TIAA

Rising to the challenge

2023 CLIMATE REPORT

EXECUTIVE SUMMARY

A message from TIAA

TIAA has looked after the financial futures of millions of savers and investors for over a century. We've managed through numerous challenges over those decades—including economic booms and busts—with a steady hand, always with clients at the forefront of our decision-making.

We believe that one of the major challenges of our time is the changing climate. While many have already felt the physical changes in temperatures and weather patterns, flooding, heatwaves, droughts and fires, we also know that the changing climate is transforming industries, complicating supply chains, and driving macroeconomic trends that affect profitability and business models. We recognize that climate change affects our investment portfolios and the methodologies we use to achieve our clients' investment objectives.

We measure our leadership on this issue in our progress toward meeting our commitments. In our 2023 climate report, we are pleased to provide updates on three primary goals:

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

Executing our fiduciary duty requires a holistic understanding of factors that impact investment value, including impacts from a changing climate. As stewards of our clients' financial futures, we must face the challenge and guide our clients' investments through the transition to a net zero greenhouse gas (GHG) emission economy.

TIAA's focus during the low-carbon transition is our own operations and the portfolios that we manage, and we believe that reaching a net zero carbon world is essential to our long-term success. We support the Task Force on Climate-Related Financial Disclosure (TCFD) and its focus on transition plans. We continually review our disclosures for areas where we can provide more information and transparency and will evolve this report over time based on data availability and industry standards.

We are proud of our progress so far, and we hope that global businesses and governments will continue to join us in facing this generational challenge head on. Together, we believe we can achieve better outcomes for our clients and the future of our climate.

1 Strategy

Climate risk is investment risk

Four climate beliefs of the General Account

Our obligation to TIAA retirement plan participants is long term, which means it is our responsibility to consider investment risks, including climate risks, over a similarly long horizon. The scientific findings from the Intergovernmental Panel on Climate Change (IPCC) suggest that physical impact of unmitigated climate change will result in global economic damage over time, with damage increasing as warming increases. Therefore, we believe the transition to a low-carbon economy is an economic imperative. Furthermore, an orderly transition within the 2050 timeframe set out in the Paris Agreement is likely to deliver better economic and investment outcomes than a disorderly or delayed transition.

The following belief statements have been developed and subsequently updated with this scientific and economic context in mind.

BELIEF STATEMENT

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

Risks

- Transitioning to a low-carbon economy is seen as necessary by many governments and the private sector, and may bring a wide variety of policy, legal, regulatory, technological, and market changes that influence investment fundamentals.
- The pace of the transition will vary significantly by region and sector (and may contradict), driven by the availability and cost of low-carbon technologies, the geopolitical environment, policy and regulatory actions, and consumer preferences.
- Transitioning to a low-carbon economy reduces long-term physical risks for investors, and an orderly transition creates less volatility than a disorderly transition.

Opportunities

- Proactively planning for climate risk in business strategy may enable issuers and other operating companies to adapt to changes including increased energy costs, shifts in consumer demand and greater regulatory requirements, while avoiding stakeholder scrutiny or reputational or brand impairment.
- Businesses, real assets and projects across many sectors that actively accelerate the transition may experience increased demand for their products and services, support from governmental policies, and/or competitive advantages in attracting intellectual capital (increasing financial productivity).

Strategic actions

- TIAA seeks to develop low-carbon transition "signposts" that monitor the pace and magnitude of the low-carbon transition over time. These signposts will be inputs that help determine our interim net zero targets.
- Nuveen offers its clients a variety of low-carbon and climate-focused products in public and private markets.

II

BELIEF STATEMENT

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

Risks

- The low-carbon transition is expected to create transition risk for public and private investments with exposure concentrated in fossil fuel and energy-intensive sectors. We expect that corporate sectors such as energy, utilities, materials, industrials and transportation face relatively higher transition risks, which may manifest in impacts to revenues, expenditures, assets and liabilities, or access to capital.
- Government-related issuers with significant reliance on the fossil fuel industry are also relatively more exposed, which may manifest in impacts to tax revenues, gross domestic product, and access to capital.

