



Sustainability



Letter from our Global Head of Real Estate

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- Tomorrow's world strategy
- Sustainability commitments
- Net zero carbon pathway

2. Sustainability at Nuveen Real Estate

- Environmental (including climate change)
- Social (including housing affordability)
- Governance

3. Smart, sustainable building blueprint

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- Biographies
- Task Force on Climate-related Financial Disclosures
- Detailed metrics tables

Sustainability expectations remain a focal point to investment managers and regulators

In 2023, sustainability issues remained front of mind for us and our investors. Advancements in the global energy transformation and affordable housing provision were particularly dominant areas and as such you'll see a focus on these in this report. Further contributing to the significance of sustainability are the regulatory developments across the globe which create greater expectations of transparency.

Our survey of institutional investors from around the world reveals that a continued focus on sustainability issues remains important and is an expectation for the majority of our clients. Approximately 70% of respondents to our annual EQuilibrium survey report that ESG factors influence investment decision making and a similar proportion report that they are going beyond regulatory requirements on the energy transition.

Given the size and scale of the investment needed to fund the transition, investors are finding ample opportunities to mitigate risk and generate returns. But investors also recognise that capital can only go so far in affecting change. Across all regions, investors agree that government policy and technological innovation will be the biggest drivers of the transition, while politicisation will be the greatest challenge.

We believe we have a fiduciary responsibility to make sure that we continue to consider these factors in our thinking because our stakeholders increasingly demand it, prudent investment management requires it, and those that dismiss it face greater actual risks.

As our latest sustainability report highlights, Nuveen Real Estate has a long-standing track record of success in ESG. Our long-term goals are underpinned by detailed short-term milestones to ensure credibility. We have always rooted our sustainability strategy in the value it delivers to investors. Simply put, we have a goal to achieve net zero carbon by 2040 because we believe that buildings that do not decarbonise will become obsolete.

Our 'tomorrow's world' philosophy sits at the core of our investment process. Focused on the long-term structural trends such as digitalisation, ageing population and the transition to the low carbon economy, it aims to deliver enduring benefits to both our clients and society. This philosophy combined with our sector approach creates real estate portfolios that serve our partners' investment, climate and social objectives.

Our 2023 – 2024 sustainability report provides transparency into our approach to sustainability, our progress to date and our plans for the future.



Chris McGibbon Global Head of Real Estate, Nuveen Real Estate

Company profile

Tomorrow's world strategy ▶

Sustainability commitments ▶

Net zero carbon pathway ▶

Nuveen Real Estate

Nuveen Real Estate is one of the largest investment managers in the world with \$147 billion of assets under management.

With over 85 years of real estate investing experience and more than 785 employees¹ located in over 30 cities throughout the world, our platform offers unparalleled geographic reach, which is married with deep sector expertise and a long history of prioritising responsible investing.

ata as of 31 Dec 2023.

1 Includes 385+ real estate investment professionals, supported by a further 395+ Nuveen employees.
2 Operations in Seoul through an investment partnership.

AMERICAS

\$113B AUM 323 employees

- Atlanta
- Baltimore
- Boston
- Charlotte
- Chicago
- Dallas
- Denver
- Hartford
- Miami
- Tampa
- Minneapolis
- Newport Beach
- Newport Beac
- New York
- San Francisco
- Washington, D.C.

EUROPE

\$29B AUM 407 employees

- Amsterdam
- Copenhagen
- Edinburgh
- Frankfurt
- Helsinki
- London
- Luxembourg
- Milan
- Madrid
- Paris
- Stockholm
- Vienna
- Zurich

ASIA PACIFIC

\$6B AUM 58 employees

- Hong Kong
- Seoul²
- Shanghai
- Singapore
- Sydney
- Tokyo



Our tomorrow's world strategy, goals and alignment

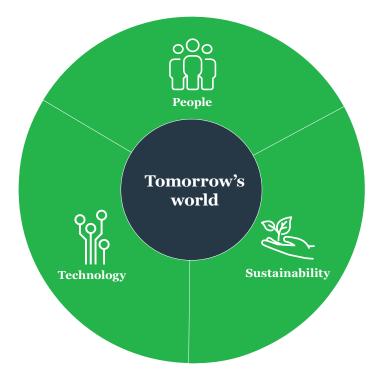
As stewards of our clients' capital, our fundamental goal is to build an investment portfolio that delivers strong risk-adjusted returns. This requires a holistic assessment of risk, weighing the positive and negative implications of our investments and how they could affect long-term investment value.

At the core of our investment philosophy is our tomorrow's world approach, which informs our long-term view of real estate investments for the enduring benefit of both clients and society. It goes beyond incorporating sustainability factors into our analysis. It embraces the structural changes that the real estate industry and society face.

In our opinion, the three key areas of evolution that shape the future of real estate are people, sustainability and technology.

We believe structural changes present significant opportunities to create and protect value, and the key to capitalising on these is to have a deep understanding of these disruptors and their effects.

"Sustainability sits at the core of our tomorrow's world strategy. We believe that the transition to a low-carbon economy is a vital focus area that presents both opportunities and risks which, when effectively managed, can create value for our investors."





Abigail Dean Global Head of Strategic Insights Nuveen Real Assets



Sustainability programme priorities in 2024 and beyond

We continue to focus on the evolving landscape and expectation for ESG integration, disclosure and leadership. Our priority areas of focus include:

Continue to monitor and manage climate risk as part of the investment process Operationalise our net zero carbon framework by setting fund/strategy personas and developing asset transition plans Continue to align assets with our Smart, Sustainable Building Blueprint to meet client expectations for sustainable investments

Focus on tenant engagement and tenant data gathering to increase whole building energy data coverage Develop resources, training and frameworks to better integrate ESG across Nuveen Real Estate and successfully deliver on ESG objectives and client expectations

Meet ESG disclosure requirements and report ESG performance through internal and external channels



NUVEEN REAL ESTATE'S COMMITMENT TO SUSTAINABILITY

2007

TIAA, Nuveen Real
Estate's parent company,
first recognised as
ENERGY STAR Partner
of the Year in 2007—
and recognised with
this award every
year subsequently,
achieving the Sustained
Excellence recognition
15 years in a row.¹

2010

Nuveen Real Estate commits through the U.S. Department of Energy Better Buildings Challenge to improve energy efficiency by 2% per year for 10 years over 20 million sq ft of equity portfolio investments and in 2020 Nuveen Real Estate was recognised a Goal achiever.

2011

Nuveen Real Estate joins as a **GRESB Member** and participates in each year's annual real estate ESG assessment. In the most recent assessment, 11 funds achieved a 5-star rating.²

2012

Nuveen Real Estate UN PRI Signatory since 2012 with an A+ rating in 2020. In December 2018, Nuveen, LLC became a signatory; Nuveen Real Estate now falls under Nuveen's PRI signatory status and reporting.

2017

Energy efficiency target introduced for Nuveen Real Estate investment properties to reduce landlord-controlled energy use by 30% by 2025 from a 2015 baseline.

Nuveen Real Estate launched its **global resilient series** of real estate strategies, using a proprietary filtering system to identify tomorrow's world cities.

2018

TIAA commits to implementing the Taskforce for Climate-related Financial Disclosures (TCFD) recommendations.

2019

Nuveen Real Estate signs Better Building Partnership (BBP) Climate Change Commitment and publishes pathway to achieve net zero carbon (NZC) by 2040.

2020-2023

Nuveen Real Estate joins **ULI Greenprint NZC commitment,**along with several U.S. real
estate companies.

Nuveen Real Estate and TIAA together become **Fitwel Champions**, focusing on implementing health and wellness and viral safety in real estate.

Nuveen Real Estate becomes a sponsor and participant of the CRREM Pathways for North America Working Group an effort led by CRREM, ULI, and Berkeley Lab.



















 $^{1\,}$ As of March 2024. Sustained Excellence has been awarded 2010 - 2024.

^{2 2023} GRESB Results, as of October 2023.

Net zero carbon by 2040

It is widely recognised that to meet the objectives of the Paris Agreement, all buildings will need to be net zero carbon by 2050 at the latest. At Nuveen Real Estate, however, we are aiming to achieve net zero carbon in our real estate portfolio no later than 2040.

We are monitoring indicators across the globe that show the transition is picking up pace. We will be ready to accelerate our net zero carbon pathway as necessary if specific regions or sectors expect us to do so. A benefit of our global footprint is that we can draw on our knowledge and expertise from locations that are transitioning swiftly to a low carbon economy and apply it in other markets.

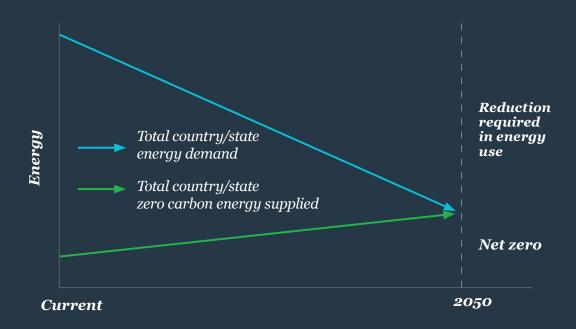
In Europe and Asia Pacific, CRREM is emerging as a widely recognised benchmark for net zero carbon performance, and we utilise this as part of our acquisition process and business planning. We also leverage local market net zero carbon performance benchmarks and tools such as those made available by the U.K. Green Building Council or the Building Construction Authority of Singapore's Super Low Energy framework.

In the U.S., we are working with the ULI and a number of our peers to support the further roll out of CRREM pathways for a greater number of locations and sectors.

Our net zero carbon pathway details our transition plan.

What is a zero carbon building?

A greater supply of renewable energy for grid electricity will mean a more generous allowance for building energy use — therefore efficiency requirements will vary from market to market.





Meets regionally defined energy use intensity standard at whole building level



Maximises renewable energy from available on- and off-site sources



Embodied carbon in development of refurbishment is minimised and remaining carbon emissions are offset



Our 2025 milestone execution and planning

Nuveen Real Estate sets 30% energy intensity reduction target by 2030 We sign Better Building Partnership (BBP) Climate Change Commitment in 2019 Our target of 30% reduction in energy intensity¹ by 2030 brought forward to 2025 due to successful energy efficiency strategies

Reduction of portfolio's carbon intensity² by 50%

All buildings are operationally net zero carbon

2015

2020

2025

2030

2040

Energy efficiency and tenant engagement

Establish NZC energy efficiency standards that align with climate science	On track	Consensus on standards is developing in Europe but is still lacking in the U.S. and Asia Pacific. We continue to play an active role in the industry groups that have an input into these standards
Achieve 30% energy intensity reduction	On track	 To date, achieved a 28% reduction in like-for-like assets, due to significant operational improvements to owned assets, and currently trending ahead of the reduction pathway by 4 index points. The portfolio reached a record low, driven by a 5% improvement in energy intensity in the largest asset classes. The portfolio is now 2 index points away from reaching its 30% target. On track to meet 2025 goal with planned disposal of older assets, acquisition of efficient assets, and ongoing roll out of LED upgrades and heating, cooling and
		ventilation system improvements
Capture whole building data for	On track	• We have already exceeded the 50% goal in Europe (57%) and Asia Pacific (87%). U.S. is currently at 47%
50% of AUM		We are rolling out technology solutions to support acquisition of whole building data and continue to pursue legal authorisations from tenants
		Capturing full building energy use data is a key area of focus with energy data providers in the United States driving momentum
Establish carbon footprint	Complete	Carbon footprint baseline estimation work complete and subject to refinements as the quality of benchmark data improves
Develop costed business plans for NZC	On track	Complete for 53% of European AUM that is in scope and 56% of Asia Pacific AUM
for all buildings		Desktop NZC cost tool has been developed allowing an assessment of the investment required to achieve net zero carbon prior to due diligence
		In the U.S., work to develop sector NZC roadmaps for primary sectors is complete, allowing NZC strategies to be layered into business planning
NZC potential assessed in buy/hold/sell decisions	On track	Net zero carbon potential incorporated into investment committee strategy reviews on standing portfolios
		• In the U.S., NZC potential will be evaluated across funds with NZC targets, with a focus on standing portfolios. Market timing will dictate when NZC potential should be systematically incorporated into buy and sell decisions, however, transition risk exposure is already incorporated into acquisition and annual budgeting considerations.

¹ Energy intensity is defined as energy use in kwh per square meters. Refer to Verification statement in the Appendix for details on independent verification of energy data.

² Carbon intensity is defined as greenhouse gas emissions in kgC0°e per square meters. Refer to the Verification Statement in the Appendix for details on independent verification of carbon data.

