

Shaping the Future of Clean and Resilient Design:

How Buildings of Excellence (BOE) and Early Design Support Drive Innovation

October 16, 2024



Agenda

Buildings of Excellence (BOE) Competition Overview

- BOE Demonstration Competition
- BOE Early Design Support Program

Driving Impacts with BOE Demonstration Projects and Early Design Support

- Carmen Villegas Apartments
- Three Arts
- The Beacon with guest speaker, Grayson Jordan

Q&A

October 16th, 2024

Kristin Graham, Senior Project Manager, NYSERDA

Gwen McLaughlin, Project Manager, NYSERDA

Vera Voropaeva, Project Manager, NYSERDA

Grayson Jordan, RA, AIA, CPHC, Paul A. Castrucci, Architects



NYSERDA

NYSERDA's New Construction Program

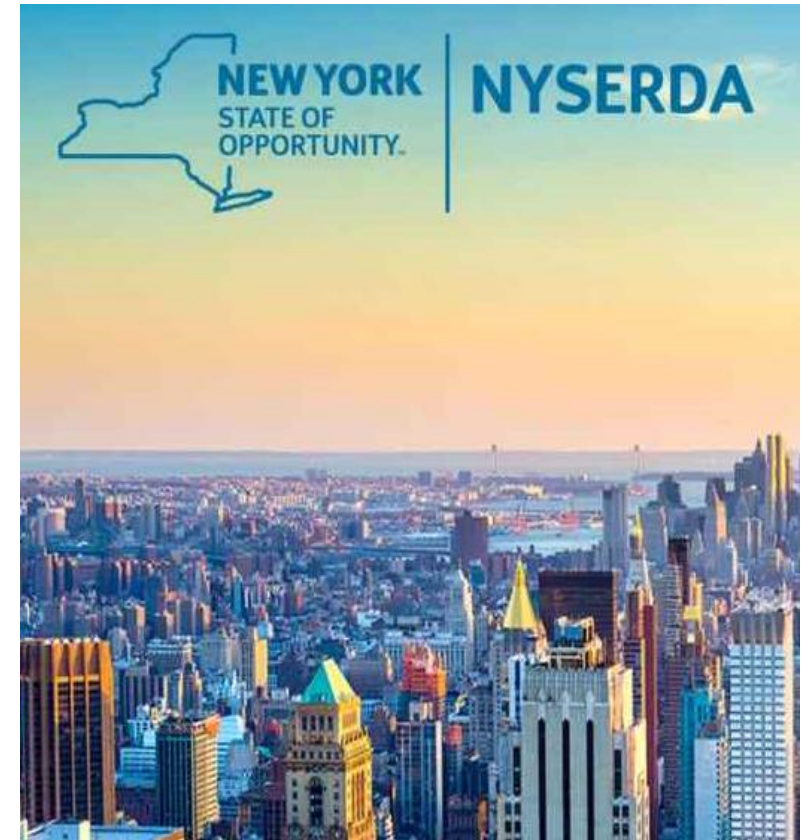
Goals and Initiatives

The Climate Act:

- ✓ Zero-emission electricity sector by 2040
- ✓ 70 percent renewable energy generation by 2030
- ✓ Reducing greenhouse gas emissions by 85 percent from 1990 levels by 2050
- ✓ Reducing on-site energy consumption by 185 trillion BTUs of end-use energy savings by 2025
- ✓ At least 35 percent, with a goal of 40 percent, of the benefits of clean energy investments are directed to disadvantaged communities

Governor Hochul's Plan:

- ✓ 2 million climate-friendly, electrified, or electrification-ready homes by 2030
 - ✓ minimum of 1 million electrified homes
 - ✓ up to 1 million electrification-ready homes
 - ✓ More than 800,000 low-to-moderate income houses are expected to receive clean energy upgrades



Building Cleaner Communities Competition

Clean and Resilient Buildings and Communities

- Targeted sector: Commercial, Light Industrial and Institutional buildings, including large-scale, multi-building projects
- Supports economic development priorities for the region or the State, including benefits to disadvantaged communities
- Encourage projects that provide supportive or essential services to the community
- Enhanced incentives for incorporating geothermal
- New Construction and adaptive reuse