Opportunities

- “Green” sectors may benefit significantly from a low-carbon transition, including renewable energy, green buildings, electric vehicles, sustainable forestry and agriculture, water management, battery storage, carbon capture and storage, energy efficiency, and electricity transmission and distribution.
- Sectors and regions with direct physical risk exposure would also benefit from a low-carbon transition scenario in the long term due to reduced physical impacts of climate change.

Strategic actions

- TIAA continues to expand the implementation of net zero across additional asset classes in the GA to heighten our focus on investment risks and opportunities stemming from the low-carbon transition.
- TIAA also continues to deepen the measurement and monitoring of physical climate risks, with a particular focus on “place-based” asset classes like farmland, timberland, real estate, infrastructure, and municipal bonds.

III

BELIEF STATEMENT

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

Risks

- Specific investment characteristics that influence transition risk include carbon intensity, expected holding period, liquidity, and the strength of the climate policy regime in the places where we are investing.
- As climate data continue to evolve and mature, carbon emissions data is an imperfect but useful proxy for transition risks, given that it is a more readily available metric to measure and monitor in an investment portfolio.
- Disclosure of carbon emissions data is nonetheless still voluntary in many jurisdictions, leading to lack of data coverage and lack of independent verification of accuracy.

Opportunities

- Adopting a decarbonization objective helps the GA uncover and pursue new investment opportunities, such as renewable energy infrastructure and the U.S. Commercial Property Assessed Clean Energy (C-PACE) program, among others.
- New global sustainability disclosure standards are emerging, such as those put forth by the International Sustainability Standards Board (ISSB), which will improve the disclosure of high quality, comparable carbon emissions data to inform the GA's investment process.

Strategic actions

- TIAA is actively expanding measurement of its financed carbon footprint, alongside further build-out of transition risk assessments.
- We work with assets, portfolio companies and other stakeholders in carbon-intensive industries to encourage greater strategic focus on their low-carbon transition.

IV

BELIEF STATEMENT

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

Risks

- Despite the increasing urgency surrounding climate change, current policies are not sufficient to meet the goals of the Paris Agreement. According to Climate Action Tracker, an independent scientific project that tracks government climate action and measures it against the globally agreed Paris Agreement aim of "holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C," current policies will result in global warming of 2.7°C by 2100.
- The real economy may therefore decarbonize more slowly than required by a science-based pathway to achieve the Paris Agreement's goals. Investment portfolios that significantly diverge from the composition of the real economy could underperform more diversified portfolios.

Opportunities

- Significant policy developments in the past year support the overall trend toward decarbonization. TIAA and its investment teams closely track these developments and the implications they may have on our investment portfolios.
- Investment portfolios that decarbonize proactively can get ahead of the expected market impact of government policies before climate risks and opportunities are fully priced in and investment values impaired.

Strategic actions

- TIAA expects to review its net zero commitment periodically to ensure it remains broadly aligned with the pace and nature of the low-carbon transition, as well as with our goal to achieve long-term positive financial outcomes for our participants.

STEWARDSHIP

Elevating expectations for companies on climate

We believe that the global economy is decarbonizing, a process that will create meaningful investment risks and opportunities for our portfolios and clients. In response to these risks, we launched our Climate Risk 2.0 program last year, 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 to the right, is assessed bi-annually and informs our proxy voting and engagement decisions.

As of Nov. 30, 2023, we have had 201 engagements with the 100 companies included in Climate Risk 2.0. In these engagements and in proxy voting decisions, we have applied a systematic approach to our expectations of companies, focusing primarily on near-term emissions reductions that stem from abatable sources.

As such, we have developed detailed industry-level expectations, produced by sector experts, that recognize the unique risks and opportunities that face each company.

- In the fossil fuel sector, for example, conversations have included 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 have included topics like product efficiency and electrification, as well as engagement with materials suppliers to support decarbonization of hard-to-abate sectors.

Transparency: basic disclosure items

Climate risk disclosure

TCFD reporting, including scenario analysis that captures significant physical and transition risk.

GHG emissions disclosure

Verified GHG emissions reporting, including material Scope 3 categories.

Policy engagement

Company discloses climate related lobbying activities.