Our 2025 milestone execution and planning, continued

Renewable energy

Assess potential for on-site solar across portfolio	On track	 73% of the European portfolio and 53% of Asia Pacific has been assessed In the U.S., solar feasibility assessments across all assets owned as of YE2023 was initiated and due to be completed by end of H1 2024 	
Renewable Power Purchase Agreements (PPA)	On track	Power Purchase Agreement in place for a U.K. strategy. Plan to undertake detailed PPA assessment across Pan-European office portfolio	

Commercial real estate debt

Assessment of NZC potential for debt portfolio	On track	We are coordinating with industry associations to develop an industry consensus on treatment of carbon emissions for debt investments
Borrower engagement	On track	 In the U.S., we continue to issue sustainability surveys to understand approach to monitoring and reporting on carbon data and if there are credible firm-level commitments to net zero carbon Participation in industry green lending working groups seeking to align our strategy with industry best practices In Europe, we have made €1.3B of green loans to date. These include provision for data sharing and clauses requiring sustainability certification First green loan executed in Asia Pacific portfolio for a development project in Australia

Development

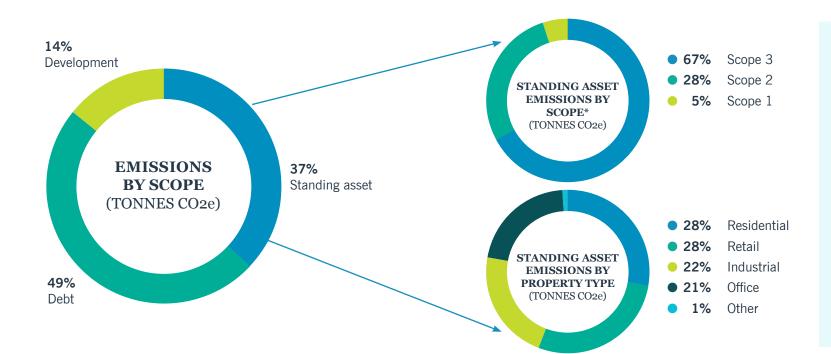
Net zero development framework (incorporating design for performance process with target operational EUIs established in Europe)	On track	 Net zero carbon incorporated into sustainable development brief and forms part of negotiations, including whole-life carbon analysis for Europe A global working group is adapting the European framework to make it relevant and roll it out to Asia Pacific and the Americas. This is expected to be complete by end 2024 Design for performance standards which require projects to meet certain energy targets are incorporated into sustainable development framework across Europe and will be incorporated into global Sustainable Development framework 	
Benchmark embodied carbon for construction activities and establish targets	On track	 Embodied carbon targets being developed as part of the Sustainable Development framework Embodied carbon assessments performed for certain development projects in Europe and Asia Pacific 	





Our 2019 baseline global carbon footprint

The path to net zero carbon must start with an understanding of the current carbon footprint. This involves identifying the sources of carbon emissions and collecting the appropriate data. We have undertaken an exercise to establish our 2019 carbon footprint. This involved a high degree of estimation — particularly for the debt portfolio and development activity. Wherever possible, actual energy consumption data has been used with regional and asset-class-specific benchmarks used to estimate consumption where no data was available. Regional emissions factors have been applied to convert consumption into carbon emissions equivalent (CO2e). Despite the reliance on estimation, the exercise has enabled us to understand how our carbon footprint breaks down across different business activities and which are most material. We will continue to refine the estimation methodology and replace estimated data with actual data wherever possible. By the end of our initial milestone period (2025) we will republish our baseline with tonnes of carbon alongside the percentage breakdown.



Since originally publishing the breakdown of our carbon footprint, we have improved the data inputs to give a more accurate reflection of the number of developments that were completed in the baseline year and we have also replaced some of the estimated data for the standing assets with actual data. This has resulted in a reduction in the proportion of these two segments. We have removed the corporate emissions altogether as these are now covered by TIAA's corporate NZC pathway.

We have a higher degree of certainty in the carbon footprint of our standing asset investment portfolio than in our debt and development portfolios, which are entirely estimated. We will continue to refine the estimation methodology and replace estimated data with actual data wherever possible. By the end of our initial milestone period (2025) we will provide a more comprehensive output which will also include tonnes of carbon alongside the percentage breakdown.

^{*}SCOPE 1 covers direct emissions from landlord controlled sources. SCOPE 2 covers indirect emissions from the generation of purchased electricity, steam, heating and cooling controlled by the landlord. SCOPE 3 includes all other indirect emissions that occur in a company's value chain, including emissions from energy procured by tenants directly from utility. BEES Energy consumption benchmarks. CBECS Energy consumption benchmarks. LEA Emissions factors. Circular Economy Embodied Carbon Footprint Database. UKGBC Guide to scope 3 reporting for development. Non-US assets/utilities that were not whole building were estimated using the BEES intensities by fuel. US assets/utilities that were not whole building were estimated using the CBECS intensities by fuel. IEA emissions factors were used to convert electricity consumption into carbon emissions. DEFRA emissions factors were used to convert US electricity consumption into carbon for the lifetime of developments were both used to estimate the carbon footprint for development. The carbon footprint is formulated using energy data that is independently verified per the Verification Statement in the Appendix. The carbon footprint once calculated using the energy data and emissions factors is not independently verified.

Sustainability at Nuveen Real Estate

Our approach to sustainability encompasses three pillars: environmental, social, and governance

Environmental ▶

Social ▶

Governance ▶









Climate risk in the investment process

Our sustainability risk management frameworks¹ sets the expectation of how certain ESG factors, determined to be material to real estate investment performance, are integrated into the Nuveen Real Estate investment process. Investment teams factor physical and transition climate risks into investment decision making by running downside scenarios and evaluating potential costs to understand the ability of the investment to achieve desired financial returns.

As part of the portfolio composition review, the investment teams utilise ESG dashboards to visualise and analyse portfolio exposure to climate-related risks. Asset teams review risk exposure annually as part of hold/sell analyses and identify opportunities for mitigation measures.

Furthermore, our Climate Risk Working Group (CRWG) is a critical internal steering body comprised of members representing a diversity of global business functions that assists in validating our approach. In 2023, we onboarded a new global physical climate risk provider, thus evolving our climate risk hazards and thresholds.

INVESTMENT PROCESS

SOURCING	Screen for future acute risk, chronic stressors and climate legislation in relevant market.	
UNDERWRITING	Understand how climate risks could impact returns, investment required to mitigate risks and comply with regulations.	
DUE DILLIGENCE Identify opportunities to improve efficiency and resilience.		
INVESTMENT COMMITTEE	Include climate risk analysis in investment memo for committee's consideration.	
ANNUAL Review climate-related impacts and compliance v local regulations.		



Our views on climate hazards

Our sustainability team reviews physical climate risk models to better understand the projected change in specific hazards, helping us to assess the vulnerability of an individual asset.

The assessment models multiple climate scenarios under different representative concentration pathways and extends across multiple decades. We use public and private data sources for a more granular assessment of asset exposure, focusing on the real-world impacts over the coming decades.

FLOODING

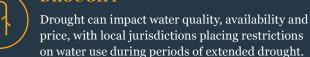
As the atmosphere warms, flooding from rainfall, river overflow and coastal storm surges, exceedingly extend beyond historical flood plains, and at greater depths. Flood events bring business interruption, loss of revenue for businesses, repair costs and affect insurability and liquidity. Buildings can be designed or retrofitted to be more resilient to flooding events and municipalities can invest in resilience strategies, such as flood walls and restoring natural barriers. However, market pricing will also reflect perceived future risk to the property, surrounding infrastructure, residential properties and the increasing costs associated with insurance.

WILDFIRE



larger and more intense, with a longer season. Although most assets are in densely populated urban areas less exposed to direct damage, wildfires can affect a broad region through soot and smoke. The impact on surrounding infrastructure and residential properties is also a potential risk to long-term value in regions affected by an increasing risk of wildfire.

DROUGHT



Many industrial and commercial processes use water as a solvent or coolant and are therefore sensitive to the cost and quality of the local supply.

TROPICAL CYCLONE/HIGH WINDS

Higher ocean surface temperatures fuel hurricanes and offshore storms with more water and power. These systems reach further inland and further north,

are more intense, and last longer. As a result, more buildings are threatened with damages from high winds, flying debris, and flooding. Older or smaller structures require costly adaptations to reinforce against these dangers. Damage to critical infrastructure and intense flooding often contribute to business downtime or even inhabitability in certain cases. Commercial assets can expect to see increased insurance costs, higher repair costs, and potential risk to long-term value in markets affected by increasing risk of tropical storms and high winds.

HEAT STRESS

Each of the last four decades has been successively warmer than any decade that preceded it since 1850.

Heatwaves have increased in intensity and frequency, and this trend is expected to become widespread. Compared to other types of physical climate risk, the impact of heat stress is easier to plan for but harder to insure against. For real estate, it brings increased cooling costs, landscaping challenges, equipment and facade degradation, and negative impacts to worker productivity, occupant comfort and overall quality of life in a region.



Risk analysis and resilience improvements

Our investment teams follow toolkits to evaluate potentially material climate-related risk.

Using these toolkits, investment teams model risk-adjusted returns with a better understanding of potential financial impacts and opportunities to mitigate risk through resilience adaptations.

HAZARD		FINANCIAL IMPACT	RESILIENCE MEASURES	
	Flood		 Elevated mechanical equipment Flood draining system Retention/detention ponds flood risks Municipal adaption strategies Flood proofing Onsite flood walls 	
ACUTE	Wildfire	 Direct building damage Business interruption Migration away from affected areas Insurance cost increase Limited access to insurance/ financing 	 Class-A roofing Noncombustible exterior Defensible space Dual-pane windows Ember-resistant vents Ignition-resistant construction materials Compliance with International Wildland-Urban Interface code Municipal adaption strategies 	
	Tropical cyclone/ Wind	 Liquidity due to buyer concerns 	 Built to fortified commercial high wind and hail or commercial hurricane design standard Shatterproof windows Storm shutters Steel or concrete frame 	
NIC	Drought	Building foundation damageIncreased water costsWater restrictionsWater main breaks	 Water-efficient technologies and conservation measures Building foundation inspection 	
CHRONIC	Heat stress	 Increased water costs Reduced HVAC¹ lifespan 	 Energy-efficient technologies and conservation measures Passive cooling strategies Solar PV shading/canopy 	



Environmental performance highlights

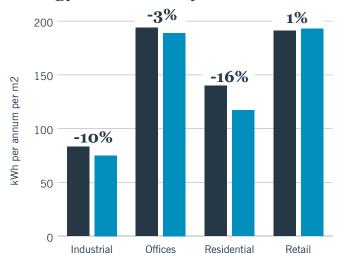
Expanded reporting coverage. Improved energy efficiency. Growth in renewable energy

	EMISSIONS ¹	2023 METRIC TONNES CO2E	YEAR-OVER-YEAR
DIRECT	Scope 1	199,529	-2%
INDIRECT	Scope 2	732,775	2%
INDIRECT	Scope 3	722,531	17%

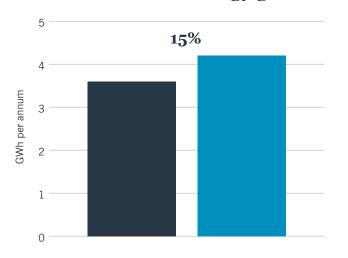
For the first time, we can report total carbon emissions across our entire equity portfolio, made possible through investment in our data estimation approach

We are pleased to report a **reduction in energy use intensity** across buildings that we have owned for at least a two-year period and for which we have actual data. We have also **increased on-site renewable energy generation.** The overall improvement in the energy efficiency of our investments contributes to reductions in carbon intensity and protects against increases in locations where grid carbon intensity is not reducing.

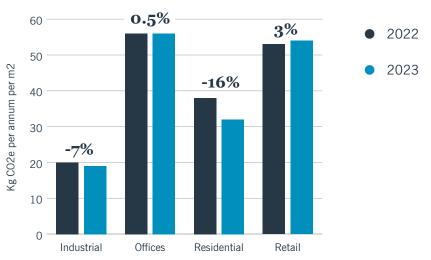
Energy use intensity



On-site renewable energy generated



Carbon intensity



Source: Nuveen Real Estate, Dec 2023. Scope 1 covers direct emissions from landlord-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. Carbon Intensity refers to emissions intensity, using whole building operational carbon (Scope 1, 2 & 3), divided by the landlord, renewable energy generated and consumed on-site by the landlord, and renewable energy generated and consumed on-site by the landlord, and renewable energy generated and consumed on-site by the landlord. Refer to the Verification Statement in the Appendix for details on independent verification of these metrics.

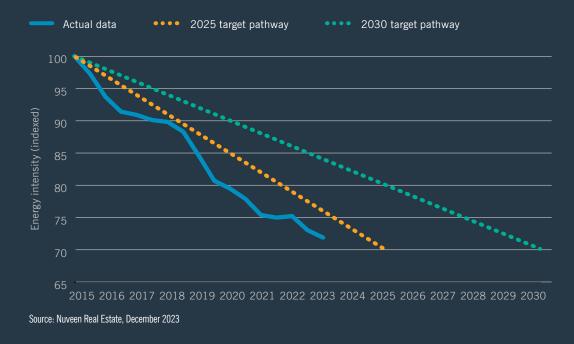
Our target to reduce energy intensity by 30% brought forward to 2025

In 2015, Nuveen Real Estate set a target to reduce the energy intensity of its global real estate equity portfolio by 30% by 2030. As part of our net zero carbon pathway we have brought this 30% energy efficiency target forward to 2025.