Rubin Hall



Buildings Cleaner Communities Competition

23

in disadvantaged communities

5

committed to using geothermal systems for space conditioning

13

committed to Passive House certification



48

Projects
Awarded

20

New
Construction

20

Adaptive
Reuse

8

Expansion, Upgrades
or Planning

Cornwall Social

Buildings of Excellence Competition

Program Overview

The Buildings of Excellence Competition aims to accelerate the design, development, construction, and operation of carbon neutral multifamily buildings that:

- ✓ Supports Governor Hochul's two-million climate-friendly homes initiative
- ✓ Exhibit quality architectural and urban design and innovation.
- ✓ Are capable of withstanding increased risks and are more resilient.
- ✓ Demonstrate replicability, and scalability
- ✓ Integrate quality non-energy co-benefits that ensure occupant comfort, health, productivity, and safety.
- ✓ Commit to sharing information related to the project's design, costs, and performance.
- ✓ Create clean, resilient, and carbon neutral multifamily buildings that are healthy and safe for its occupants at predictable costs.



**BUILDINGS OF EXCELLENCE
COMPETITION**



Buildings of Excellence Competition

Two Part Program Composition

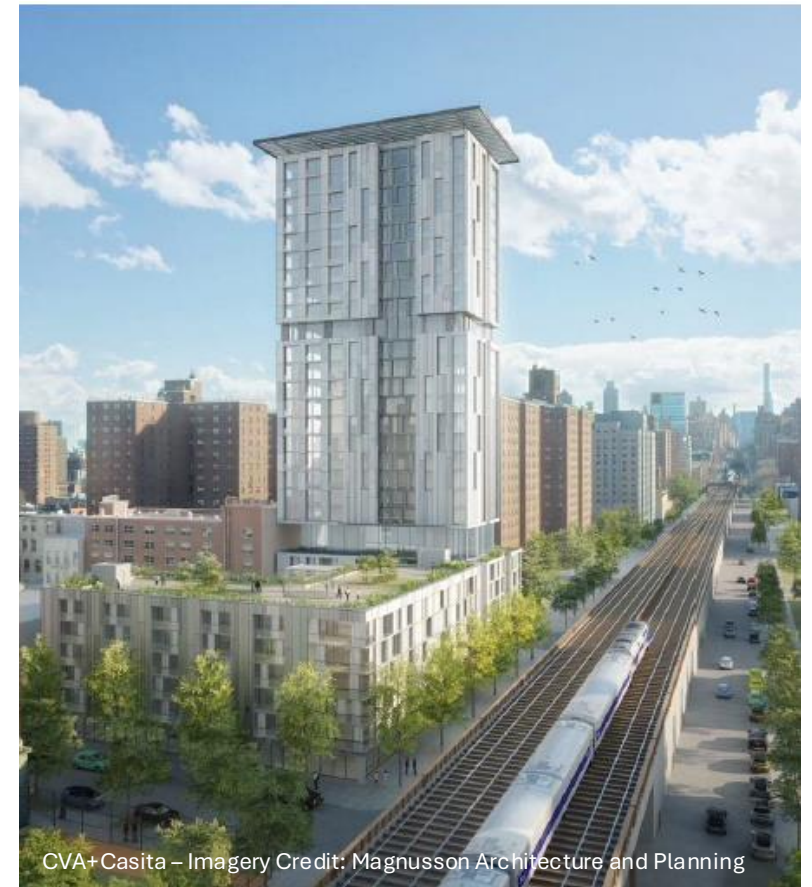
Buildings of Excellence Competition Make Up

- ✓ Demonstration RFP
 - ✓ Competitive Program, closed.
 - ✓ Blue Ribbon Jury and Award.
- ✓ Early Design Support Funding RFP
 - ✓ Open Enrollment Program, open.

