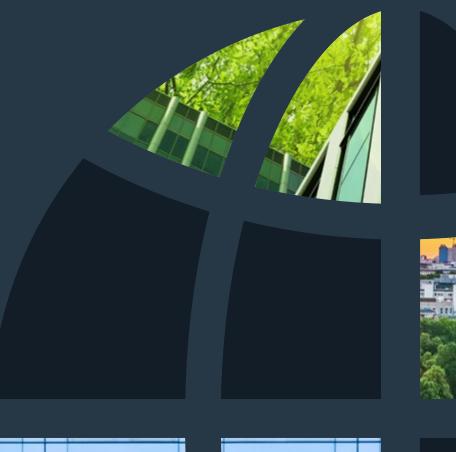


# 2023 Annual impact report





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### Overview

**Nuveen Green Capital** is a national leader in sustainable commercial real estate financing solutions and an affiliate of Nuveen, the investment manager of TIAA with over \$1 trillion in assets under management.<sup>1</sup> Established in 2015 by the C-PACE industry's founders and standard-setters, Nuveen Green Capital is a private capital provider dedicated to making sustainability a smart financial decision for commercial real estate owners who seek to improve the energy, water and resiliency performance of their properties.

Letter from our co-founders ►

Our mission ► Impact philosophy ►

Our sustainability & impact team ►

### Letter from our co-founders

We are thrilled to present to you Nuveen Green Capital's 2023 impact report, which gives us the opportunity to highlight the tremendous benefits Commercial Property Assessed Clean Energy (C-PACE) offers.



Jessica Bailey President and CEO



Alexandra (Ali) Cooley Chief Investment Officer

Our firm started as Greenworks Lending and was launched in 2015 to expand the impact of C-PACE. We met in 2012 while developing and launching the Connecticut C-PACE program at the Connecticut Green Bank. Soon, the program was growing rapidly and had become the standard for C-PACE programs across the country.<sup>2</sup> This growth reinforced our conviction that C-PACE could scale energy efficiency in commercial buildings and new developments around the country – driving benefits for local communities, energy security, and the environment.

With Nuveen Green Capital, we have demonstrated that clean energy and energy efficiency investments are smart business decisions, not only for all types of commercial real estate developers and building owners across the country – but also for policy makers, investors, and other stakeholders. Nuveen Green Capital is a triple-win demonstration of doing well by doing good: investors get access to attractive yields, borrowers get access to accretive financing solutions, and the environment benefits too – all enabled through a public-private partnership with zero cost to taxpayers.

While impact has always been at the core of what we do, our growth over the last near decade has exceeded what we could've imagined when we started. We've been able to reposition and grow Nuveen Green Capital in different market conditions and demonstrate the power of C-PACE to serve the needs of our investor, building owner, and public sector partners. We publish this 2023 impact report with significant tailwinds and ambition for this platform and this industry to continue to grow rapidly on its rapid growth trajectory.

### Our mission

Our mission is to champion the reduction of carbon emissions in the built environment by leveraging and expanding the use and adoption of Commercial Property Assessed Clean Energy (C-PACE) financing. Through our strategic financing solutions, we empower the commercial real estate market to employ sustainable measures and infrastructure that not only help to reduce their carbon footprint, but also yield cost savings.<sup>3</sup>

C-PACE is a state policy enabled, public-private financing program in which commercial property owners can obtain low-cost, long-term financing for energy efficiency, climate resiliency, water conservation, and renewable energy projects that is repaid as a special assessment alongside other property taxes. Examples of eligible use of C-PACE financing include energy efficient lighting, electrification, HVAC systems, low-flow water fixtures, solar energy installations, hurricane and earthquake hardening, and much more. Why is it so important to decarbonize the built environment?

The built environment is responsible for over

42%

**OF ANNUAL GLOBAL CO2 EMISSIONS**<sup>4</sup>

### Letter from our Head of Sustainability

As the standard-bearers in C-PACE policy and capital markets over the past 10 years, we believe it is crucial that we use our voice to lead the industry and advocate for best practices with key policymakers and stakeholders.