We are tracking well ahead of our 2030 target pathway which can be attributed to improving the efficiency of our existing buildings portfolio, while also developing and acquiring buildings that are performing ahead of industry benchmarks on energy efficiency. We expect to continue to see some normalisation in energy use as some of our buildings resume a normal occupancy and operations post-COVID. Meeting this target is our first step toward future-proofing the Nuveen Real Estate portfolio against transition risk and aligning our portfolio with the global movement to limit global warming as agreed in the Paris Agreement.

Progress against 2030 target

We have now brought our target achievement date forward to 2025 and made this goal one of the first milestones on our pathway to net zero carbon



Included in target scope





¹ This target applies to those assets in our portfolio where Nuveen has asset management control. It excludes assets where our role is purely advisory and also those assets in our Debt portfolios. For office buildings, whole building energy use is included, regardless of whether the cost for this energy is recovered directly from tenants. For retail and industrial properties, only common parts energy use is used. For multifamily properties, whole building energy use is included where we have it. Target progress is calculated using a weighted indexed approach. This means that similar properties are grouped together and are allocated a proportion of the index 'points' available based on the total energy use of that group. Reductions in energy use then reduce the total points. For example, if 10 points were awarded to European Offices and there was a 10% energy reduction in that group, that would result in a 1-point decrease. It is very difficult to put some buildings into a benchmark group as they do not share enough energy use characteristics with other properties. In this instance, these properties enter the index on their own and are compared only against themselves. This enables us to exclude less properties. Other reasons to temporarily exclude properties are if they are undergoing major refurbishments or are less than 60% occupied. Energy use is measured by kWh of "electricity equivalent" (kWhee) of whole building imported energy use per sq ft. The numerator is calculated by adding kWh of imported electricity to kWh of any imported fuel multiplied by 0.72 and kWh of imported hot or chilled water multiplied by 0.86 or 0.4 respectively. The 'kWhee' energy metric enables direct aggregations of building energy use and comparisons of efficiency across international property portfolios. The denominator represents the gross internal floor area of space to which Nuveen Real Estate supplies energy. Excludes data centre tenant energy consumption.

Using smart building technology to achieve energy efficiency

New technologies and smart building solutions have made it possible to use sensors, advanced metering and software platforms to collect and monitor energy usage and other data points on a real-time basis. We have engaged a smart buildings technology consultant to help us evaluate our current use of operational and energy management technologies in our U.S. office portfolio. We are especially focused on three categories of technologies:

- 1. Energy information systems that use real-time interval data to provide insights on building performance
- 2. Fault detection and diagnostics that sit on top of existing control systems and provide a more detailed level of analysis on equipment performance
- 3. Building automation systems that control comfort and operate critical systems, such as HVAC

We believe smart building technologies, like the ones referenced above, will be a critical part of our energy and carbon footprint reduction targets.



High energy performance

We utilise energy ratings such as ENERGY STAR, NABERS and EPC to verify energy performance meets industry standards and seek to achieve superior energy performance across our portfolio.

265 **buildings**

with high-energy performance demonstrated by ENERGY STAR, NABERS certification, or EPC ratings of A or B

High energy performance case studies



SADDLEBACK MEDICAL OFFICE BUILDING

Location: Laguna Hills, California, U.S. **Sector:** Medical Office Building Certification type: ENERGY STAR certified with a score of 96/100



183 – 185 CLARENCE STREET

Location: Sydney, Australia Sector: Workplace/Office **Certification type:** 5 Star Green Star Design & Construction, 6 Star NABERS Energy, 4 Star NABERS Water, WELL Health and Safety



LINE 28 AT LOHI

Location: Denver, Colorado, U.S. Sector: Residential

Certification type: ENERGY STAR certified with a score of 75/100



City Park

Location: Vienna, Austria Sector: Industrial

Certification type: DGNB Platinum



16 Colonial Way

Location: Watford, United Kingdom

Sector: Industrial

Certification type: BREEAM

Excellent, EPC A+



The Sans

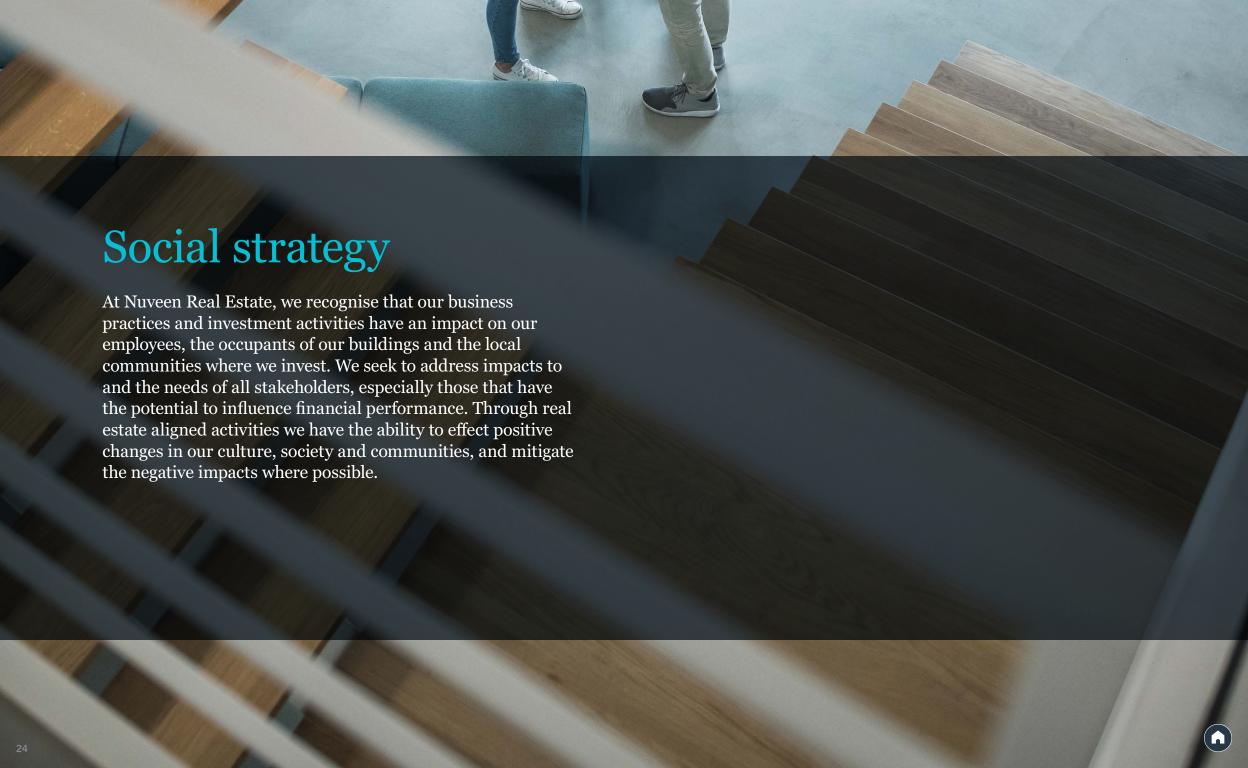
Location: London, United Kingdom

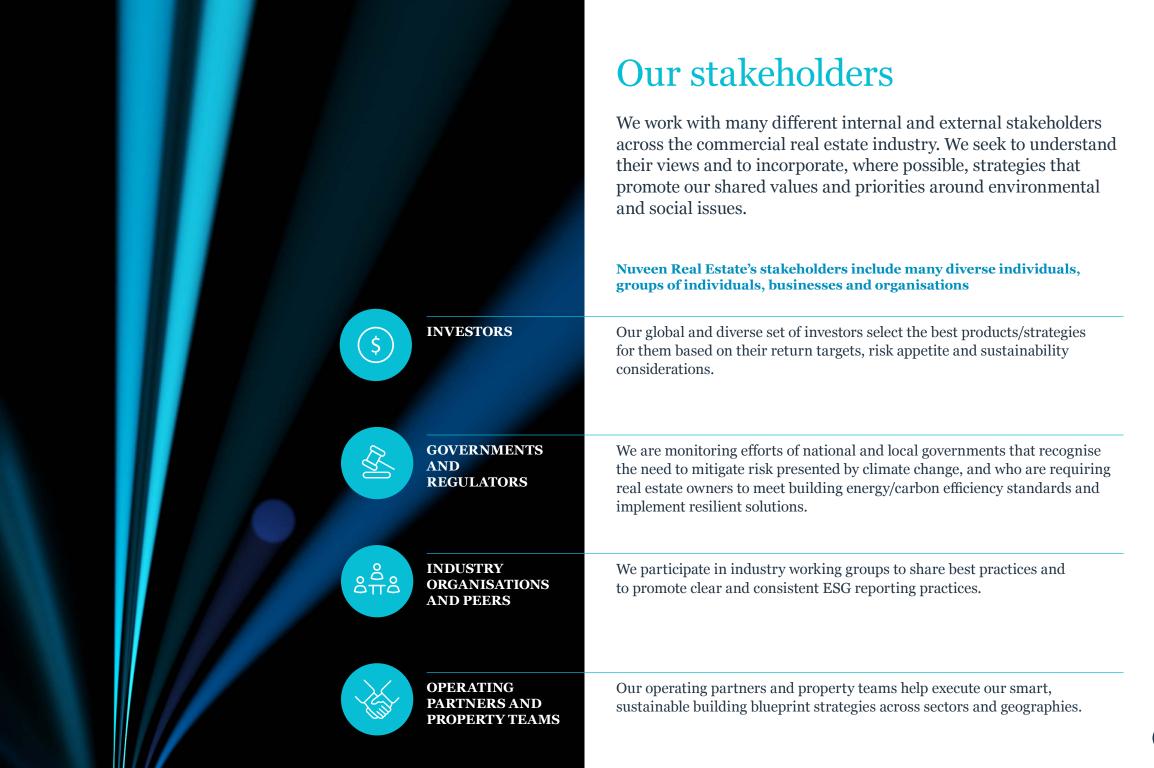
Sector: Office

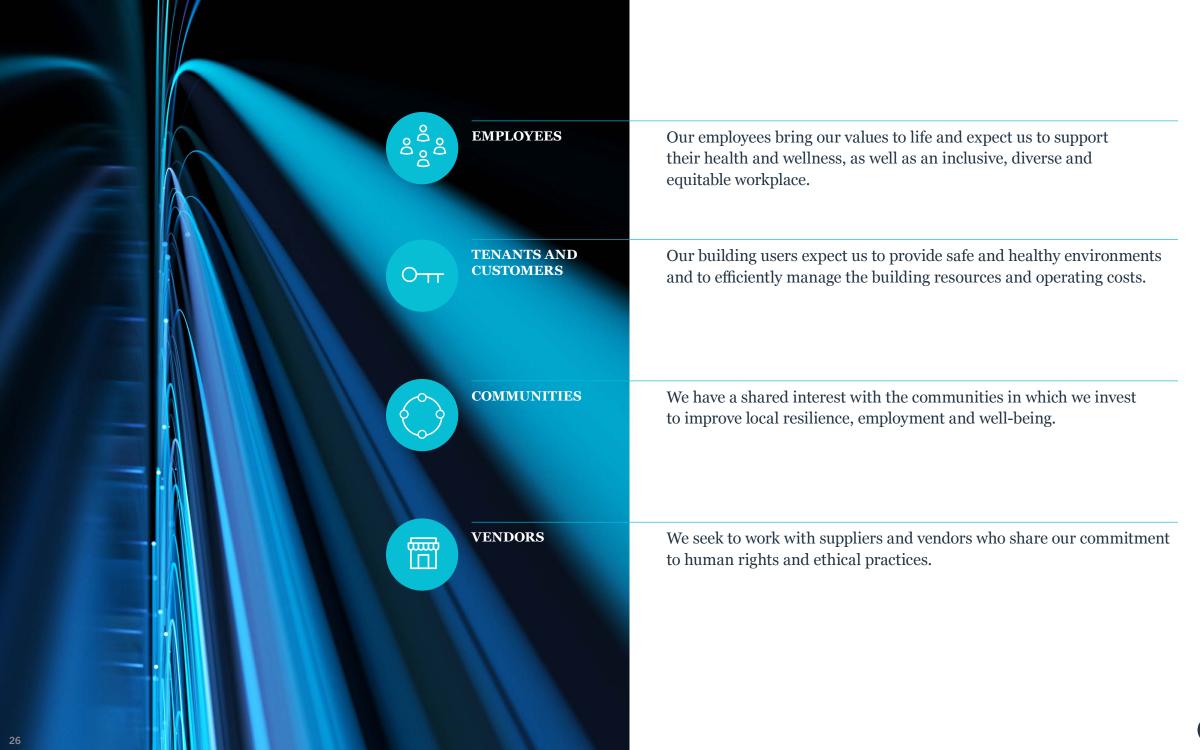
Certification type: BREEAM Excellent, EPC A, WiredScore Gold











Measuring and managing customer satisfaction

Maintaining open and collaborative communication with our building customers is key to understanding and meeting their needs. In 2023, we:

- Sent an annual tenant satisfaction survey to more than 3,500 tenant contacts across approximately 500 office, retail, medical office and industrial buildings in the U.S.
- Sent more than 45,500 resident surveys across approximately 137 apartment communities

Nuveen Real Estate works with our operators on annual tenant satisfaction surveys. Property teams are responsible for reviewing and analysing survey responses, summarising key takeaways in a property action plan and presenting that plan for consideration and incorporation into the asset business plan and budget.