Buildings of Excellence Competition

Early Design Support
RFP

Demonstration RFP



CVA+Casita – Imagery Credit: Magnusson Architecture and Planning

Buildings of Excellence

Demonstration Project Solicitation

Buildings of Excellence Competition

Demonstration Projects

Buildings of Excellence (BOE) selects multifamily demonstration projects that will be:

- Clean and resilient, emissions free, beautiful, and functional buildings that will provide healthy, safe, comfortable, and resilient living spaces for their occupants.
- Provide project data, including the incurred costs for constructing the awarded projects, as well as the predicted and measured energy performance.
- Round 5 closed September 18th, 2024



Image Credit – THINK! Architecture & Design

Buildings of Excellence Competition Demonstration Projects

47

are majority affordable
housing

37

in disadvantaged
communities

12

committed to using
geothermal systems for
space conditioning

46

committed to Passive
House certification



NEW
YORK
STATE

Buildings of
Excellence

65

Projects
Awarded

8,121

Total
Units

34

Are 8+ Stories

32

In Construction or
Completed

Buildings of Excellence

Demonstration Project Locations & Typologies

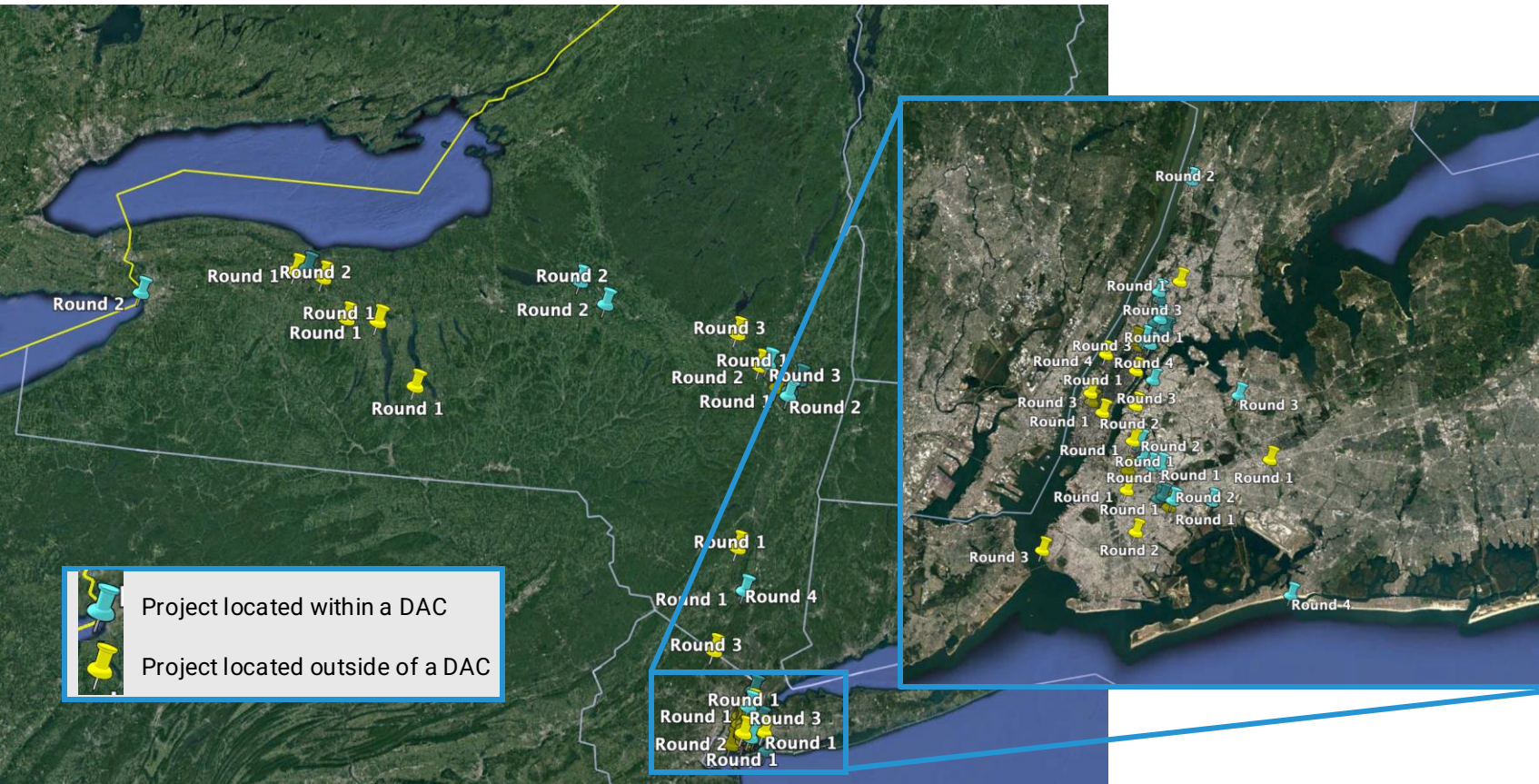


Image Credit – Black Mountain Architecture

Eco Flats

- BOE Round 3 Winner
- Awarded \$1,000,000
- 6 buildings with a total of 84 units

Certification Pathway:
Phius ZERO



Image Credit – MAP Nightnurse Images

The Rise

- BOE Round 2 Winner
- Awarded \$1,000,000
- 72 affordable units for justice involved families

Certification Pathway:
Passive House Institute Classic



Image Credit – NY Housing Conference

Carmen Villegas Apartments

- BOE Round 4 Winner
- Awarded \$1,000,000
- 211 affordable units for seniors

Certification Pathway:
Phius CORE

Buildings of Excellence

Demonstration Projects

Project data

- Construction cost
- Operational data

Visit the BOE website for more information on

- [Winners of the Four Rounds of the Competition](#) as well as
- [Project Cost Data, Best Practices for Design and Construction of Multifamily Buildings, and more](#)