**Genevieve Sherman** Head of Sustainability and Policy

One of our primary objectives is to ensure C-PACE is adopted legislatively in every U.S. state and local community, ensuring that C-PACE funded improvements create reductions in energy and water use, and facilitate improvements in building design over and above minimum mandated standards. In 2023, we led the expansion of C-PACE into New Mexico and supported C-PACE adoption in over 140 new municipalities nationwide.

Additionally, we advocate for the expansion of C-PACE to include new categories of building technologies – which are becoming front-and center in a changing climate and energy transition – such as electric vehicle charging, high performance new buildings and climate and environmentally resilient infrastructure. In 2023, we supported the expansion of C-PACE nationally with key program expansions in Alaska, Colorado, Massachusetts, Michigan & Utah.

Finally, we work with key partners across the banking, capital markets, and commercial real estate industries to ensure C-PACE can have maximum impact in the ecosystem in which it operates. In 2023, we deepened our impact with our biggest year ever, deploying over \$800M across 16 states, including our first projects in Nevada and Virginia, directly reducing energy and water usage, avoiding greenhouse gas emissions, and improving resiliency of our client's buildings. We are thrilled to share some of those stories and the details of our 2023 impact here.

### Our sustainability & impact team



Jessica Bailey President and CEO

As President and CEO, Jessica oversees the strategic direction and day-to-day operations for Nuveen Green Capital. As company cofounder and one of the architects of the nation's first successful C-PACE program, Jessica has helped drive double-digit annual originations growth for the firm since its founding, and raise and deploy over \$2 billion in capital, while facilitating the expansion of C-PACE to over 38 states and counting. From 2012 to 2014, Jessica was with the Connecticut Green Bank, where she designed and led the award-winning C-PACE program for the state. From 2004 to 2012, Jessica worked at the Rockefeller Brothers Fund, a foundation based in New York.

Jessica graduated with a B.A. from the University of Notre Dame and a Master's degree from Yale University.



Alexandra (Ali) Cooley Chief Investment Officer

Alexandra "Ali" Cooley co-founded Greenworks Lending in 2015 and has served as CIO, COO, and CFO from its inception through its acquisition by Nuveen in April 2021. Under her leadership on the capital markets side, Greenworks Lending became the first company to securitize C-PACE-backed assets in 2017, and in 2021, she oversaw the C-PACE industry's largest 144A securitization of C-PACE assets, followed by another in 2022 and in 2023, as well as the launch of the \$525M 'CPACE Lending Fund,' aimed at insurers.

Prior to co-founding Greenworks, Ali oversaw and managed the development of over \$100 million in innovative financial products to deploy clean energy by leveraging private capital at the Connecticut Green Bank, the nation's first green bank. Ali graduated with a B.A. from the University of Pennsylvania and an M.B.A./M.E.M. from Yale University.



Genevieve Sherman Head of Sustainability and Policy

As Head of Sustainability and Policy, Genevieve leads Nuveen Green Capital's impact reporting, as well the geographic expansion of C-PACE policies, now adopted in 38 states. Before joining Nuveen Green Capital, Genevieve spearheaded the original design and implementation of Connecticut's C-PACE program at the Connecticut Green Bank – largely considered the first successful C-PACE program in the country.

Prior to her work in the C-PACE policy arena, Genevieve consulted with Clean Energy Solutions Inc., Earth Markets, and HR&A Advisors to design and operate state and utility administered energy efficiency programs.

Genevieve holds a Master's Degree in City Planning and a Certificate in Environmental Policy from MIT, and a BA in Urban Studies from Columbia University.



**Jessa Coleman** Director, Sustainability & Programs

Jessa helps to expand the company's footprint and diversify its investment opportunities in clean energy, and is responsible for overseeing C-PACE program requirements in over 75 discrete lending programs spread across more than 1,800 jurisdictions, while working to identify and develop new product opportunities. Previously, as Senior Manager of Programs at PACE Financial Servicing (PFS), she administered over \$80 million in financing. She has been honored for her work by a PACESetter Award for Program Design & Implementation from PACENation. She has consulted for various social enterprises in Europe and Africa. Jessa has a Master's in management and sustainability from HEC Paris' Grande Ecole Program, supplemented by a certificate in Energy & Finance. She holds a B.A. in International Studies from American University.