These surveys include two types of questions:

- 1. Benchmark metrics, such as net promoter score (NPS), that help measure relative performance across portfolios
- 2. Tactical questions that help our property teams identify specific actions to take on-site to improve tenant/resident satisfaction

HIGHLIGHTS FROM OUR 2023 CUSTOMER SATISFACTION SURVEYS:

50% of our office assets won the 2023 Kingsley Excellence Award. To earn this, properties must exceed the Kingsley Index in overall satisfaction and have at least a 30% response rate.

Achieved a 55% average response rate across our office and medical office surveys.

The recently added sustainability section to our commercial surveys revealed the following:

- 70% of our retail tenants described sustainable building operations as important or very important
- Local community engagement, building resilience/emergency preparedness and water efficiency were identified as top sustainability priorities by our building occupiers



CASE STUDY

Industrious partnership

Based on the outstanding customer satisfaction and feedback achieved in the New York metro that was initially achieved using Industrious for community engagement, Nuveen Real Estate decided to scale its partnership nationally.

Throughout 2023, the partnership focused on laying the foundation across our workplace properties:

- **Brand:** Developed and rolled out Nuveen's consumer brand guide
- Hospitality & employee engagement: Created training for all customer facing employees to deliver exceptional service
- Tenant content & programmes: We created memorable opportunities to engage with tenants on a national level
- Data & analytics: Critical feedback mechanisms and data trackers to ensure the brand promise upheld

In 2024, Industrious is helping Nuveen Real Estate establish its Nuveen Network booking site, allowing tenants at Nuveen owned buildings the ability to book workspaces at more than 175 locations on demand.

Statistic spotlights:

- 1000+ events hosted across all Nuveen Real Estate office properties
 - 8,337 school supply items donated to Operation Homefront during July and August
 - 1000+ students supported as a result of school supply donations
- 100% of people coming into work have downloaded the Nuveen App, with 60% logging in on a regular basis
 - The tenant database grew from 3,000 contacts to 15,000 contacts across 15 properties
 - 15 teams are sending out weekly newsletters to their entire consumer database(s) not just tenant leads, and we are seeing an average 30% open rate (higher than 12% industry average)





Prioritising health and wellness of occupants

The buildings in which we live, work and spend our time have an impact on our health and productivity.



As of April 2024, we have achieved:

74
Viral response certifications

26
Multi-tenant base building office certifications

2Multifamily residential certifications





Fitwel, a leading certification system focused on human health and well-being. Nuveen Real Estate received one of Fitwel's 2023 Best in Building Health Special Recognition Awards:

Nuveen | Industry Leadership: ESG Impact Through Health

Nuveen has been recognized for leading the industry in advancing ESG through healthy buildings and prioritising occupant health, safety and well-being. "Nuveen and TIAA understand the importance of investing in spaces that provide safe, productive environments for our employees and occupiers. Doing so not only supports our building occupants, but also protects and enhances the value of our investments."



Chad Phillips Global Head of Workplace, Retail & Mixed-Use



Our view on housing affordability and impact

We recognise that a shortage of affordable housing options is an issue in the communities where we invest around the world and this is directly tied to rising economic inequality, which is a constraint on economic growth. Vulnerable populations worldwide have suffered disproportionate health and economic setbacks from the pandemic. Persistent social injustices — which are systemic in many cases — create the environment in which these disparities thrive.

Commercial real estate investors' ability to impact housing affordability goes beyond supporting those most in need. We know the low-to-moderate income earners are vital to keeping economies going and communities need a strong, diverse workforce. This demographic receives a mix of government subsidies and in some cases earns too much to be eligible for public housing programmes. We believe that by building diverse rental housing opportunities across all income levels, we are creating thriving communities that support strong real estate value creation across all sectors.

"We have been intentional about bridging our core competency in real estate with community impact. Our housing impact portfolio is dedicated to creating change by placing environmental and social impact at the heart of our investment strategy, which ultimately drives better outcomes for residents and inclusive communities while delivering a risk-adjusted financial return."



Pamela West

MD, Portfolio Manager

Affordable Housing Strategy

Investing across the U.S. affordable housing spectrum

Nuveen Real Estate is committed to investing to preserve affordability in housing across the globe, with dedicated housing impact investments in the U.S., including properties regulated by federal subsidy programmes; e.g., Low-Income Housing Tax Credit (LIHTC) as well as unregulated naturally occurring affordable housing (NOAH). We invest across the spectrum of affordable housing, achieving risk-adjusted returns through efficient management and responsible exits.

Rent-subsidised

Resiliency with strong cash flows

- **Federal subsidy:** Residents pay 30% of income towards rent and the remainder of the difference is funded through federal subsidies
- **Highly regulated:** Residents are sourced through housing agency and owners must comply with rules and regulations of HAP contracts
- Durable income/resiliency: Federal subsidy, averaging 70% of rental income, is paid monthly and on time with mark up to market (MUTM) rents throughout hold period
- Leverage: Up to 80% LTV with agency debt

Income-restricted

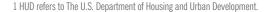
Long-term preservation with low exit risk

- **Regulated:** Residents must qualify at income levels below 60% AMI; compliance for deed restrictions and HUD¹ fair market rents
- Limited capital needs: Typically renovated within the last 15 years and only in need of light upgrades and green retrofits
- **Durable income/resiliency:** Rents are set by HUD against area median income for affordable housing and families with fair market rent annual increases
- Leverage: Up to 70% LTV with agency debt

NOAH

Preservation in high-growth corridors

- No subsidies, no regulations: Marketrate class B and C assets in emerging areas traditionally rented to residents earning less than 60% AMI
- **Light renovations:** Units typically require some light renovations between \$3k and \$5k to improve the quality of units and implement green retrofits
- **Durable income/resiliency:** Rents are maintained at affordable levels for residents with little displacement and low turnover
- \bullet Leverage: Up to 65% LTV with agency debt



Building a diversified portfolio across the U.S. through public private partnerships

162
direct affordable housing investments

\$5.7B

 $Impact\,AUM$

31,887

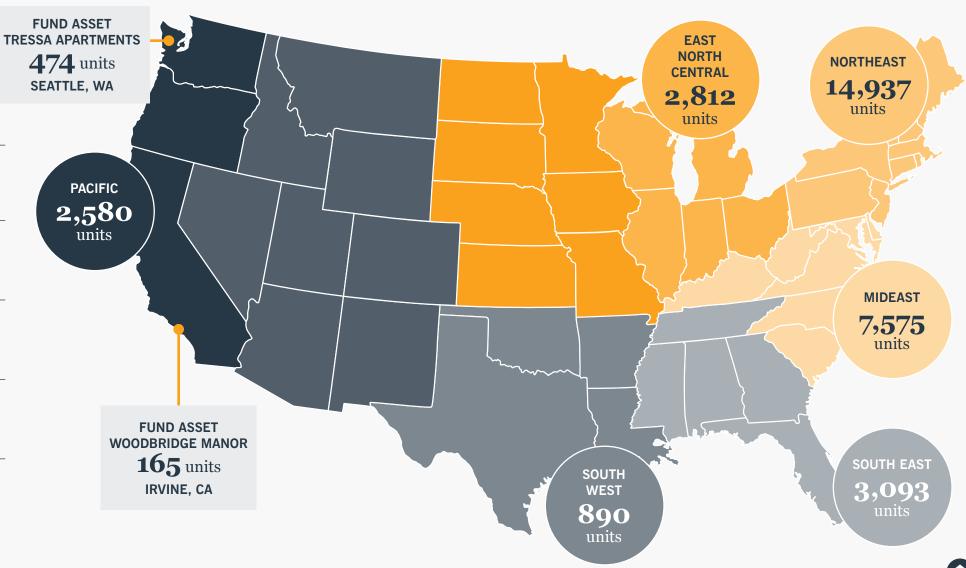
units

\$1,066

average resident-paid rent

47

MSAs



Source: Nuveen Real Estate, as of 31 Dec 2023.

Housing impact investment performance and impact results



95% deeply affordable¹

Nuveen Real Estate's affordable housing strategies in the U.S. focus on preserving housing that is affordable for those earning 60% or below of their area's median income (AMI). We call this deep affordability. Many properties we invest in are 100% deeply affordable, while others blend deeply affordable units with other units priced for higher-income residents earning up to 80% AMI. This dual approach enables us to preserve affordable units wherever they exist, and explains the diversification of affordable units in our portfolio over time.



92% properties with green improvements

We also focus on implementing green retrofits, benchmark and analyse utility performance, and identify energy and water savings opportunities across the portfolio. Through these retrofits, the team will look to capture both energy cost savings and lower our carbon footprint.



66% properties located in primarily BIPOC² neighborhoods

We are supporting a historically underserved resident base, both financially and socially. Using demographic data within a 1-mile radius of each of our properties, we find that we are reaching significantly more diverse neighborhoods than the national average of BIPOC neighborhoods at 41%.



88% properties with indoor community rooms, 87% with outdoor/green space

To create impact "beyond four walls", we create community resources, such as playgrounds, computer labs and business centers. By creating community outdoor-seating areas and fitness rooms, we aim to use our affordable housing strategically, as a platform for delivering additional services and promoting healthy living.



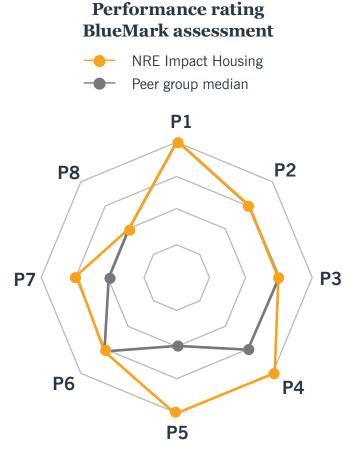
84% properties offering resident services and programmes

We prioritise enhancing and creating key physical design elements to improve residents' health and well-being and work directly with third parties and local community resources to deliver additional services, including on-site food distributions, preventative health screenings and educational workshops. We are also focused on supporting the financial well-being of our residents by engaging a firm to provide on-time rent payment credit reporting, ultimately giving residents improved credit, broader banking options and access to rent relief.

As signatories of Operating Principles for Impact Management, we have undergone third party verification

Nuveen Real Estate engaged
BlueMark, a leading independent
provider of impact verification
services to review and verify
its impact measurement and
management process. Nuveen
received 'high' to 'advanced'
scores for seven of eight operating
principles for impact management,
performing well above peers in the
real asset impact investing market.
This verification is conducted
annually to inform and enhance the
impact strategy, as well as identify
opportunities for improvement.

Operating principle	Nuveen Real Estate IMpact Housing Score
Setting and managing a strategic impact intent in line with	P1 ////
investment objectives	P2 ///
Assess the expected impacts of each investment, monitor	P3 ///
those impacts, and contribute to growing those impacts over time	P4
	P5
Monitor the performance of each investment, adjust appropriately	P6 ///
Ensure impact post-exit; review, document, and improve impact	P7 ///
processes	P8 //
ADVANCED HIGH	MODERATE LOW



CASE STUDY

Esusu

Nuveen Real Estate is furthering the firm's social impact efforts through a partnership with Esusu, a leading financial technology company leveraging rent reporting for credit building.

The aim of the partnership is to provide rent reporting for residents living in Nuveen Real Estate's affordable housing properties at no cost to residents. This model enables many residents to establish a credit identity, boost credit scores and increase financial health overtime. Through Esusu, residents also have access to 0% interest, no penalty rent relief microloans, which provides support and increases housing stability for residents experiencing financial hardship while also helping properties reduce turnover and improve collections. Nuveen Real Estate aims to bring credit reporting and rent relief services to all properties to enhance resident well-being across the portfolio.

CREDIT IMPROVEMENT

- Partnership enables residents at select properties to report on-time rent payments to three major credit bureaus
- Over 6,700 residents across 4,300+ units are enrolled
- Average credit score increase is +46 points

FINANCIAL IDENTITY

- This partnership helps residents establish a financial identity and increases financial health
- 982 residents established credit for the first time
- 65% of residents improved their credit score after enrollment

HOUSING STABILITY

- 0% interest rent relief programmes available for all residents experiencing financial hardship
- 150+ residents have received close to \$260,000 in microloans paid directly to properties, preventing eviction



CASE STUDY

Community Solar

Nuveen Real Estate has launched a community solar pilot programme at three properties in Massachusetts in collaboration with Perch Energy (Perch), a clean energy technology platform and community solar servicer that connects solar developers with consumers.

