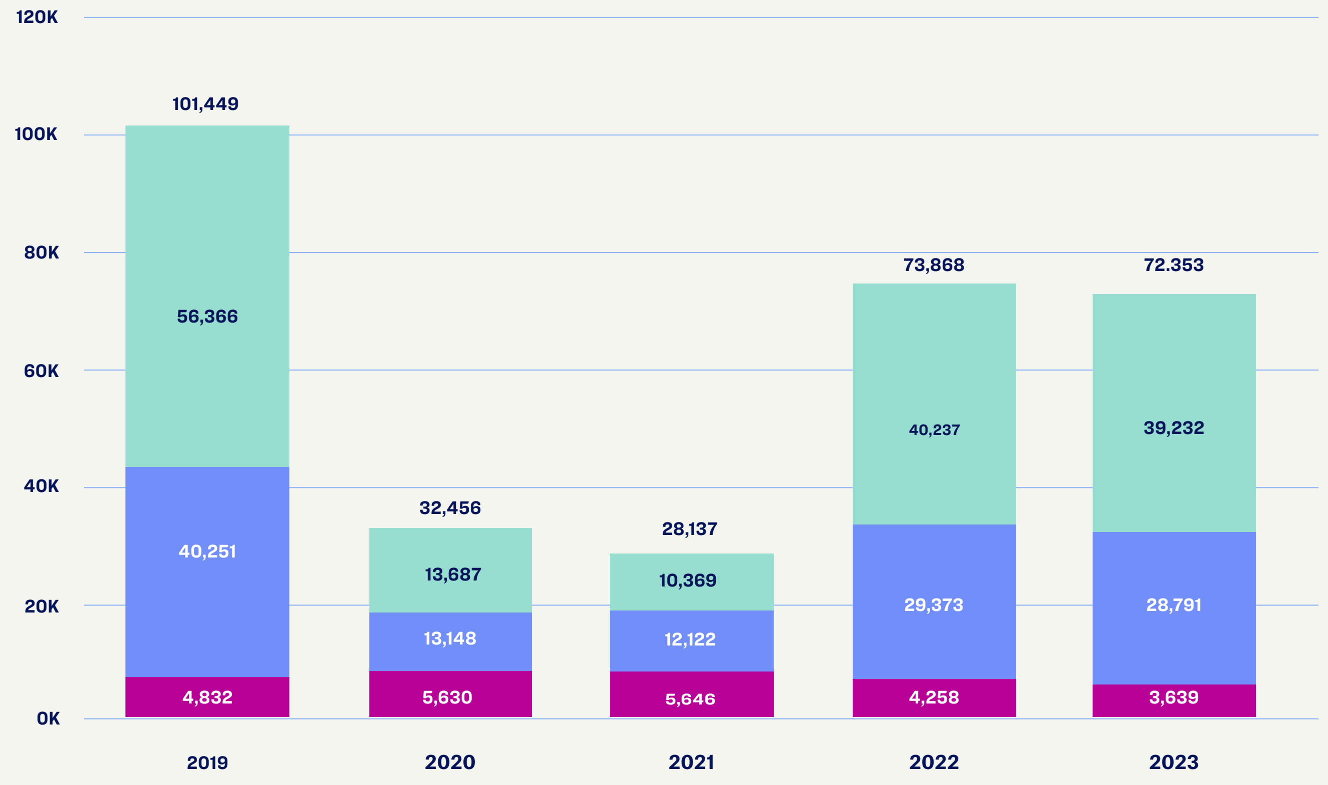
Operational emissions reduction measures

We continue to follow our Net Zero 2040 operational road map, implementing strategies and measures to reduce energy use and emissions. Accomplishments and planned activities include:

- Switched electricity supply at our TIAA India Mumbai office from fossil-fuel generated power to 100% renewable energy generated electricity.
- Achieved LEED Platinum certifications for commercial interiors at our new Mumbai, India, office.
- Our new Frisco, Texas, corporate center will be Net Zero energy as the all-electric property will be supplied by onsite and offsite renewable energy-generated electricity.
- Targeting LEED Platinum (Interior Design & Construction), LEED Gold (Core & Shell), and Fitwel certifications at the new Frisco corporate center.
- Targeting LEED Gold and Fitwel certifications for our Chicago Corporate Center modernization project.
- Awarded an Energy Star certification for our datacenter in Broomfield, Colorado.
- Piloting elimination of single-use containers at test locations and rolling out successful programs throughout all sites.