Graham Higgins Senior Manager, Sustainability & Programs, CEM, LEED AP BD+C

Graham has focused his career on creating a more sustainable and equitable built environment through energy efficiency, sustainable design, and responsible investment. His undergraduate degree in Sustainable Development from the University of St Andrews in Scotland and Master's in Sustainability Management at the Earth Institute at Columbia University have established a strong foundation, further refined by over 12 years of experience in sustainability consulting, energy efficiency analysis and implementation and high-performance building design. Graham brings a wealth of experience in energy auditing, energy efficiency and renewables, sustainable design, and financial and engineering feasibility analysis to the Nuveen Green Capital team.



Shelby DuPont Manager, Sustainability & Programs

Shelby is responsible for translating programmatic requirements from state and local governments to Nuveen Green Capital's teams, while expanding the sustainability measures eligible under these programs. Prior to this role, Shelby was a Project Specialist managing funds granted to World Resources Institute's Center for Sustainable Business and Science Based Targets Initiative. She was also appointed as a Fellow to the U.S. Department of Energy's State and Community Energy Programs office, supporting federal grants and tools related to energy burden. Shelby holds a **Bachelor of Science in Economics** and Women and International Development from St. Catherine University, and a Diversity, Equity, and Inclusion Certificate from the University of South Florida's Muma College of Business.

### Our portfolio of C-PACE ASSETS

Project type and purpose ►

8

Asset class and improvements funded **>** 

Project location ►

### Project type and purpose

C-PACE directs funds toward the construction or renovation of commercial properties to reduce energy and water consumption, produce renewable energy, or increase environmental resiliency.

C-PACE provided a unique debt solution that is allowing us to develop a state-of-the-art, energy efficient research and development facility. We are very grateful for the team at Nuveen Green Capital for getting this deal done, especially during this challenging economic environment."

– Philip Butler - MRA Group



### Asset class and improvements funded

### TOP IMPROVEMENTS FUNDED (IN \$ MILLIONS)



#### **ORIGINATIONS BY PROPERTY TYPE**



## **Project location**

Click options below to view statistics:

2023

TOTAL ORIGINATIONS \***822.3**M⁵

# Our impact

Impact case studies ►

Environmental impact ►

Social impact ► UN SDG alignment and contribution ►

### Impact case studies Locking in efficiency in commercial buildings

# Sustainability driven hotel rehabilitation

Located on the Riverwalk in central San Antonio, The InterContinental Hotel, formerly a Wyndham Hotel, will be reimagined and renovated to become a luxury hotel and conference center. The 21-story hotel will feature 391 rooms, including a restaurant, lobby and rooftop bars, a coffee bar, an outdoor pool and whirlpool, a business and fitness center, as well as 20K square feet of meeting space.

Once renovated, C-PACE funded sustainability measures are projected to save the new InterContinental Hotel \$402,000 in year-one energy costs, as well as save \$19.1 million in lifetime energy costs. The measures, which include building envelope improvements, efficient LED lighting and plumbing, and a new high efficiency HVAC system, will also enable the hotel to save 110.6 million kilowatt hours (kWh) and 28.7 million gallons of water over their effective useful lifespan. In addition, the C-PACE financed project will avoid an estimated 66,518 metric tons of carbon.



#### 111 E Pecan Street, San Antonio, TX

Lifetime Energy Savings (\$) 19,130,788 Lifetime Savings (kWh) 110,594,910 Lifetime Savings (Metric Tons CO2)

66,518

Lifetime Water Savings (Gals)

28,650,000

# Sustainable multifamily new development

Spring Garden Apartments is a new, multifamily development, located in the Callowhill neighborhood of Philadelphia. It is a planned market rate complex, which will include 13.9K square feet of retail space. This project marks the largest C-PACE financed project in the state of Pennsylvania, and the second multifamily deal under C-PACE policy since it was expanded to allow for multifamily projects.