Community solar projects are locally built clean energy projects that are connected to the electrical grid and serve to replace energy from fossil fuels, thereby lowering carbon emissions and pollution. Residents in the pilot properties can easily sign up and subscribe to a local solar project with no upfront cost, and then receive energy credits off their electricity bills, reducing what they owe their utility company by 10-20% and supporting strategies that help combat global warming. Importantly, community solar does not require on-site installation, thereby expanding its access to affordable housing residents and other renters. On average, residents who participate in the programme are expected to save \$80 to \$160 each year and additionally receive an initial \$75 for signup. In the first quarter of the pilot, across the three properties, up to 20% of residents have signed up for participation. In addition to resident savings, properties can save up to \$3,000 annually for common areas. These savings can then be utilised to support other services onsite that enhance resident well-being or sustainability. Nuveen Real Estate is actively exploring opportunities to expand reach at the pilot properties, as well as to scale this service to other properties in the portfolio.

- No cost to access discounted solar energy at 3 pilot properties
- Residents save \$80 \$160 each year + an initial \$75 for signup
- \$1 3K annual savings for common areas (per building)



Engaging with our supply chain

We recognise that social factors are an important consideration in the selection of vendors that we work with in the management of our real estate investments. Our procurement process prioritises working with vendors that reflect our own values and offering the opportunity to support diverse businesses and create more inclusive communities where we invest.

WORKING WITH DIVERSE SUPPLIERS (U.S.)

- Monitoring spend with diverse suppliers. Property managers are encouraged to include diverse and diverse-compliant suppliers and/or responsible contractors to the list of vendors being considered
- Nuveen Real Estate requires the diversity status of all vendors to be recorded in a property accounting system in the U.S. seeking to benchmark spend with diverse suppliers and set goals for yearover-year improvement through intentional engagement with diverse suppliers

WORKING WITH RESPONSIBLE CONTRACTORS

Nuveen Real Estate has a deep interest in the condition of workers employed by independent contractors engaged directly or indirectly by our business. We have developed a responsible contractor policy that supports and encourages fair compensation, represented by wages and benefits, for workers employed by our independent contractors and subcontractors, subject to fiduciary principles concerning duties of loyalty and prudence, both of which further require competitive, risk-

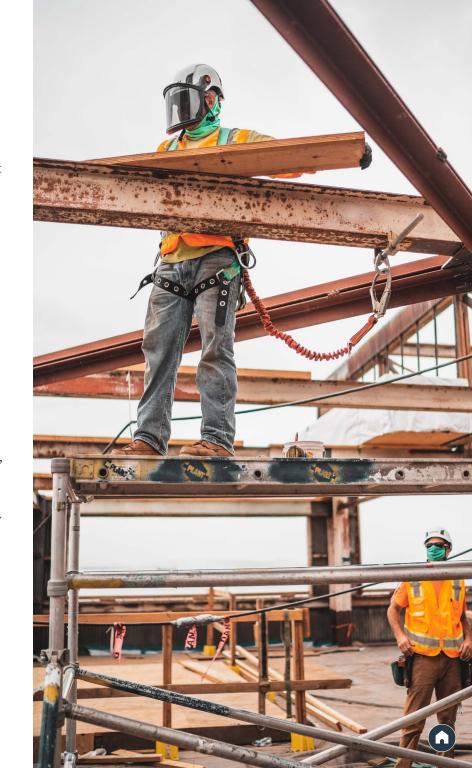
adjusted returns on real estate investments. We believe that an adequately compensated and trained worker delivers a higher quality product and service and we attempt to hire responsible contractors whenever possible.

HUMAN RIGHTS AND ETHICAL PRACTICES

We strive to be an engaged, influential and active corporate citizen. We approach this by staying true to our values and by maintaining good governance standards and processes at the corporate, fund and asset level.

Various firm-wide and regional policies are in place across the business to ensure compliance with laws and regulations and to ensure our values on ethical matters are understood by our employees. These include policies on anti-bribery and corruption, whistleblowing, health and safety, engagement of suppliers and employment policies and procedures, in relation to equal opportunities/diversity, recruitment, health and safety and employee behavior.

We continue to review the current policies, procedures and training initiatives for our business to ensure that they fully reflect our commitment in relation to human rights and ethical practices. Within these policies, requirements exist regarding measures taken to avoid or mitigate risk, such as due diligence procedures, supplier education and policies, standard contract language and avoidance of high-risk regions.



Diversity, equity & inclusion (DEI)

Focus on DEI in real estate

At Nuveen Real Estate, we are focusing on how to impact DEI in our own business and at the properties where we invest. Here is a summary of our areas of focus:

Partner with local high schools, U.S.
HBCU (Historically Black Colleges and
Universities), and DEI organisations in many countries
to build awareness and create diverse pipelines
through training, mentorship and job readiness.

RETENTION AND DEVELOPMENT OF CURRENT STAFF

Provide professional development opportunities, mentorship, training and sponsorship to grow and retain diverse talent. Our Women in Nuveen (WIN) programme develops and supports female talent at every stage of their careers through career management, leadership and visibility.



EXTERNAL ALLIANCES

Partner with a global ecosystem of nonprofit organisations and industry alliances to enhance professional development, networking, recruitment and DEI best practices.



METRICS AND ACCOUNTABILITY

Establish individual, team and business level aspirational goals to align with Nuveen's efforts to measure and assess DEI progress.



SUPPLY CHAIN DIVERSITY

Ensure our vendors and third-party demographics match our DEI principles.

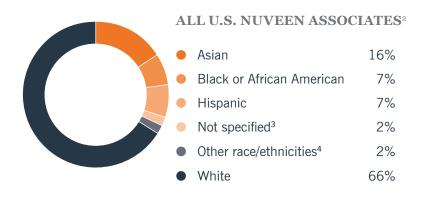


CULTURE AND INCLUSION COUNCIL

Nuveen's Culture and Inclusion Council is a cross-functional team that drives integrated strategies to advance and measure the impact of Nuveen's highest culture priorities.

Our global business

	FEMALE	MALE
ALL GLOBAL NUVEEN ASSOCIATES ¹	37 %	62 %
GLOBAL INVESTMENT PROFESSIONALS	28 %	72 %







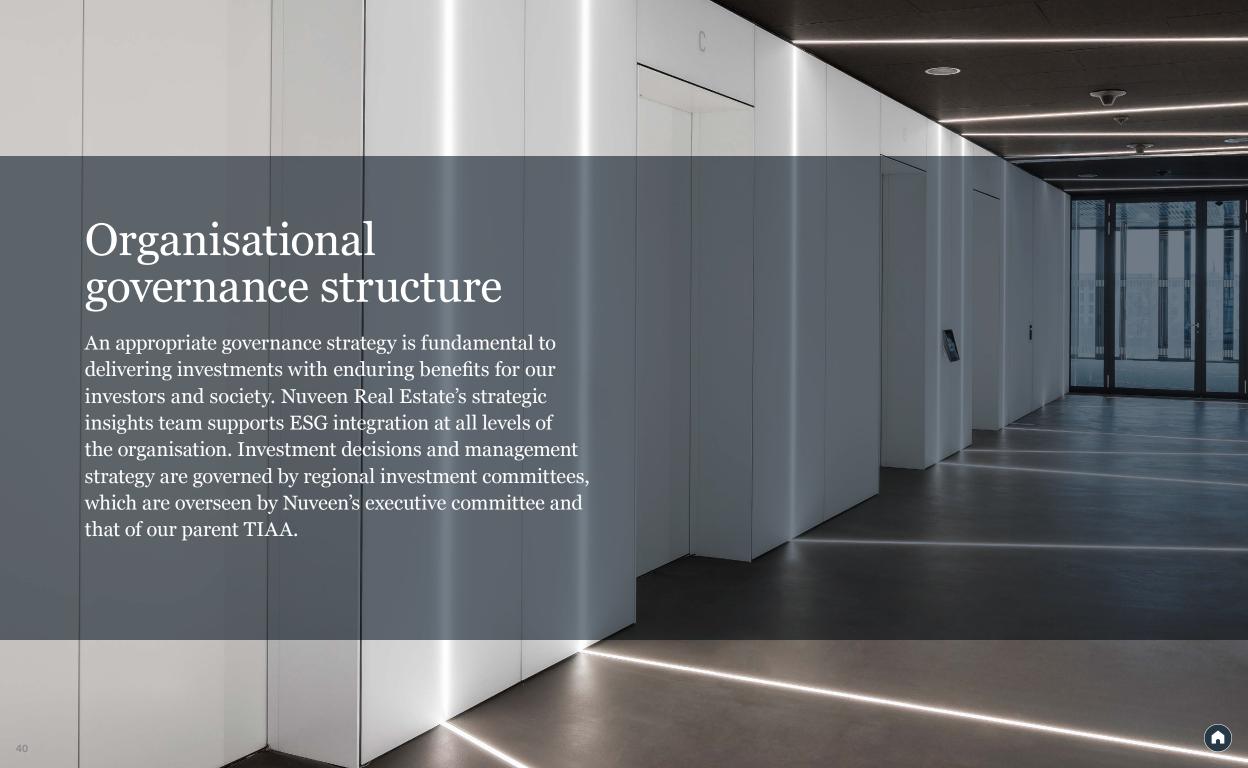
¹ Figures apply to Nuveen global associates as of July 2023.

² Figures apply to Nuveen U.S. associates as of July 2023.

³ Not specified includes associates who prefer to not identify.

⁴ Other Race/Ethnicities includes American Indian or Alaska Native, Native Hawaiian or other Pacific Islander and two or more ethnicities.





Our parent company, TIAA

TIAA's core purpose is to provide secure retirements through lifetime income for millions of our clients, meaning we have always focused on positive long-term outcomes.¹ We view climate risk as a type of investment risk. Executing our fiduciary duty to protect our clients' capital requires full understanding of the implications of a changing climate, as these dynamics have an impact on the expected financial productivity, growth prospects and value of issuers and assets in which we invest. To do our part, we are prioritising our work to be prepared for a low carbon future and continue to drive progress through our existing commitments:

- TIAA General Account (the insurance investment account that supports the flagship TIAA Traditional annuity): Net zero by 2050
- Nuveen Real Estate: Net zero by 2040
- TIAA corporate operations: Net zero by 2040

1 Any guarantees under annuities issued by TIAA are subject to TIAA's claims-paying ability



For more information read the 2023 TIAA Climate Report

"We view climate risk as investment risk."



Thasunda Brown Duckett
President and CEO
TIAA, Nuveen's parent company



Governance structure

TIAA Executive Committee and Board

Nuveen Executive Committee

Nuveen Alternatives Regional Regulated Boards

Nuveen Real Estate Global Executive Leadership Team

Regional Investment Committees

Regional Operational Committees

Delegated authorities

Portfolio Management

Investment Teams

Property Managers and Operating Partners



Our strategic insights team supports ESG integration across all levels of Nuveen Real Estate to ensure alignment with the broader company's ESG strategy



ESG integration in the investment process

To successfully deliver on our objectives, we believe it is critical that ESG is fully integrated into our end-toend investment process. We achieve this through both our top-down tomorrow's world investment strategy and bottom-up asset-level implementation. The checks and balances at the different stages of our process support our teams in executing our ESG integration strategy.





Adopting good governance practices to execute on our ESG strategy

Articulate strategic ESG objectives that support the firm's tomorrow's world vision

Prepare policies and procedures that govern ESG activities across the business

Advise fund ESG strategies to align investments with client expectations

Provide sustainability training for leadership and investment teams

 $^{1 \; {\}sf SSBB: Smart, Sustainable Building Blueprint} \\$

² KPIs: Kev Performance Indicators

Smart, sustainable building blueprint





SMART, SUSTAINABLE BUILDING BLUEPRINT

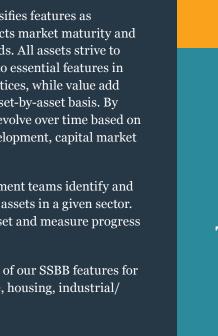
To bring our tomorrow's world vision to life, Nuveen Real Estate has developed a smart, sustainable building blueprint (SSBB) for the different real estate sectors it invests in. Each sector-specific SSBB takes into account the three key drivers of change in tomorrow's world: sustainability, technology and people.

Each blueprint categorises building features or operational best practices based on the area of building performance being addressed, the expertise required to implement cost-effective solutions and the relevant stakeholder set.

Each sector's SSBB framework also classifies features as essential, value add or pilot, which reflects market maturity and Nuveen Real Estate's operating standards. All assets strive to incorporate programmatic approaches to essential features in asset business plans and operating practices, while value add and pilot features are assessed on an asset-by-asset basis. By nature, how features are classified will evolve over time based on consumer sentiment, technological development, capital market demand and local market dynamics.

The SSBB is a tool that helps our investment teams identify and prioritise implementation strategies for assets in a given sector. It is also a framework within which we set and measure progress towards operational goals.