TIAA's operational emissions impact

Total GHG emissions (mt CO_2e)



Scope 1
Natural gas and propane stationary combustion, generators and fugitive emissions

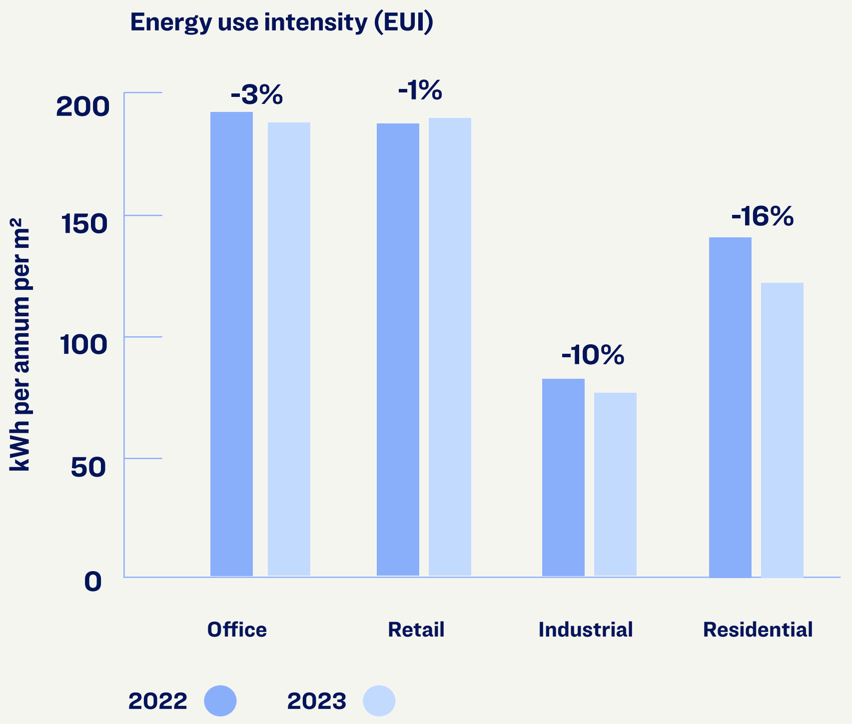
Scope 2
Electricity and district heating usage

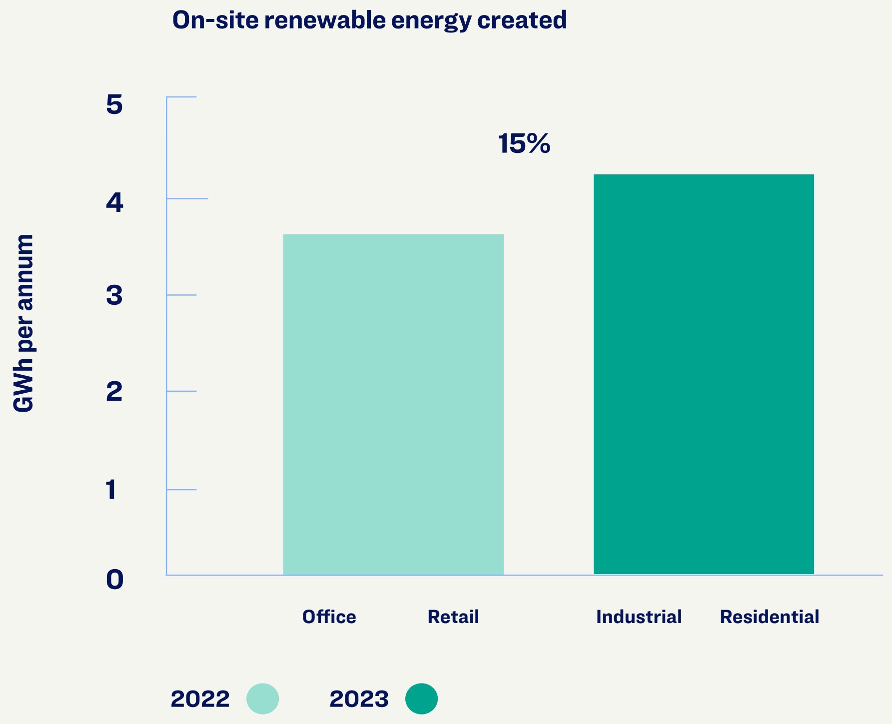
Scope 3
Water usage, fuel-and energy-related activities, waste, business travel and employee commuting