Accountability: strategy/plans for risk management

Risk management

TCFD reporting discloses how business planning has been impacted by scenario analysis and how climate is incorporated into ERM.

Governance

Board has evidenced climate competence and a committee with climate oversight. Compensation incentivises achievement of stated targets.

Policy management

Company reasonably aligns lobbying activities with stated priorities and seeks to address discrepancies.

Targets

Company has near and long-term targets for material emissions. Where feasible, targets are third-party verified.

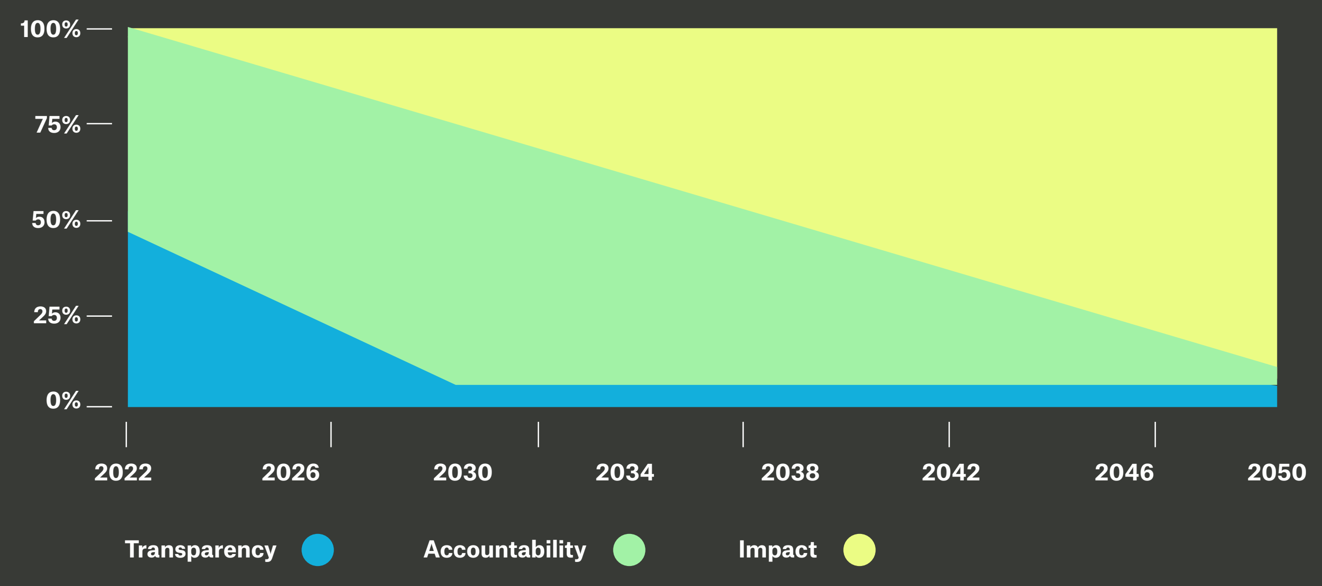
Strategy

Company strategy aligns with industry-specific standards and capitalizes on emerging opportunities.

Impact: materialization of plans

Realized decarbonization

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



Our climate investing product offerings

Client objectives	Product features	Products and investment specialists	Asset class
Avoid exposure to carbon-intensive assets in portfolio	• Lower carbon footprint than the benchmark • Limited exposure to fossil fuel reserves	TIAA-CREF Social Choice Low Carbon Equity Fund	Public equity
		Nuveen ESG ETF Suite	Public equity
		Low Carbon Value ESG Equity SMA	Public equity
Reduce carbon emissions of assets	• Decarbonize over time at a Paris-aligned rate • Targeted company engagement program to reduce emissions (Scope 1, 2, and 3)	Nuveen Real Estate[2]	Real estate
		Nuveen Global Net Zero Transition ETF	Public equity
		Nuveen Global Clean Infrastructure Impact Fund	Public equity
		Nuveen Global Real Estate Carbon Reduction 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 verfied carbon credits	TIAA-CREF Green Bond Fund	Fixed income
		TIAA-CREF Core Impact Bond Fund[1]	Fixed income
		TIAA-CREF Short Duration Impact Bond Fund[1]	Fixed income
		Nuveen Global Core Impact Bond Fund[1]	Fixed income
		Nuveen Emerging Markets Impact Bond Fund[1]	Fixed income
		Nuveen Global Impact Fund	Private capital
		Nuveen Green Capital[2]	Private capital
		Nuveen Natural Capital[2]	Real assets
		Nuveen European Core Renewable Infrastructure Fund	Real assets
		Glennmont Clean Energy Fund IV	Real assets
		Nuveen Energy Transition Enhanced Credit Fund II	Real assets