Buildings of Excellence

Early Design Support

Buildings of Excellence Competition

Early Design Support RFP 3928-D – Program Overview

Program Objectives:

- ✓ Pilot Program for direct funding to design firms
- ✓ Future of NCP programming and funding
- ✓ Increase firm proficiency in carbon neutrality.
- ✓ Build the practice of design firms in the carbon neutral space.
 - ✓ Within a firm, push the design of a singular project and then transition the firm's portfolio to be carbon neutral
 - ✓ Number of firms practicing in the space
- ✓ Reduce barriers and soft costs that design firms may face.
 - ✓ Inject funding at the very early design phase when decisions are being made, to help reduce upfront risks
- ✓ Assist in convincing more developers in buildings more carbon neutral-ready projects.

Market Development:

- ✓ Increase number of carbon neutral projects and firms participating in the space.



Linden Boulevard Phase III –
Imagery Credit: Magnusson Architecture and Planning

Buildings of Excellence Competition

Early Design Support RFP 3928-D – Project Deliverables

Early Design Support Projects:

project design, goals, and further exploration of key components

- ✓ Design partners explore:
 - ✓ Architectural design quality
 - ✓ Aesthetics
 - ✓ Functionality
 - ✓ Community and Site Context
 - ✓ Innovation
 - ✓ Carbon Neutral and Energy Efficiency Attributes
 - ✓ Resilience, Passive and Active Survivability
 - ✓ Quality of Non-energy Co-benefits
 - ✓ Market Transformation Capability
 - ✓ Reduction in Embodied Carbon
 - ✓ Cost Reduction Strategies



425 Grand Concourse – Imagery Credit: Dattner Architects / Synoosis, LLC

Buildings of Excellence Competition

Early Design Support RFP 3928-D

Build Capacity through Market Development:

- Build the practice of design firms in the clean, resilient, and carbon neutral space
- Implement scale and replicability
- Reduce upfront risks that design firms may face by injecting funding at the very early design phase when decisions are being made
- Build developer confidence in carbon neutral-ready projects