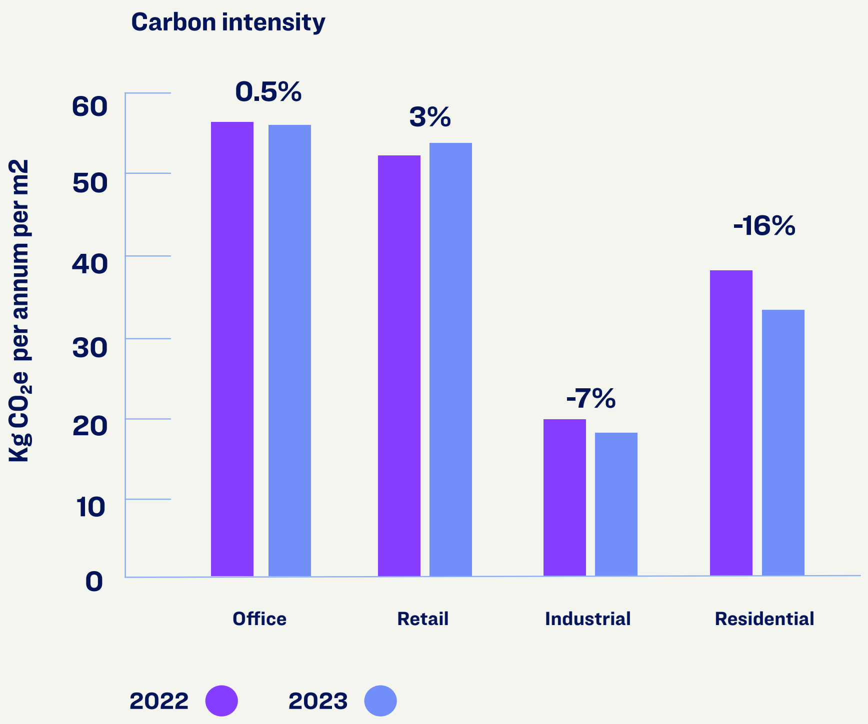
Nuveen Real Estate environmental performance highlights

Expanding reporting coverage. Improving energy efficiency.
Growing renewable energy.

	Emissions	2023 mt CO_2e	Year over year
Direct	Scope 1	199,529	-2%
Indirect	Scope 2	732,775	+2%
Indirect	Scope 3	722,531	+17%







Source: Nuveen Real Estate, Dec 2023. Scope 1 covers direct emissions from landlord-obtained natural gas. Scope 2 covers emissions from actual landlord-obtained electricity, calculated using the location-based method, and district thermals. Scope 3 refers to those emissions associated with actual energy obtained by the landlord but used by the tenant, if submeter data is available; and energy obtained by the tenant directly from the utility supplier. Data estimations have been used where data is not available, thus providing a total operational carbon footprint. Estimations methodology is in line with industry best practice. Carbon emission factors from DEFRA and IEA have been used. Carbon Intensity refers to emissions intensity, using whole building operational carbon (Scope 1, 2 & 3), divided by total floor area (GIA). Only properties with at least some actual data are included in the calculation. On-site renewable generation includes energy generated and consumed on-site by the landlord, renewable energy generated on-site and exported by the landlord, and renewable energy generated and consumed on-site by the tenant. Only actual data is included.