1. Please note that climate-related investments make-up less than 50% of the AUM 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. 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

Risk management

TIAA's climate risk management framework

RISK MANAGEMENT

Climate risks are multi–faceted

Climate risks must be identified and monitored through different lenses across the organization.

TIAA began a phased buildout of our enhanced climate risk management framework in 2022, 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.

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.

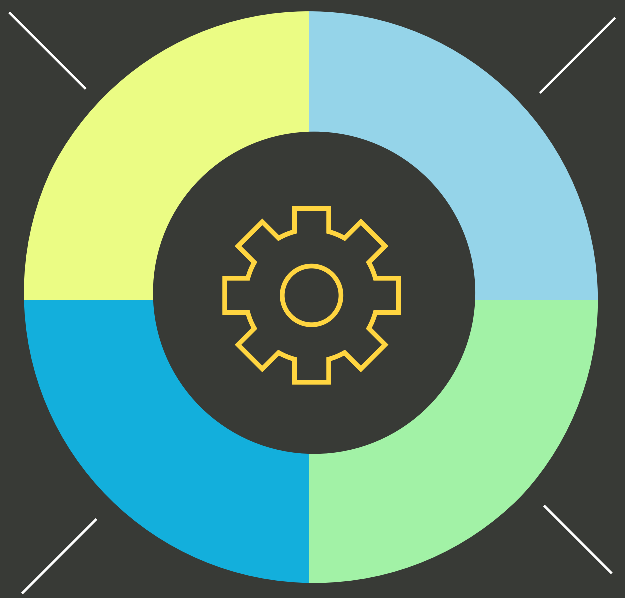
TIAA's climate risk management framework

1. Oversight

The Board, and Boards of our affiliates, are responsible for understanding relevant climate risks and overseeing their management within the overall business strategy and risk appetite.

2. Risk assessment

Development of processes to report material climate risks, their transmission channels and their potential impact on existing risk factors and overall risk appetite.



4. Scenario analysis

Use of scenario analysis to understand how climate risks may materialize and measure potential impacts.

3. Monitoring

Incorporation of assessments, including time horizons, that allow us to appropriately inform TIAA's business activities and decision-making.