\$40 million in C-PACE capital funded key sustainability measures for the planned multifamily development, including building envelope, LED lighting, water conservation systems and a high efficiency HVAC system. The property owners are projected to realize \$4.3 million in energy savings, to save 41,715,935 kilowatt hours (kWh) of energy, as well as to save 16.4 million gallons of water over the effective useful lifespan of the measures.

In addition, the complex's 329 housing units will provide much-needed residential space to the Callowhill area of Philadelphia.



#### Spring Garden Apartments, Philadelphia, PA

Lifetime Energy Savings (\$) <u>4,286,260</u> Lifetime Savings (kWh) 41,715,935

Lifetime Savings (Metric Tons CO2)

31,640

Lifetime Water Savings (Gals)

Total Housing Units Created

16,385,940

329

### <u>All electric student housing</u>

2008 N. Broad St. in Philadelphia, PA is a six-story, 34,801 square foot all electric student housing building adjacent to Temple University. C-PACE financed measures include a high performance building envelope, interior and exterior LED lighting, a high efficiency all electric HVAC system including VRF (Variable Refrigerant Flow) heat pumps, a high efficiency all electric domestic hot water boiler and low flow plumbing fixtures. The property is designed to an Energy Star score of 95, placing it in the top 5% of energy efficient dormitories nationally.

In addition, the C-PACE funded measures will enable the building to avoid an estimated 4,361 metric tons of carbon emissions, while also providing 40 new housing units for students. The property is projected to realize \$986.8K in lifetime energy savings, 5,591,302 kilowatt hours (kWh) of energy, as well as 4.13 million gallons of water over the lifespan of the funded measures.



#### 2008 N Broad St, Philadelphia, PA

Lifetime Energy Savings (\$) 986,759

Lifetime Savings (kWh)

Lifetime Savings (Metric Tons CO2)

4,361

Lifetime Water Savings (Gals)

**Total Housing Units Created** 

5,591,302

4,129,035

**OUR PORTFOLIO OUR IMPACT OVERVIEW** 

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### **Environmental impact**

*C-PACE funded commercial building improvements drive reduced energy use, water use, and greenhouse gas emissions.*<sup>6</sup> *In 2023, Nuveen Green Capital's reductions through C-PACE projects were equivalent to:* 



These values are all equivalent to the 326,982 Metric Tons Avoided over the lifetime of Nuveen Green Capital's 2023 projects. All values are derived from the EPA's greehouse gas equivalency calculator as of 3/22/2024 and are equivalent to one another. The only exception is the Olympic sized swimming pools metric (660,000 Gallons per Olympic sized pool).

### Energy efficiency and renewable energy Investing in direct and intentional environmental outcomes



\$535.6
\$ million
Invested

### **ALIGNED SDG**



#### Objectives

- Retrofitting existing property resulting in the reduction of GHG emissions
- Constructing new buildings with the highest energy efficiency
- Installing new solar clean energy capacity

#### Measurable outcomes

КРІ	Metric	Quantity:
Electricity Saved	MWh	440,045
Fuel Saved	MMBtus	532,297
Renewable Energy Capacity Added	MW DC	2.6
Renewable Energy Generated	MWh	41,947
Carbon Emissions Avoided	MTCO2	326,982
New Energy Efficient Buildings	# Buildings	37

Η2

### Water efficiency and management Investing in direct and intentional environmental outcomes



\$60.2 \$ million Invested

#### **Objectives**

• Retrofit or new development resulting in the reduction of water consumption

#### Measurable outcomes

KPI	Metric	Quantity:
Water Saved	Gallons	273,371,960

#### **ALIGNED SDG**



### Social impact

In 2023, C-PACE financing supported the construction and rehabilitation of green, resilient buildings and multifamily housing.