Nuveen Real Estate: Steps to achieve Net Zero by 2040

2015	2020	2025	2030	2040
Nuveen Real Estate sets 30% energy industry reduction by 2030	We sign Better Building Partnership (BBP) Climate Change Commitment in 2019	Our target of 30% reduction in energy intensity by 2030 brought forward to 2025 due to successful energy efficiency strategies	We reduce our portfolio's carbon intensity by 50%	All buildings are operationally Net Zero carbon
• Commit Nuveen Real Estate to setting a pathway by 2020 and achieving Net Zero carbon (NZC) by 2050 at the latest		• Develop costed business plans for NZC for all relevant buildings • Achieve 50% whole building energy data coverage • Assess NZC potential for debt portfolio	• Meet or exceed local industry standards for portfolio average carbon efficiency in Europe for the path to Net Zero carbon • Continue mass removal of fuel • Get in place, where feasible, renewable energy power purchase agreements (PPAs)	• Track below local market Net Zero carbon operational pathways for global portfolio average carbon performance • Achieve significant reductions in embodied carbon and tenant emissions

THE GENERAL ACCOUNT:

Net Zero by 2050

TIAA announced its Net Zero by 2050 commitment for the General Account (GA) in 2021, driven by the belief that climate risk is investment risk.

The initial phase of our journey to Net Zero by 2050 prioritized assets for which data is readily available and reasonably accurate; therefore, our interim targets are set for the public corporate bond portfolio and directly owned commercial real estate—these together account for roughly 27% of the GA's assets.[3] Over the last year, the GA has worked with internal partners and external vendors to develop sound methodologies for estimating financed emissions (PCAF score 3–5) in asset classes where disclosure is not yet a market norm. To date, the GA has been able to measure carbon intensity for an additional 12% of assets with a goal of adding to this coverage each year moving forward. The GA will also work with Nuveen to identify asset classes where interim reduction targets can be set to work in conjunction with investment strategy.

Our 2025 interim targets for each asset class, set against a 2019 baseline year, are as follows:

Asset class	Carbon intensity metric[1]	2025 target reduction range[3]
Public corporate debt	Tons CO2e/million USD sales	15%—25%
Direct commercial real estate	Tons CO2e/square meter	15%—20%

Public Corporate Debt

The 2025 interim target for the public corporate bond portfolio is measured against our 2019 baseline weighted average carbon intensity (Scope 1 and 2 emissions) measured in metric tons of CO_2e/$M sales.

Progress toward the 2025 target has been driven by:

- Integration of climate-related guidelines in the selection of new investments
- Roll-off of existing investments as bonds mature
- Reductions in issuers' carbon intensity over time

As of year-end 2023, the 31% decline in weighted average carbon intensity (WACI) is exceeding the General Account's 2025 target for the public corporate debt portfolio. The selection of new investments did serve to reduce WACI, but much of the overall decline can be attributed to the change in carbon intensity of bonds the GA held throughout the period. This change is measured by the interaction of the numerator (issuer emissions) and the denominator (corporate revenue).

Issuer emissions are evolving in line with expectations, while the growth of corporate revenue post-pandemic has been a tailwind for WACI reduction that may not be replicable moving forward.

The sector breakdown of the portfolio shifted since 2019 with financials increasing from a weight of 19% to 26% and energy decreasing from 9% to 5%. Exposure to utilities remained relatively stable during the period at 20%. Utilities sector WACI of 1,930 mt CO_2e/million USD sales is over 3.7x higher than the next highest sector (Energy) and 83% of the overall public corporate debt carbon intensity can be attributed to the companies that provide electricity to the global economy. The high credit quality, predictable cash flows, and ability to issue long-duration bonds make this sector an important component of insurance investment portfolios. The WACI of GA Utilities positions decreased 29% since 2019 and, given its influence on portfolio WACI, the ability of these issuers to continue the decarbonizing of power generation assets will be watched closely.

Annual change in public corporate fixed-income weighted-average carbon intensity and financed emissions

	2019	2020	2021	2022	2023	2019–2023
Weighted Average Carbon Intensity (tons CO_2e/million revenue)	663	592	533	460	456	
Year-on-year % change	-	-11%	-7%	-17%	-1%	-31%
Financed emissions (tons CO_2e)	12,251,425	11,673,426	11,050,946	7,035,993	4,588,915	
Year-on-year % change	-	-5%	-5%	-36%	-35%	-64%

Note: Weighted average carbon intensity reflected above is measured as carbon emissions per dollar of revenue. Financed emissions were calculated using an EVIC-based attribution factor as recommended by the Partnership on Carbon Accounting Financials (PCAF). Measures were also calculated using carbon emissions per dollar of Enterprise Value Including Cash (EVIC) for informational purposes, although this metric was not used as a direct measure of progress in the portfolio. Carbon intensity metrics for each issuer were sourced primarily from MSCI, with any remaining data gaps filled first using any prior year data from MSCI and second using TIAA internally developed estimates. TIAA estimates were formed by mapping an issuer to a peer group by industry, region, and company size, then estimating its carbon intensity as the 60th percentile carbon intensity of that peer group.