3

Metrics and targets

Tracking progress toward our net zero goals

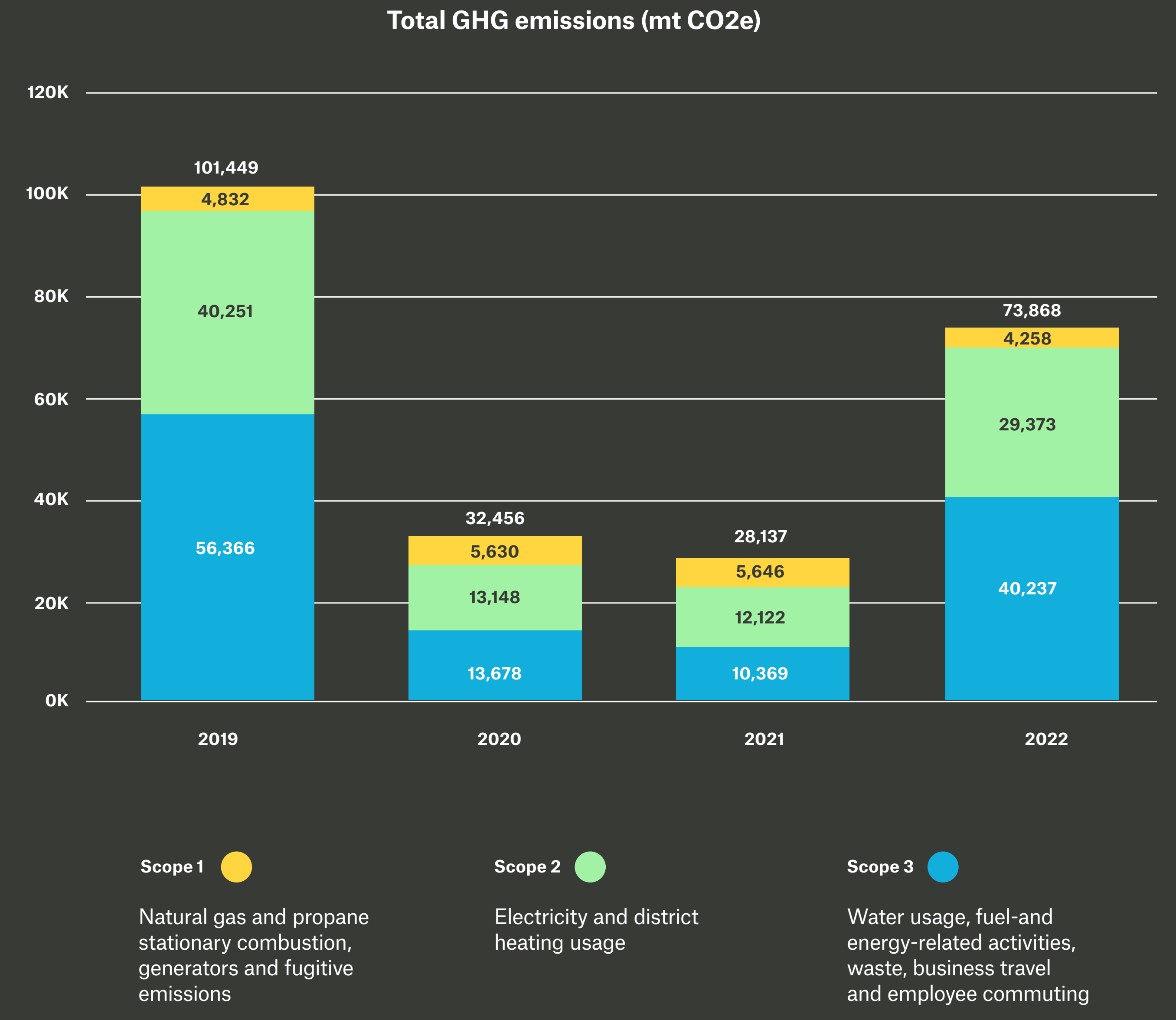
TRACKING PROGRESS

Operational emissions—Net zero by 2040

TIAA Global Corporate Services reports on Scope 1, 2 and a portion of Scope 3 emissions. The Scope 3 categories include business travel, employee commuting, waste and water-related emissions. While our overall operational emissions increased in 2022 from the previous two years, they show a 27% reduction when compared to the 2019 baseline. We see the increase in our 2022 GHG emissions compared with 2020 and 2021 as anomalous due to the temporary reduction of emissions from the global pandemic resulting in reduced business, travel and related activities during those previous two years.

A significant proportion of the 27% reduction in emissions in 2022 relative to the 2019 baseline can be attributed to the consolidation of our site portfolio based on business requirements. We also formalized hybrid work schedules for eligible associates and invested in virtual meeting capabilities, which reduced emissions from commuting and business travel, respectively.

TIAA's operational emissions impact



MAKING HEADWAY

The General Account: Net Zero by 2050

TIAA announced its net zero by 2050 commitment for the GA in 2021, driven by the belief that climate risk is investment risk.

The initial phase of our journey to net zero by 2050 will prioritize assets where 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 30% of the GA's assets. Inconsistent emissions disclosure and carbon accounting standards prevent the full and accurate measurement of the carbon footprint associated with the remaining 70% of diversified assets and securities held by the GA. As disclosure improves and carbon accounting best practices expand across asset classes, we will expand our interim targets accordingly. More asset classes are being targeted for 2024 and 2025 as the path toward gathering the data needed for measurement and interim target setting becomes clearer.