The following brochure illustrates some of our SSBB features for the workplace/office, retail & mixed-use, housing, industrial/logistics and alternatives sectors.













Tenants and community



Leasing



Data and digitalisation



Health and wellness



Explore our SSBB brochure here



Highlights of the SSBB in 2023

Measuring progress against the SSBB framework is crucial in assessing the overall environmental impact of the building to gain a holistic understanding of how the asset is performing. Properties are surveyed annually to measure progress towards operational goals set in the SSBB. Results are shared with stakeholders to assess and identify areas for improvement and support decision making.

Performance metrics reported reflect information available from assets held in the portfolio as of 31 December 2023.

86% of properties across all sectors have LED lighting in common areas. Light-emitting diode (LED) is today's most energy-efficient and rapidly developing technologies.

62% of office properties have automated lighting controls in tenant space. Automated lighting

of properties across all sectors have completed Tenant Satisfaction Surveys. Maintaining open and collaborative communication with our building customers allows us to identify areas for improvement and make informed decisions to enhance the performance of properties.

contributes to energy efficiency through adjusting

settings based on occupancy or time schedules.

of multifamily properties have xeriscaping in place or approved for implementation. Xeriscaping is the process of landscaping that reduces or eliminates the need for irrigation.

multifamily properties have smart units in place. Smart unit criteria includes smart thermostats, locks, light switches and leak detectors.

industrial properties have upgraded to cool roofs. Cool roofs are a passive design strategy that focuses on reducing heat absorption by reflecting more sunlight compared to traditional roofing.



SMART, SUSTAINABLE BUILDING BLUEPRINT

Bringing SSBB to life

PICTURED: 16 Colonial Way, Watford

INDUSTRIAL/LOGISTICS

Energy

- Net zero carbon aligned building
- Achieved EPC A+ (-10) rating
- LED lighting with daylight harvesting
- Replaced gas with air source heat pumps
- Installed solar panels

Water

- Water efficient sanitary appliances
- Taps with timers
- Low flow shower head and basin taps
- Low flush volume toilets

Waste

- Reused existing windows and frames
- Salvaged existing façade cladding

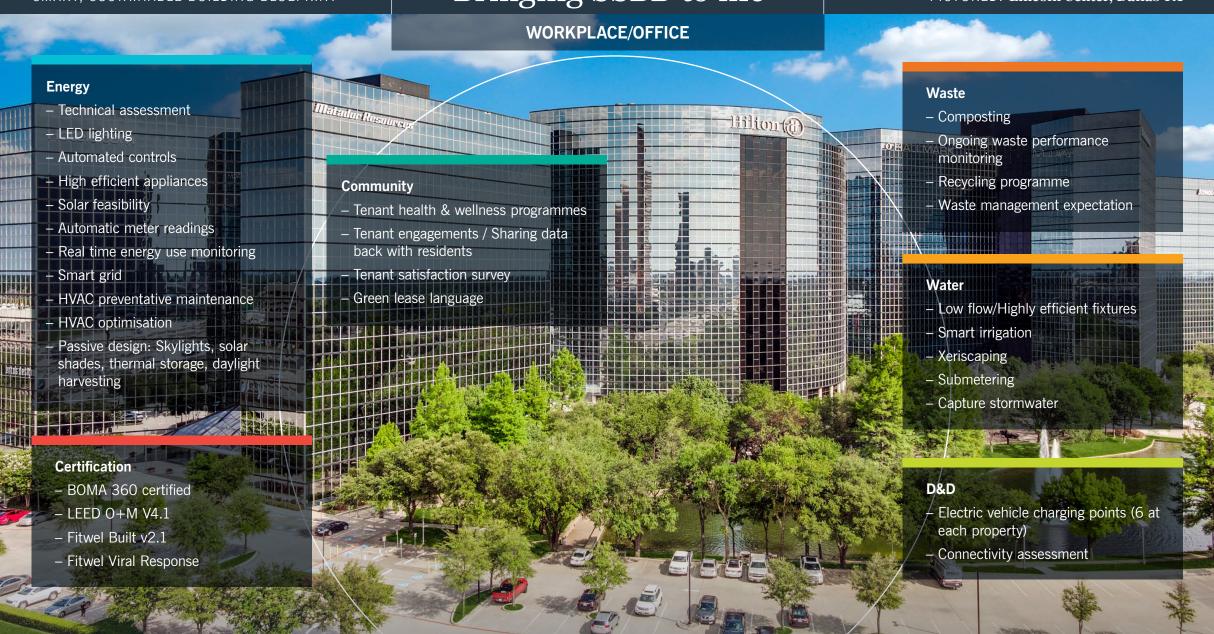
Community

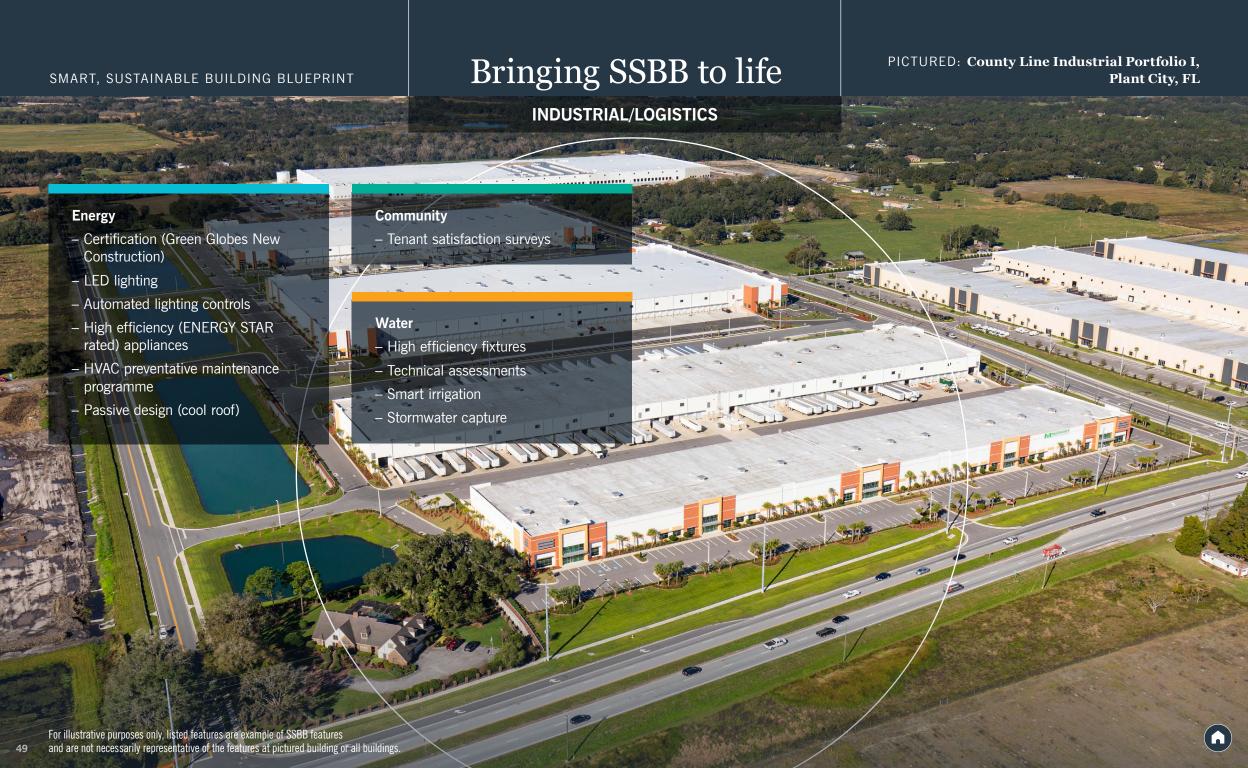
- Electric vehicle charging points
- Cycle storage (with green roof) and shower facilities
- Bird boxes and insect hotels

SMART, SUSTAINABLE BUILDING BLUEPRINT

Bringing SSBB to life

PICTURED: Lincoln Center, Dallas TX





Appendix

Biographies ► Task Force on Climate-related Financial Disclosures (TCFD) ►

Detailed metrics tables ▶





Abigail Dean Global Head of Strategic Insights, Nuveen Real Assets

Abigail Dean is the Global Head of Strategic Insights for Nuveen Real Assets. In this role she is responsible for the organisation's global sustainability, proptech and research functions. The Strategic Insights team work closely with colleagues across investment, product development, compliance, risk and investor relations to ensure that our investment strategies in Real Estate, Infrastructure and Natural Capital are underpinned by an understanding of global megatrends and that ESG is integrated into fund and asset management.

Since joining Nuveen, Abigail has overseen the organisation setting a target for the Real Estate business to achieve net zero carbon by 2040. This commitment responds to and supports the ambitious goals for sustainable real estate established at the 21st annual Conference of Parties (COP21) held in Paris in September 2015. Abigail is a member of both the Nuveen Real Estate and the Nuveen Real Assets Executive Leadership Team and has spearheaded the integration of sustainability considerations into the investment process. She is also leading the organisation to develop investment guidelines related to physical and transition climate change risk, as set out in the Taskforce on Climate Related Financial Disclosure Framework.

Abigail joined Nuveen Real Estate in 2016. She previously worked at JLL, where she led on sustainability for the Property and Asset Management team in the U.K. and also held a Director role in JLL's sustainability consulting team, Upstream.

Abigail is passionate about driving sustainable change in Real Assets Investment and sits on several industry committees including the GRESB Standards Committee. She chairs the INREV ESG committee and is a Better Buildings Partnership Board Member.



Richard Hamilton-Grey Head of Sustainability, Europe

Richard oversees the sustainability programme across Europe. Richard develops and coordinates the integration of sustainability strategy across the investment management process, and advises fund and asset management teams on managing sustainability risks and capitalising on opportunities within their portfolios. Richard is also a member of Nuveen Real Estate's Investment Committee.

As part of the Strategic Insights team, Richard works alongside the organisation's global research, proptech and innovation functions. His role includes driving Nuveen Real Estate's tomorrow's world strategy which is designed to help future proof the investment strategy in light of global megatrends and integrates sustainability across fund and asset management.

Prior to joining Nuveen Real Estate in 2015, Richard was at Land Securities, responsible for energy management across office, retail and leisure portfolios. Prior to that, he was at the Institute for Sustainability where he managed a European-wide Responsible Property Investment programme.



Brittany Ryan Head of Sustainability, Americas

Brittany leads the sustainability programme for the Nuveen Real Estate Americas portfolio. She ensures sustainability considerations and processes are sufficiently embedded across business areas including product development, portfolio management, investment management, client reporting and governance. Brittany is a voting member of the Investment Committee.

Since joining the firm in 2018, Brittany developed an end-to-end climate risk acquisitions process providing investment teams with training and tools to factor physical and transition risk into investment decision-making. Additionally, she continues to support portfolio managers in crafting sustainability objectives to meet investor expectations for value preservation and market leadership.

Previously, Brittany supported the Principal Real Estate Responsible Investing programme as an account manager at RE Tech Advisors. She also supported 30+ major U.S. cities' energy management solutions through the U.S. Department of Energy Better Buildings Initiative. She has shaped several sustainability programmes, including those of Building Owners and Managers Association and Owens Corning.

Brittany holds a Master of Public Policy from the University of Maryland, specialising in Environmental Policy and a B.A. in Environmental Studies from Ramapo College of New Jersey. She is a Fitwel Ambassador and a Fundamentals of Sustainability Accounting Level II Candidate. Brittany participates in several industry committees including Real Estate Roundtable SPAC, NAREIM Sustainability and ULI Greenprint.





Allison Kirby
Director of ESG Reporting & Disclosure,
Americas

Allison Kirby is the Director of ESG Reporting & Disclosure at Nuveen Real Estate. She leads external reporting efforts, industry framework alignment and strategic optimization of the reporting process.

Prior to joining Nuveen Real Estate in 2023, Allison was the Associate Director of ESG at Cushman and Wakefield leading the launch of advisory and reporting services for investor clients across the Americas. She has eight years of consulting experience driving ESG performance improvements for real estate clients with distinct experience in GRESB reporting and ESG strategic planning.

Allison holds a B.A. in Environmental Studies from Ramapo College. She is a GRI Certified Sustainability Professional.



Mark Cameron Head of Sustainability, Asia Pacific

Mark is Head of Sustainability, Asia Pacific at Nuveen Real Estate. Based in Hong Kong, he is responsible for the implementation of the firm's tomorrow's world strategy, integrating climate risk in the investment process and delivering on Nuveen's 2040 net zero carbon commitment for the region. Mark is a member of the Nuveen Real Estate's Asia Pacific Investment Committee.

Prior to joining Nuveen, Mark was Head of Energy & Sustainability Services, Asia Pacific at JLL. Previously, he held regional leadership positions with global engineering design consultancies Arup & Buro Happold. Based in Hong Kong for the past 12 years, Mark has previously resided in Germany and the U.K.

Mark holds a Bachelors in Building Services Engineering from Glasgow Caledonian University and a Masters module in Economics from Imperial College London. Mark sits on the ANREV ESG committee.