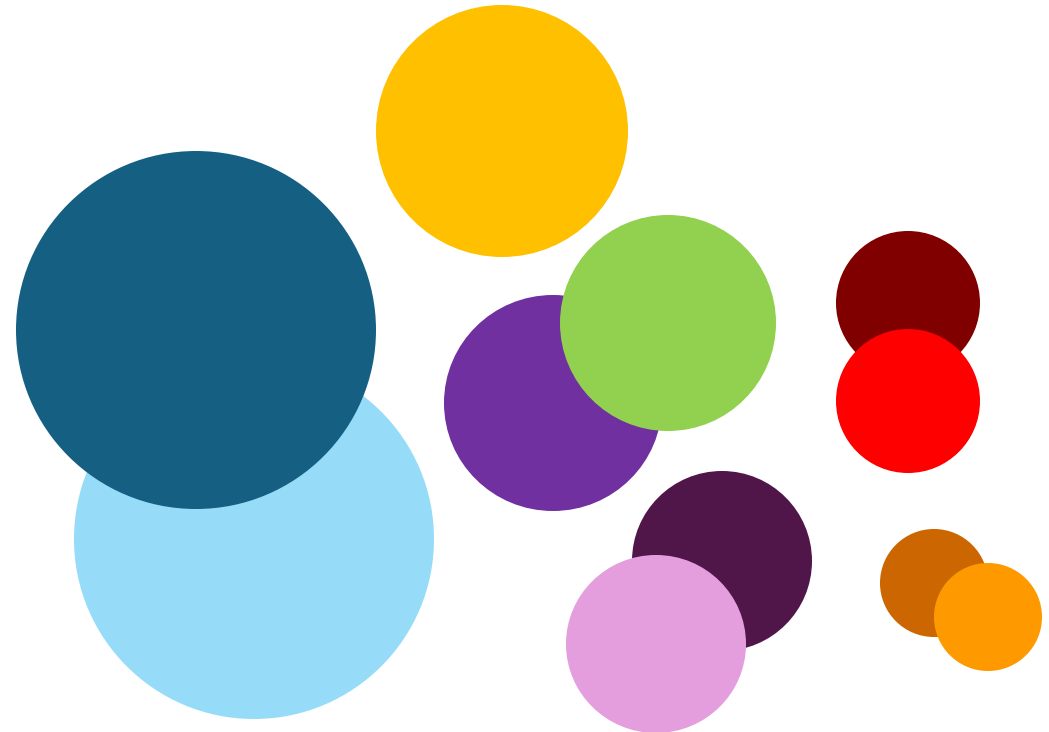


Morris Sol on Park
Imagery Credit - *Magnusson Architecture and Planning*

Buildings of Excellence Competition

Early Design Support RFP 3928-D – Scope of Study

- Passive House Design Integration
- Embodied and Operational Carbon Evaluation
- Third-Party Pre-Certification Feasibility
- High-Performance Envelope Analysis
- Emergency Generator + Battery System Research
- Photovoltaic System Feasibility
- Ground Source, Air Source System Evaluation
- Energy Recovery Ventilation Analysis
- Domestic Hot Water System Exploration
- Stormwater and Flood Management Research
- Material Selection Evaluation



Buildings of Excellence Competition

Early Design Support RFP 3928-D – Logistics

Early Design Funding RFP offers:

- ✓ Open Enrollment Program open through November 15, 2025
- ✓ \$1.50/square foot up to a cap of \$150,000 per project
- ✓ Support for initiatives focused on reducing energy use, building resiliency, improving occupant living experiences, broad marketing, and public awareness.
- ✓ Two step application process
 1. Design Firm Partner Proposal
 2. Carbon Neutral Project Proposals

Early-stage design support for:

- ✓ New construction and adaptive reuse multi-family projects.
- ✓ Will achieve carbon neutral performance.
- ✓ Beautiful and functional buildings.
- ✓ Living spaces that are healthy, safe, comfortable, and resilient for their occupants.
- ✓ Projects that will be profitable for the project's developers and owners.