Our 2025 interim targets for each asset class, set against a 2019 baseline year

2025 General Account interim targets, by asset class, set against 2019 baseline year

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

Annual change in public corporate fixed income carbon intensity

	2019	2020	2021	2022	2019–2022
Carbon mt CO2e (mt CO2e/million USD sales)	663	592	553	530	–
Year-on-year % change	–	–11%	–7%	–4%	–20%

Note: Carbon intensity reflected above is measured as carbon emissions per dollar of revenue. Measures were also calculated using carbon emissions per dollar of Enterprise Value Including Cash (EVIC) for informational purposes, although this metric 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

GENERAL ACCOUNT

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 CO2e/$M sales. To arrive at the 2025 target reduction range, the Responsible Investing, Risk, GA, and Investment teams collaborated to model a variety of potential carbon intensity reduction pathways and their potential investment impact on the public corporate debt portfolio.

As we move toward implementation, we will rely on a combination of strategies to work toward achieving the 2025 target:

- Integrating climate-related guidelines in the selection of new investments
- Roll-off of existing investments as bonds mature
- Reductions in issuers' GHG emissions over time

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 (Scope 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/m2) improvements
- Electric grid carbon intensity (CO2/kwh improvements

TIAA general account carbon intensity in 2021 versus baseline per sector

Property type	2019 emissions intensity	2021 emissions intensity	△ 2019-2021 emissions intensity
Industrial	0.0394	0.0384	-2.6%
Residential	0.0982	0.0822	-16.3%
Office	0.0789	0.0524	-33.6%
Retail	0.0741	0.0563	-24.0%
Total	0.0605	0.0540	-10.7%

COMMITTING TO TRANSPARENCY

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 will continue to monitor these shifts, seeking to balance investment risk and return within our clients' investment objectives as they unfold.
As a matter of policy, we do not 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 have a long history of stewardship and engagement, with 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 are achieved via real world emissions reductions.

However, this does not mean we will 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.

Transparency is a key part of our commitment to responsible investing. To that end, we are disclosing our fossil fuel exposure in this report for the first time. See the corresponding table for TIAA, Nuveen, and all affiliates' exposure to fossil fuels (in millions of dollars) as of year-end 2022.

TIAA's fossil fuel exposure

Fossil fuel exposure, year end 2022 (million USD)

$MM	Publics	Private		Total
		Direct	Funds	
GA	6,492	125	341	6,959
3rd party	28,302	–	30	28,331
Total	34,794	496		35,290

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 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 were not included in the analysis. Third party client exposure was estimate using market value. General Account fossil fuel exposure was calculated utilizing ICB sub-sector filters across all asset classes (including direct/co-investments, indirect energy funds and indirect PE funds). General Account exposure was estimated using statement value.

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The views expressed in this material may change in response to changing economic and market conditions. Past performance is not indicative of future returns.

Responsible investing incorporates Environmental Social Governance (ESG) factors that may affect exposure to issuers, sectors, industries, limiting the type and number of investment opportunities available, which could result in excluding investments that perform well. There is no guarantee that the strategy will be successful, and employing an ESG strategy may not result in favorable investment performance.

ESG integration is the consideration of financially material ESG factors in support of portfolio management for actively managed strategies. Financial materiality of ESG factors varies by asset class and investment strategy. Applicability of ESG factors may differ across investment strategies. ESG factors are among many factors considered in evaluating an investment decision, and unless otherwise stated in the relevant offering memorandum or prospectus, do not alter the investment guidelines, strategy or objectives.

The TIAA General Account is an insurance company account and is not available to investors as an investment. It is solely owned by and supports TIAA's contractual guarantees and business operations; its performance is not directly allocated to any specific contract or obligation.

You should consider the investment objectives, risks, charges and expenses carefully before investing. Please call 877-518-9161 or go towww.TIAA.org/prospectuses for current product and fund prospectuses that contain this and other information. Please read the prospectuses carefully before investing.

Investment, insurance and annuity products are not FDIC insured, are not bank guaranteed, are not deposits, are not insured by any federal government agency, are not a condition to any banking service or activity, and may lose value.

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