\*4 total projects that are either locally or nationally designated historic landmarks



# Resiliency and climate adaptation

### Investing in direct and intentional environmental outcomes



\$63.6 \$ million Invested

#### Objectives

- Retrofit or new development of earthquake resistant building infrastructure

#### Measurable outcomes

KPI	Metric	Quantity:
Seismic Resiliency	Total SF Earthquake Hardened	1,586,950

#### **ALIGNED SDG**





# Affordable housing

### *Investing in direct and intentional environmental outcomes*



\$9.0
\$ million
Invested

#### Objectives

• Construction of new affordable housing units

#### Measurable outcomes

KPI	Metric	Quantity:
Affordable Housing Created	# Units	70

### **ALIGNED SDG**



### UN SDG alignment and contribution



Impact objectives	Amount invested	Sustainable Development Goals	KPI	Metric	Quantity:		
Energy efficiency and renewable energy	\$535,566,576	SDG 7	Electricity Saved	MWh	440,045		
• Retrofitting existing property resulting in the reduction of GHG emissions			Fuel Saved	MMBtus	532,297		
<ul> <li>Constructing new building with the highest energy efficiency</li> </ul>			Renewable Energy Capacity Added	MW DC	2.6		
<ul> <li>Installing new solar clean energy capacity</li> </ul>				Rene	Renewable Energy Generated	MWh	41,947
			Carbon Emissions Avoided	MTCO2	326,982		
		SDG 7	New Energy Efficient Buildings	# Buildings	37		
Water efficiency and management	\$60,242,717	SDG 6	Water saved	Gallons	273,371,960		
• Retrofit or new development resulting in the reduction of water consumption							
Resiliency and climate adaptation	\$63,567,489	SDG 11	Seismic Resiliency	Total SF	1,586,950		
Retrofit or new development of earthquake resistant building infrastructure				Earthquake Hardened			
Affordable housing <ul> <li>Construction of new affordable housing units</li> </ul>	\$9,014,952	SDG 11	Affordable Housing Created	# Units	70		

#### For more information, please visit us at nuveen.com/greencapital

#### 1 As of Jan 1, 2024.

- 2 Department of Energy 2016 C-PACE Report lists the Connecticut C-Pace program as the first statewide C-PACE program in the U.S.
- 3 https://www.epa.gov/statelocalenergy/commercial-property-assessed-clean-energy
- 4 Source: https://www.architecture2030.org/why-the-built-environment/
- 5 As of 31 Dec 2023. Disclosure: State statutes authorizing C-PACE stipulate that 100% of C-PACE funds be used toward the financing of 'Eligible Improvements'. Nationwide, statutory definitions for 'eligible improvements' are generally described within these 4 categories: energy efficiency, renewable energy, water conservation, and climate resilience. Individual state definitions within a category may differ. This report categorizes measures based upon their location's definition.
- 6 All data shown are projections of estimated reductions in use or avoided consumption over the life of the installed improvement funded with C-PACE. See Disclosure below for more information on technical methodology. Disclosure: All data shown are projections of estimated reductions in use or avoided consumption over the life of the installed improvement funded with C-PACE. C-PACE programs require a 'baseline' of energy or water consumption to be established and for funded improvements to demonstrate and report on projected reductions in energy or water usage, or reduction in related emissions, over that baseline. Such baseline maybe the historic energy and water use of the subject property or a prescribed building energy code. In certain instances, specifically in the construction of new buildings, C-PACE funded improvements are required to achieve a standard of energy and water performance (i.e. a green building certification or model building code) and are not required to separately calculate and report avoided resource use and emissions over a baseline. NGC reports projected avoided electric, fuel and water use, as applicable, solely where C-PACE programs dictate a baseline and projected savings over that baseline are submitted to a C-PACE program administrator, pursuant to the methodology dictated by such C-PACE program, for confirmation of improvement eligibility and funding approval. NGC reported avoided carbon, specifically, utilizes the U.S. EPA AVERT Tool to apply appropriate regional emissions factors for electricity and fuel savings at the level of each C-PACE improvement funded. Impact measures are based on the Environmental Protection Agency's Greenhouse Gas Equivalencies Calculator.
- 7 2 of NGC's 2023 closings achieved LEED certification with 1 additional targeting LEED certification in 2024.
- 8 1 of NGC's 2023 closing achieved Energy Star certification with another achieving Designed to Energy Star.

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