Direct Real Estate (Equity)

Direct Commercial Real Estate Equity and Funds will target a reduction of area normalized (per square meter) total building operating emissions, which includes both landlord-controlled energy use (Scopes 1 and 2) and tenant-controlled energy use (Scope 3) from a 2019 baseline. The Direct Real Estate operational carbon footprint will include buildings wholly owned by the GA, co-investments with JV partners, and assets held in NRE funds where the GA is an investor. The carbon footprint will include a combination of actual property energy use data and estimates for different property types across different regions based on publicly available data. The GA will target a 15–20% reduction in carbon emissions per square meter by 2025, which is expected to be primarily driven by the following factors:

- Allocation shifts across geographic regions (country) and sectors (office, retail, housing, industrial)
- Building energy efficiency (kwh/m^2) improvements
- Electric grid carbon intensity (CO_2/kwh) improvements

Results from an assessment of the 2022 carbon intensity of the direct real estate portfolio has shown a reduction of 21%, from 0.0624 mt CO_2e/m^2 to 0.0492 mt CO_2e/m^2 was achieved between 2019 and 2022.

TIAA GA Carbon Intensity in 2022 versus baseline per sector (mt CO_2e)

Property type	2019 Emissions Intensity	2022 Emissions Intensity	Δ 2019-2022 Emissions Intensity
Industrial	0.0389	0.0310	-20%
Residential	0.0962	0.0762	-21%
Office	0.0760	0.0492	-35%
Retail	0.0857	0.0734	-14%
Total	0.0624	0.0492	-21%

These reduction efforts have led to estimated financed emissions of 333,842 as of YE 2022. Not all of these emissions are directly under GA control, and looking forward, we expect the three levers listed below to all play an important role in reduction:

- Grid decarbonization
- Portfolio turnover—sale of inefficient buildings/acquisition of efficient buildings
- Energy efficiency improvements

Infrastructure

The Nuveen Infrastructure Sustainability team engaged with a vendor to assist in the top-down calculation of carbon emissions for the portfolio. As a result of these efforts, the estimated financed emissions are 806,957 mt CO_2e as of year-end 2022 for the direct infrastructure diversified portfolio. The sector makeup of the top WACI contributors are transportation, natural gas extraction, and fossil fuel electric power generation.

Employing a top-down methodology is particularly useful to identify hot spots, but depending on the vendor, these estimates are, at times, orders of magnitude different due to the reliance on broad categories of economic activities. One way to achieve a more precise emissions calculation is to employ a bottoms-up approach, which consists of collecting data directly from companies. This data can be challenging to collect for certain assets and funds where we've limited influence and control.

For diversified infrastructure funds, work is underway to develop estimation methodologies for areas where we can't obtain necessary data (e.g., revenue reporting for certain funds). By the end of 2024, the estimated baseline will include all assets within the portfolio, including funds. The baseline is subject to revision, as new, holding-level data potentially becomes available and replaces estimates.

Regarding Nuveen Infrastructure's clean energy platform, financed emissions are reported in the 2023 clean energy sustainability report.

Nuveen Natural Capital

Nuveen Natural Capital is Nuveen's land-focused investment manager. The farmland and timberland assets under our management represent approximately 3 million acres across more than 600 properties in 10 countries.*

Employing a top-down methodology is particularly useful to identify hot spots, but depending on the vendor, these estimates are, at times, orders of magnitude different due to the reliance on broad categories of economic activities. One way to achieve a more precise emissions calculation is to employ a bottoms-up approach, which consists of collecting data directly from companies. This data can be challenging to collect for certain assets and funds where we've limited influence and control.

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Regarding Nuveen Infrastructure's clean energy platform, financed emissions are reported in the 2023 clean energy sustainability report.