Cooper Park Commons - Building 2 – Imagery Credit:
Architecture Outfit and
Magnusson Architecture and Planning

Buildings of Excellence Competition

Early Design Support RFP 3928-D – Logistics

Established Design Firm Partners:

- ✓ Demonstrate required experience
- ✓ Can submit up to 4 projects

Project Eligibility:

- ✓ Multifamily building
- ✓ Located in New York State
- ✓ Carbon Neutral
- ✓ New Construction, Adaptive Reuse, or Gut Rehabilitation
- ✓ At least 25,000 square feet
- ✓ Programming, concept, or early schematic design phase (prior to 50% SD)
- ✓ An early design stage funded project can also be submitted for the Demonstration Project RFP.



Colonial II Apartments – Imagery Credit: RIDA Architecture PLLC

Buildings of Excellence Competition

Early Design Support RFP 3928-D – Logistics

Design Partners provide early design support scope of:

- ✓ In-depth carbon neutral research and design
- ✓ Additional energy modeling and economic analyses
- ✓ Investigating third party standards and certifications
- ✓ Facilitating an integrated design and construction process
- ✓ Completing a more robust promotion and publicity plan

Full Proposal Requirements, List of Deliverables, and Format for both the Design Firm Partner and Early Design Project Proposals are located within the [RFP](#).



St. Marks Passive House – Imagery Credit: Cycle Architecture LLC and BQE

Buildings of Excellence & Early Design Support Success

**BLUE
RIBBON**

Distinguished
Design Excellence
Award Winner



Carmen Villegas Apartments

101 E. 110th Street, New York, NY 10029

28
Stories

211
Affordable units

180,352
Total sq ft.

New Construction
Completion Year: 2028
Total project cost: \$180,000,000
Total project cost per sq ft: \$998.05
Award: \$1,000,000

Phius CORE Certification

Disadvantaged
Community
Location

NYS DEC
Potential
Environmental
Justice Area
Location

Imagery Credit: Magnusson Architecture and Planning

BOE & EDS Success - CVA

Design Partner: Magnusson Architecture and Planning, P.C.

Notable Technical Attributes

- ❑ Heating/Cooling/Domestic Hot Water – Ground Source Heat Pumps (GSHP)
- ❑ Triple Pane Windows
- ❑ Centralized Energy Recovery Ventilation (ERV)
- ❑ Minimum Efficiency Reporting Value (MERV) 13 Filtration
- ❑ Onsite Building Integrated Solar Photovoltaic (PV) – Solar PV Capacity 80kW on the Roof and 45 kW on the façade
- ❑ Domestic Hot Water Controls – Leak Detection Monitoring in Units and/or Common Areas

Building Features

- ❑ Interior Bike Storage for 14 Bikes
- ❑ within ¼ mile of a bus stop
- ❑ within ½ mile of other mass transit

Resiliency

During power outages, the 6th floor Place of Refuge will provide for residents and staff: Wifi, refrigeration, outlets mechanical heating, cooling and ventilation. Throughout the building half of the corridor receptacles, the telecom room, a portion of the community facility space and the elevator will be operational. Also, a combination of wet and dry 2080 level flood proofing measures will be provided.



Imagery Credit: Curtis + Ginsberg Architects

Three Arts

340 West 85th Street, New York, NY 10024

8
Stories

62
Affordable units

51,520
Total sq ft.

Gut Rehabilitation
Completion Year: 2026
Total project cost: \$40,311,194
Total project cost per sq ft: \$782.44
Award: \$1,000,000

**PHI EnerPHit Component Method
Certification**

BOE & EDS Success – Three Arts

Design Partner: Curtis + Ginsberg Architects

Notable Technical Attributes

- Heating/Cooling- Packaged Terminal Heat Pump (PTHP)
- Domestic Hot Water – CO2 Air Source Heat Pump (ASHP)
- Triple Pane Windows
- Heat Pump Clothes Dryer
- Centralized Energy Recovery Ventilation (ERV)
- Minimum Efficiency Reporting Value (MERV) 13 Filtration
- Domestic Hot Water Controls – Demand Control Sensors with Leak Detection Monitoring in Units and/or Common Areas.

Building Features

- within ¼ mile of a bus stop
- within ½ mile of other mass transit

Resiliency

Building is located outside of the 500-year floodplain and will have an area of refuge for residents.

NYSERDA Buildings of Excellence Contacts

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