Amy Craik Senior Associate, SSBB Programme Manager, Americas

Amy is responsible for Nuveen Real Estate's United States Smart, Sustainable Building Blueprint (SSBB). She works with sector teams, operating partners, and property managers to implement and measure the priority sustainability, technology, and community building features across the Nuveen Real Estate portfolio.

Prior to joining Nuveen in 2021, Amy was a Project Manager for Turner Construction in Oakland, CA. She has experience managing large groups of stakeholders and evaluating solutions for asset level implementation. She has developed subject matter expertise in MEP, Design-Build and tenant improvements.

Amy graduated with a B.A. in Sustainable Environmental Design, with a minor in Urbanism in Developing Countries from the University of California, Berkeley. She holds Fitwel Ambassador, LEED Green Associate and WELL AP accreditation.



Anna Weingord
Sustainability Analyst,
Americas

Anna supports Nuveen Real Estate's tomorrow's world sustainability platform in the United States. She focuses on supporting asset and property management teams in achieving long-term ESG targets and facilitates collaboration between internal teams and external consultants.

She is an experienced energy and sustainability researcher with particular knowledge in climate policy, real estate and carbon tracking. She began her career at Urban Green Council as a researcher identifying and executing studies that reveal industry trends and influence building design. She performed analysis for two NYC Energy and Water Use Benchmarking Reports and convened focus groups of city, state and private sector building professionals for NYSERDA contracted reports. Anna's previous professional experience also includes projects at the Brooklyn Navy Yard, Building Energy Exchange, and Greenpeace Australia Pacific.

Anna graduated with a B.A. in Economics and Environmental Analysis & Policy from Boston University. She is a LEED AP with a specialty in building design and construction.



Ellie Awford Senior Associate, Sustainable Asset Management Lead, Europe & Asia Pacific

Ellie is the Sustainable Asset Management Lead in the Sustainability team. She was previously Senior Asset Manager for St James Quarter in Edinburgh and the UK Retail Warehouse Fund. While in the retail team, Ellie was the sector lead for sustainability. Her role includes driving forward the coordination and execution of strategic asset management initiatives, with a focus on net zero carbon.

Prior to joining Nuveen Real Estate in 2019, Ellie was an asset manager at Legal & General Investment Management. She has held previous roles in investment at Morgan Williams and Knight Frank.

Ellie studied Land Economy at Cambridge University. She is also a member of the Royal Institution of Chartered Surveyors.



Linda Livingstone Associate, Sustainable Investment Insights, Real Estate

Linda, in her role as Nuveen Real Estate's Sustainable Investment Insights Associate, ensures comprehensive sustainability reporting for the organisation and its funds to align with requirements from GRESB, TCFD, INREV and SFDR. Additionally, she is spearheading the development of strategies to streamline and ensure the accuracy of data reported to investors, leveraging her expertise cultivated at S&P Global in sustainable analytics for financial institutions and non-financial corporates. Prior to her tenure at S&P Global, Linda contributed to global sustainability efforts as a Policy Analyst at the OECD, focusing her publications on mitigating plastic pollution and policies that can foster a more resource-efficient economy.

Linda holds a B.A. in Business Administration from the University of St. Gallen and an MSc. in Energy Management from ESCP Business School, both earned with honors.



Sadaf Salehi Sustainable Portfolio Management Lead, Europe & Asia Pacific

Sadaf is the Sustainable Portfolio Management Lead for the Strategic Insights team at Nuveen Real Estate. She oversees the delivery of Nuveen's ESG programme across its real estate portfolio in Europe and Asia Pacific, advising investment teams on ESG performance and developing improvement pathways that informs the firm's business planning and fund strategy.

Prior to joining Nuveen in 2021, Sadaf led the Research and Development teams at Firstplanit, a U.K. based startup that provided automated sustainable design consultancy services for residential renovation projects. She began her career in 2018 as a project engineer at Omrab Canada Inc., where she worked on the design and delivery of water and wastewater treatment projects across MENA countries, from concept to completion.

Sadaf graduated with a B.Eng. in Architectural Conservation and Sustainability Engineering from Carleton University and an M.Sc. in Environmental Design and Engineering from University College London. She holds BREEAM Associate, Fitwel Ambassador and LEED Green Associate accreditations.

Appendix — Taskforce on Climate-related Financial Disclosures (TCFD)

PILLAR	TCFD RECOMMENDATIONS	ACTIVITIES	ADDITIONAL REFERENCES
Governance	a) Describe the board's oversight of climate-related risks and opportunities.	Nuveen, its affiliate, Nuveen Real Estate, and its regulated entities have an explicit focus on the integration of sustainability risk across their respective portfolios. This includes approving the Sustainability Risk Management Framework ("the Framework") and monitoring Nuveen Real Estate's management team's approach to providing adequate expertise and resources required for the implementation and oversight of identified ESG-related risk and meeting Product ESG-related objectives.	Additional details can be found in the firm TCFD report (link here)
		Nuveen Real Estate is an active member of the TIAA/Nuveen Net Zero Carbon Steering Group, set to oversee the TIAA General Account's commitment to net zero by 2050.	
		Formal oversight of climate risk at the Enterprise Level includes the following committees.	
		 TIAA Corporate Governance and Social Responsibility Committee TIAA Investment Committee 	
		TIAA Risk and Compliance Committee	
		 TIAA-CREF Fund Complex Investment Committee Nuveen Funds Board Oversight 	
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	The Global Executive Leadership Team sets firm-wide strategy and goals related to ESG performance and resource allocation, reviews business-wide reports on ESG and climate risk exposure, and hosts quarterly Risk and Compliance Committee updates which include periodic updates on approach to climate risk and NZC pathway progress reports.	Nuveen Real Estate Statement on Responsible Investment (link here)
Governance		The Operating Committee (U.S.) and Investment Committee(s) play a central role in the oversight of the Framework and other ESG-related matters.	
		The ultimate decision on whether to invest and how to manage a given investment rests within the Investment Team (or its client), in accordance with Nuveen Real Estate's Authorisation Policy. This policy typically requires Investment Committee approval and adherence to other relevant company policies and procedures, in which liquidity, time horizon, pricing and anticipated financial returns are considered as part of the overall decision.	
	(a) Describe the climate-related risks and opportunities the	The transition to the low carbon economy will have a transformative impact on many industries over the next few decades. In the short to medium term, it is our view that transition risk and opportunity will have a more significant impact on real estate markets than physical climate change risk.	Risk analysis and resilience improvements page 18
	organisation has identified over the short, medium and long	Transition risk and opportunity will be particularly significant in Europe, where cities will not be as exposed to physical impacts as some other global locations and where there is strong engagement from governments, investors and business on this issue — meaning that policy risk, market shifts and technological innovation are	Smart, Sustainable Building Blueprint page 45
Strategy	terms.	all likely to move swiftly. In the U.S. this transition is expected to take place more swiftly in coastal-urban markets where there is a strong demand for climate action among residents and local government.	
		The physical impacts of climate change have significant potential to have direct financial impact on an asset as well as affect the demand for real estate, from tenants and investors, in a particular region or location, which could have a detrimental effect on real estate asset values.	(link here)
Strategy	(b) Describe the impact of climate- related risks and opportunities on the organisation's businesses, strategy and financial planning.	The direct nature of investment in real estate means that Nuveen has the ability to control the path to net zero carbon of these assets — this is why Nuveen Real Estate has developed a pathway to achieve net zero carbon by 2040. In the real estate industry, and among those that invest in it, there is a widespread acceptance that all buildings must be net zero carbon by 2050 if the goals of the Paris Agreement are to be achieved. At Nuveen we believe this means that buildings that are not able to achieve net zero carbon will start to lose value well before that date and the portfolio target is primarily aiming to protect value for our clients by mitigating transition risk.	
		We recognise that the physical impacts of climate change will affect real estate values and that it is critical to develop an understanding of how, where and when these physical impacts will become financially material to an individual investment's financial performance.	
		Our strategy includes defining the potential for direct impacts to income, operating costs and capital expenses and indirect impacts to investment value due to market-level changes resulting from increasing frequency and intensity of climate-related hazards.	

Appendix — Taskforce on Climate-related Financial Disclosures (TCFD), continued

PILLAR	TCFD RECOMMENDATIONS	ACTIVITIES	ADDITIONAL REFERENCES
Strategy	(c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Nuveen Real Estate is using industry frameworks, such as Carbon Risk Real Estate Monitor (CRREM) models, to measure exposure to transition risk. Our approach allows for flexibility to accelerate adoption of net zero carbon where market transition risk warrants. Our approach takes into account both the pace of global and local decarbonisation efforts as well as the acceleration in physical hazards due to global warming. Our strategy targets energy and carbon performance expectations based on a 2040 1.5 degree scenario as part of our NZC pathway implementation. We consider physical climate change through 2050 based on RCP8.5 due to the short-time frame, in climate change terms, where certain levels of warming, and associated hazards, are expected to be locked-in for the near term as efforts to reduce carbon emissions are underway.	
Risk	a) Describe the organisation's processes for identifying and assessing climate-related risks.	Nuveen Real Estate developed and implemented a Sustainable Risk Management Framework (the "Framework"), which outlines the investment risk procedure for considering sustainability risk throughout the investment process. The Framework provides an expectation of how climate risk factors, which have been determined to be material to real estate investment performance in certain regions or sectors, are integrated into the Nuveen Real Estate investment process. This includes consideration of climate risk factors in investment analysis, due diligence, monitoring, and portfolio construction and exit, which can enhance long-term investment value and help manage downside risk. Investment and portfolio management teams are responsible for evaluating the potential financial impact of ESG factors on investment and portfolio performance, while the Operating Committee (US) and Investment Committee(s) oversee compliance with the Frameworks and other ESG related matters.	Climate risk in the investment process page 16
		As part of transaction sourcing and annual asset planning, investment teams assess potential climate-related risks informed by physical risk models on the projected change in specific hazards against specific Representative Concentration Pathways (RCPs) and decades. NRE leverage the internal Climate Risk Working Group to develop an investment toolkit that outlines potentially material risk thresholds per different climate hazards, as well as associated guidance for evaluating potential financial impacts, mitigation measures and technical assessments. Our process provides portfolio management teams the information necessary to determine the potential impact of climate change on investment performance, as well as opportunities to mitigate identified risks in asset business plans.	
Risk	b) Describe the organisation's processes for managing climate-related risks.	Where a potentially-material increase in climate related hazards is identified, discussions between sustainability, investment, and portfolio management teams take place which include the consideration of downside scenarios or "stress test" as part of the decision to invest and the ability of the investment to achieve desired financial returns. If it is determined that there is potentially material financial risk, investment teams are required to seek Preliminary Investment Committee (IC) guidance which is intended to set expectations for the mitigation of risk when seeking final IC approval. Where risk is identified on existing assets, similar analysis is done as part of annual business planning. Management of climate risk requires extensive resources and focus from a cross-functional team across the organisation. At a high level, the work of this team, which combines first line of defense and second line of defense responsibilities, is to deliver, among other things, support for recommended pathways, a range of potential economic impacts on portfolio metrics (i.e., yield, quality and diversification) associated with these pathways, setting interim targets, developing relevant investment guidelines and finally tracking, monitoring and reporting on progress.	 Risk analysis and resilience improvements page 18 Smart Sustainable Building Blueprint page 45 Net zero carbon pathway (link here)
Risk	(c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisations overall risk management.	NRE's climate-related risk evaluation processes are embedded into investment management processes. From transaction sourcing to annual asset planning, climate-related data and considerations are layered into investment decision-making, alongside the broader risk evaluation process. Both Risk and Sustainability are voting members of Investment Committee to serve as oversight for whether the process controls to evaluate climate-related risk are sufficiently followed. Throughout the year, the Sustainability team reports portfolio-wide climate-related risk exposure, in the form of a Risk Appetite Statement, to the Nuveen Real Estate Risk Management Committee for review.	