Churchill Asset Management

Churchill, Nuveen's dedicated U.S. private capital manager, utilizes a carbon accounting vendor to model emissions across its senior lending, junior capital, and equity co-investment platforms. As of year-end 2023, the GA's allocation to these strategies carries an estimated 92 mt CO_2e/$mm revenue. Churchill remains committed to engaging with private equity sponsors to increase the number of portfolio companies reporting true emissions, but will continue to model emissions to fill gaps as needed. represent approximately 3 million acres across more than 600 properties in 10 countries.*

Using the carbon accountant's sector analysis, we can see that Churchill benefits from a focus on asset-light industries, such as professional services, healthcare, administrative support, and educational services, which make up over 42% of our NAV but just under 18% of attributed emissions. This sector analysis has helped formulate engagement planning at our portfolio companies, particularly in the manufacturing sector, which makes up 21% of NAV, while contributing ~44% of the emissions across our portfolio. Engagement planning can range from providing free resources to our portfolio companies to begin calculating true Scope 1 and 2 emissions to targeting ways our borrowers can reduce emission across key parts of their business.

Looking ahead to next steps in carbon accounting and reporting capabilities, Churchill is working on a solution to model emissions across our PE Fund program, the only remaining asset class that doesn't yet have estimated data.

*Nuveen internal sources as of December 31, 2023

TIAA's fossil fuel exposure

Fossil fuels currently make up over 80% of the world's primary energy supply and are likely to meet a significant portion of global energy needs for decades to come. TIAA and Nuveen's exposure to fossil fuel-related investments reflects their widespread past and current role in the real economy. Increasingly, the low-carbon transition is likely to bring major shifts in the energy system. We'll continue to monitor these shifts as they unfold, seeking to maximize risk-adjusted investment returns and meeting our clients' investment objectives.

As a matter of policy, we don't completely divest from major sectors of the economy, including the energy sector. Divestment is a blunt tool that does little to reduce real-world GHG emissions and removes our ability to engage with companies and assets over time. We've a long history of stewardship and engagement, with a particular focus on the theme of climate change. Our engagement approach is informed by the growing recognition that portfolio-level climate targets are most impactful when they're achieved via real-world emissions reductions, not simply by reweighting our portfolio holdings.[1]

However, this doesn't mean we'll blindly hold an investment without regard for changing market conditions. Our investment process is both dynamic and climate aware, reflecting our investment teams' careful balance of risk and return as well as climate-related data and training curated by the Responsible Investing and Risk teams.

Transparency is a key part of our commitment to responsible investing. To that end, we're disclosing our fossil fuel exposure in this report for the second year. Over time, our overall fossil fuel investment exposure may rise or fall based on various dynamics. From 2022 to 2023, our exposure declined by 1%, driven primarily by reductions in public investments for third-party clients. Within the GA, fossil fuel exposure rose, although investment teams continue to favor shorter, over longer duration exposure due to uncertainty around long-term fossil fuel demand. See the corresponding table for TIAA, Nuveen, and all affiliates' exposure to fossil fuels (in millions of dollars) as of year-end 2023.

Fossil fuel exposure, year-end 2023 (million USD)

$MM	Publics	Private		Total	% Change vs. Prior Year
		Direct	Funds		
GA	4,548	2,328	375	7,251	+4%
3rd party	27,556	0	0	27,556	-3%
Total	32,104	2,703		34,807	-1%

Methodology: TIAA's fossil fuel exposure includes our public and private investments in any type of securities issued by 1) fossil fuel reserve owners, 2) companies directly operating in the production of oil, coal, and natural gas, or 3) companies involved in the fossil fuel value chain, such as exploration, refining, pipelines, and equipment. Some LP positions were excluded as look-through analysis on the underlying investments is not always available. Third-party client fossil fuel exposure was calculated using security identifiers from FactSet's security matching algorithm, matched to MSCI ESG data fields within the MSCI Data Manager platform. Unmatched securities were evaluated against other security identifiers on a "best-efforts" basis to generate a match against MSCI ESG data fields. Securities that MSCI was unable to match weren't included in the analysis. Third-party client exposure was estimated using market value. GA fossil fuel exposure was calculated by utilizing ICB sub-sector filters across all asset classes (including direct/co-investments, indirect energy funds, and indirect PE funds). GA exposure was estimated using statement value.

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