Appendix — Taskforce on Climate-related Financial Disclosures (TCFD), continued

PILLAR	TCFD RECOMMENDATIONS	ACTIVITIES		ADDITIONAL REFERENCES
		Portfolio Dashboards managed by Nuveen Real Estate's Sustainability team provide a portransition risk. Dashboards are accessible to investment and portfolio teams and are used and indirect financial risks.		
		Transition Risk	Physical Risk	
		 Energy Use Intensity (kWh/sf) or (kWh/m2) and GHG Intensity (tCO2e/sf) or (tCO2e/m2) metrics are used to measure if a building is operating efficiently compared to expectation for NZC and benchmarked against similar buildings in sector and/or region Exposure to building regulation is used to measure potential risk associated with fines, large capital requirements and discounts at the time of sale where there may be uncertainty about a building's ability to comply with future energy use 	NRE applies internally-derived risk thresholds per a set of physical hazards. Below are the metrics to measure risk per hazard.	
			Flood metrics	
			 Hazard zones based on extreme flood events projected to year 2050 	
			 Cumulative probability of flooding at specific flood depths and estimated repair costs (U.S. only) 	
		intensity/GHG intensity/carbon intensity limits	Sea level rise metrics	
	a) Disclose the metrics used by	• Carbon intensity measured as CO2e/m2 is used as a metric to measure progress	Hazard zones based on storm surge events projected to year 2100	
Metrics	the organisation to assess climate- related risks and opportunities in line with its strategy and risk management processes.	over time in a growing and diverse portfolio	 Cumulative probability of flooding at specific flood depths and estimated repair costs (U.S. only) 	
			Wildfire metrics	
			Fire Weather Stress Index projected to year 2050	
			Cumulative wildfire likelihood (U.S. only)	
			Tropical cyclone metrics	
			 Probable maximum wind intensities projected to year 2050 	
			 Cumulative probability of different wind speeds and estimated repair costs (U.S. only) 	
			Drought stress metrics	
			Drought Stress Index projected to year 2050	
			Heat stress metrics	
			Heat Stress Index projected to year 2050	
			Projected annual cooling costs (U.S. only)	
	(b) Disclose Scope 1, Scope 2, and if appropriate Scope 3 greenhouse gas (GHG) emissions and the related risks.	Scope 1 Provided with metrics Scope 2 Scope 3		Appendix — Detailed metrics pages 58 – 59
	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance	 30% reduction in landlord controlled energy intensity from a 2015 baseline Net zero carbon by 2040, supported by 5-year interim targets as disclosed in NZC 	Our target to reduce energy intensity by 30% brought forward to 2025 page 20	
	against targets.		Net zero carbon pathway (link here)	

Appendix — Detailed metrics

KEY FACTORS	INREV INDICATOR		UOM -	ABSOLUTE			LIKE-FOR-LIKE		
				2022	2023	% CHANGE	2022	2023	% CHANGE
Energy consumption	ENV1	Energy consumption, for the proportion of portfolio that is in landlord's control		1,744,114	1,596,567	-8.5%	1,218,429	1,105,246	-9.3%
consumption	ENV2	Energy consumption, for the proportion of portfolio that is in tenant's control		274,310	88,407	-68%	151,985	86,367	-43%
	ENV3	Estimated energy consumption, for the proportion of portfolio that is in landlord's control	MWh	1,772,373	1,831,489	3.3%	344,113	363,392	5.6%
	EINVS	Estimated energy consumption, for the proportion of portfolio that is in tenant's control		1,954,526	2,430,562	24%	118,558	178,202	50%
	ENV4	Total energy consumption (ENV1 + ENV2 + ENV3)		5,745,323	5,947,025	3.5%	1,833,085	1,733,207	-5.5%
	ENV5	Total energy consumption data coverage, by area	% of m2	100.0%	99.9%	Down by 0.081 percentage points	100.0%	100%	No change
	ENV6	Energy intensity (based on ENV4) (SFDR Annex 1 Table 2 Additional RE PAI - 19)	- kWh / m2	179	148	-17.5%	154	146	-5.5%
	ENV7	Energy intensity (based on ENV4), by property type - Industrial		88	111	25.9%	83	75	-9.7%
		Energy intensity (based on ENV4), by property type - Offices		296	184	-37.7%	194	189	-2.5%
		Energy intensity (based on ENV4), by property type - Residential		138	119	-13.7%	140	117	-16.1%
		Energy intensity (based on ENV4), by property type - Retail		189	187	-0.9%	191	193	1.0%
Renewable energy	ENV8	Generated and consumed on-site by landlord (SFDR Annex 1 Table 1 Universal PAI - 5)		731	1,115	53%	647	1,063	64%
chergy	ENV9	Generated on-site and exported by landlord (SFDR Annex 1 Table 1 Universal PAI - 5)		2,984	3,126	5%	2,984	3,118	4%
	ENV10	Generated and consumed on-site by third party or tenant (SFDR Annex 1 Table 1 Universal PAI - 5)	MWh	2.8	0.4	-85%	2.8	0.4	-85%
	ENV11	Generated off-site and purchased by landlord (SFDR Annex 1 Table 1 Universal PAI - 5)		86,425	85,658	-1%	77,174	77,720	1%
	ENV12	Generated off-site and purchased by tenant (SFDR Annex 1 Table 1 Universal PAI - 5)		43,078	8,357	-81%	28,648	8,098	-71.7%
	ENV13	Renewable energy data coverage, by area	% of m2	9.1%	7.7%	Down by 1.4 percentage points	21.32%	21.28%	Down by 0.04 percentage points

Appendix — Detailed metrics, continued

KEY	INREV INDICATOR			ABSOLUTE			LIKE-FOR-LIKE		
FACTORS			UOM	2022	2023	% CHANGE	2022	2023	% CHANGE
Greenhouse Gas Emissions (GHG)	ENV14	Direct emissions - Scope 1 (SFDR Annex 1 Table 2 Additional Real Estate PAI – 18)	tonne CO2e	55,222	43,445	-21%	47,321	39,470	-17%
	ENV15	Indirect emissions - Scope 2 (SFDR Annex 1 Table 2 Additional Real Estate PAI – 18)		398,837	385,478	-3%	317,510	302,958	-5%
	ENV16	Indirect emissions - Scope 3 (SFDR Annex 1 Table 2 Additional Real Estate PAI - 18)		76,051	36,765	-52%	49,702	36,405	-27%
		Estimated emissions - Scope 1		149,403	156,083	4%	50,336	51,816	3%
	ENV17	Estimated emissions - Scope 2		320,964	347,296	8%	15,369	19,539	27%
		Estimated emissions - Scope 3		539,216	685,766	27%	22,090	36,001	63%
	ENV18	Total operational carbon (ENV14 + ENV15 + ENV16 + ENV17) (SFDR Annex 1 Table 2 Additional Real Estate PAI - 18)		1,539,692	1,654,834	7.5%	502,328	486,189	-3.2%
	ENV19	Total operational carbon data coverage, by area	% of m2	100%	99.9%	Down by 0.081 percentage points	100%	100%	No change
	ENV20	Operational carbon intensity (based on ENV18)	tonne CO2e / m2	0.043	0.045	5%	0.042	0.041	-3%
	ENV21	Operational carbon intensity (based on ENV18), by property type - Industrial		0.027	0.032	18%	0.020	0.019	-7%
		Operational carbon intensity (based on ENV18), by property type - Offices		0.067	0.069	3%	0.0560	0.0560	0.5%
		Operational carbon intensity (based on ENV18), by property type - Residential		0.036	0.032	-13%	0.038	0.032	-16%
		Operational carbon intensity (based on ENV18), by property type - Retail		0.045	0.050	12%	0.053	0.054	3%
Water Consumption	ENV24	Water consumption, for the proportion of portfolio that is in landlord's control	m3	750,276,584	3,078,010,392	310%	729,718,124	2,091,016,684	187%
Waste Management	ENV25	Waste generated, for the proportion of portfolio that is in landlord's control	tonne	48,315	54,275	12%	36,388	36,440	0.1%
Building Certificates	ENV26	Percentage of assets with a certificate (Ref: GRESB Asset Level Spreadsheet list), by area	- % of m2	23%	24%	Up by 0.99 percentage points	27%	28%	Up by 1.4 percentage points
Energy Ratings	ENV27	Percentage of assets with an energy rating (Ref: GRESB Asset Level Spreadsheet list), by area		20%	25%	Up by 5.7 percentage points	20%	27%	Up by 7.8 percentage points

²⁰²³ target performance and 2024 target

The House portfolio had a 2023 energy reduction target of 3.0% of landlord procured energy. On a like-for-like basis, including actual and estimated data, the portfolio recorded a 6% decrease in landlord procured energy.

Appendix

Data qualifying and asset variance notes

Reporting period and boundary

This environmental performance summary covers 01/01/2022 - 31/12/2023 and cover Nuveen Real Estate's global real estate equity portfolio. It excludes the debt portfolio and corporate offices. It includes only assets owned and operational during the reporting period (Y1 or Y2). If an asset is a development or land, it is excluded from scope.

Methodology

The report has been prepared in accordance with the updated INREV best practice guidelines (2023), covering mandatory Environmental indicators ENV1-ENV21, and ENV24-ENV27. The calculations have been carried out in line with the GHG Protocol. A detailed description is provided alongside each indicator.

Asset list source

The asset list for the non-US portfolio was taken from Verco's Master Asset List, which is maintained through monthly checks against the assets under management (AUM list) which detect property acquisitions and disposals, which are then verified with the fund management teams and asset managers. The asset list for the US portfolio was collated from the files shared by CodeGreen, and checked with the Nuveen US team for completeness and accuracy.

The data for the non-US portfolio was taken from Verco's environmental reporting programme, including data collected on a quarterly basis and stored in the Carbon Desktop platform, and data collected on an annual basis for the 2023 GRESB exercise (covering 2022 calendar year).

Utility consumption data sources

The data for the US portfolio is collected and processed by CodeGreen. Verco did not conduct any processing on the dataset, except filtering the energy data to only accept data that covers whole building, and converting the water consumption figures from US gallons to cubic metres. As an exception, the gas consumption date for two assets (Emerus Westmoreland, and Emerus McCandless) was manually excluded from reporting, as it was found to yield an energy use intensity that was over 5.000 times the expected intensity benchmark value.

Estimations:

Where data is missing, data has been estimated based on data already received for a property, as long as there was sufficient actual data available to base the estimation on. Note that gap-fille estimations may be done slightly differently by Verco and CodeGreen; however, both methodologies rely on extrapolation based on available data and are expected to be very similar.

Where no data is available for an asset or a space within that asset, a typical use benchmark-based estimation has been applied and assigned to scope according to the management status of the building.

For the US dataset, actual data has been used only where it is known to cover the whole building. Where partial data has been provided, it has not been used in this report, and a Commercial Buildings Energy Consumption

Survey (CBECS, 2018) benchmark value has been applied to the asset instead, based on the property type provided for the asset by CodeGreen.

For the non-US dataset, Building Energy Efficiency Survey (BEES, DEFRA and Verco) benchmark intensity values have been used. Where a straightforward match between the GRESB property type and the BEES benchmarks did not exist, a composite was created. For several assets (e.g. data centres or a portfolio where audit reports were available for a subset of similar buildings), custom intensity benchmark values were derived to improve estimation.

The benchmark-derived estimates were assigned to emission scopes using the management status of a building. They emissions were recorded against Scope 1 and 2 for managed buildings, and Scope 3 for non-managed buildings. Where data was missing in a residential asset, or where explicit confirmation existed, the areas without data were recorded as being under complete tenant operational control, and the benchmark-estimated value was applied to Scope 3 despite the building being managed.

Absolute / like for like analysis

The absolute figures include all properties which were owned by Nuveen at any point during the reporting period. Only consumption within the ownership period is included. Acquisition or disposal of assets during the reporting period can therefore lead to an apparent increase or decrease in absolute consumption which do not necessarily reflect changes to consumption patterns.

The like-for-like analysis uses a static portfolio approach, which includes only those properties that were held in the portfolio for the duration of the reporting period and the comparison year, and were not refurbished during this time. It therefore allows direct comparison of the same group of properties year-on-year. In the energy, GHG, water, and waste indicators, the like-for-like inclusion is also determined by the presence of data in both years.

Property type groupings

Assets are grouped into broad asset classes for the purposes of presentation.

Intensity

Gross Internal Area has been used to normalise consumption and emissions to calculate energy and emissions intensity indicators. Only buildings owned for the entire year, not undergoing major refurbishment, and having some actual energy data, are included in the intensity metric.

Emission factors

Carbon emission factors from DEFRA and IEA have been used to produce this report.

A company-specific emission factor was used for the Hong Kong data centre asset, where two energy companies in the country have different grid carbon intensities, and the high consumption at the data centre asset had a significant influence on portfolio performance.

For district cooling, no emission factors are available, therefore a cooling coefficient of 3 is assumed, and the emission factor is derived from the grid electricity factor for that country.

For district heating, only UK district heating values are available, which have been applied to all countries.

The US dataset recorded district heating and cooling values together; an emission factor was used which was an average value between the DEFRA Heat emission factor, and a third of the USA electricity emission factor.

Verification statement

Verification statement for the House Portfolio.

Verco Advisory Services (Verco) hereby confirm that the environmental data consumption reported for the house portfolio has been verified through a trend and variance analysis. There has been extensive correspondence with the data collectors to review the accuracy of the data. The verification has been done in line with the following standards:

- ISO 14064-3
- ISO 50002
- ISO 19011

The verification checks are delivered by Verco (applicable to the non-US portfolio only), a specialist sustainability consultancy, on the sustainability disclosures related to the house portfolios assets. This provides investors and other stakeholders with confidence in the reported data. Data for the US assets is collected and checked by CodeGreen Solutions. The term "checked" aligns with GRESB's definition of the term. Certain US investment vehicles that report to GRESB undergo independent verification by Longevity Partners in line with the AA1000 Assurance Standard. This verified data feeds into the data reported within this report.

Mark Challis

Operations Director

Verco Advisory Services

Important information

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