

NYC Capital Green Building Program Local Law 51 of 2023 Overview

Mayor's Office of Environmental Coordination

- Established by Section 192(e) of the New York City Charter, MOEC:
 - assists City agencies in carrying out their **environmental review responsibilities** and acts as the **repository for all City Environmental Quality Review (CEQR) documents**
 - serves as the City's **liaison to state and federal agencies on environmental matters**
 - advises the Mayor on matters of **environmental policy**
 - implements the **City's green building law**

Our mission is to be a resource for city agencies and private applicants by providing information and assistance in completing the environmental review process and to help the city to **lead by example** in applying state-of-the-art green building requirements.

Mayor's Office of Environmental Coordination

Established Precedent and Jurisdiction

- **Executive Order 97** authorized the Office to exercise the powers and duties of the Mayor in conjunction with the implementation of LL86 (which was amended by LL31/32 in 2017, which was then repealed and replaced with the current LL51).
- **Executive Order 149** added to the Director's responsibilities the duties to periodically evaluate the stringency of the law's minimum requirements and, if warranted by developments affecting the green building industry, to change them as well as to expand the category of projects subject to the law's goals and polices.
- Accordingly, the Office evaluates these requirements and their applicability on an on-going basis while continuing to develop resources related to the law's ongoing implementation.
- The **collection of capital project building data** to meet the law's annual reporting requirement not only helps the Office track compliance, but it also enables the Office to continuously analyze the applicability and stringency of the Law's requirements to inform future capital green building policy.

Mayor's Office of Environmental Coordination

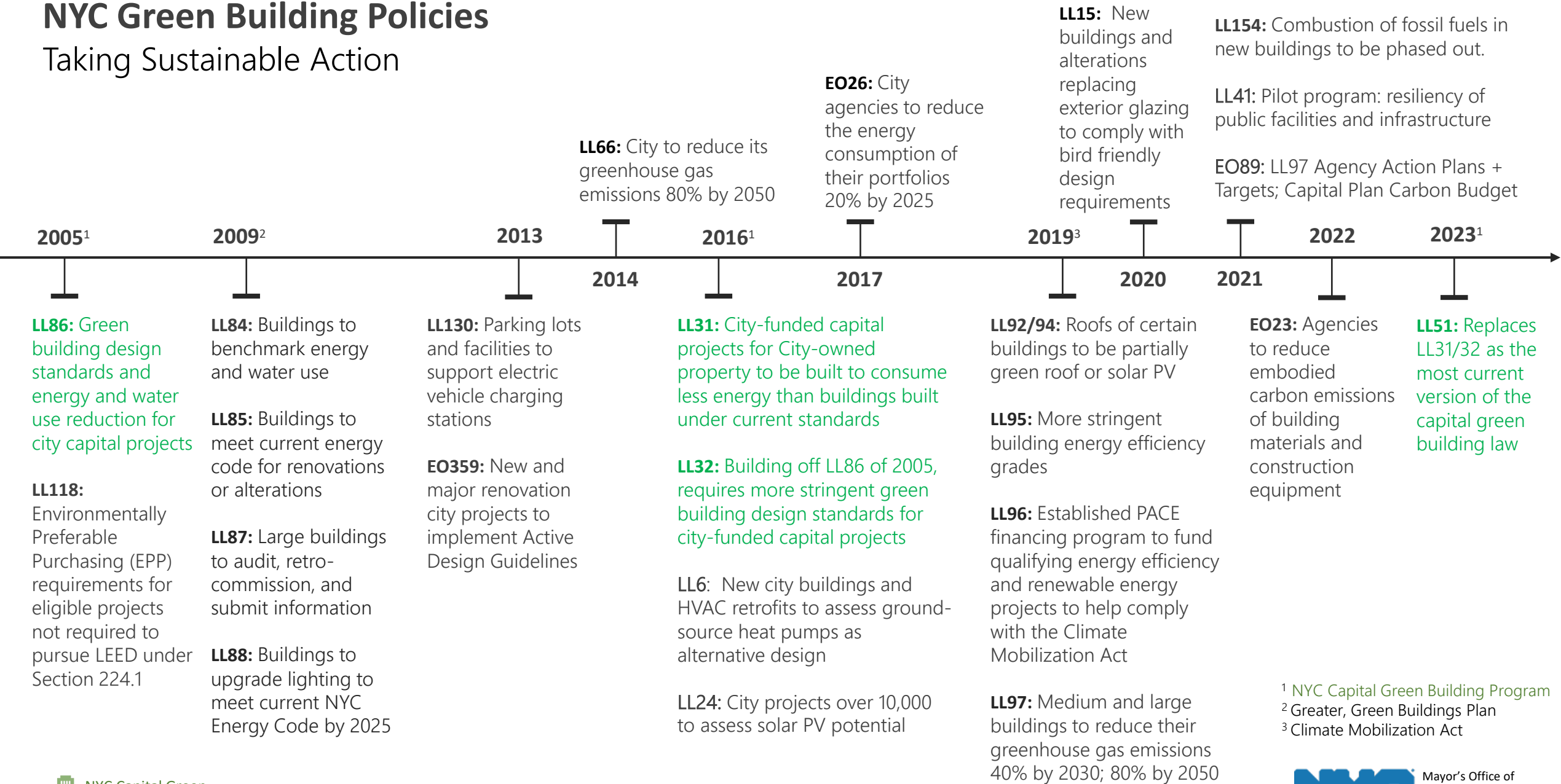
NYC City Capital Green Building Program

- Requires more stringent green building design standards for city-funded capital projects and requires them to consume significantly less energy than similar existing building types
- Support of the City's **OneNYC Plan 2050** goal to achieve carbon neutrality and position New York City to advance climate change mitigation and adaptation strategies and local and regional resilience

"The City aims to be a model for other cities and nations and for the private sector, which is central to New York's economy. Further, while the City sets ambitious policies across the public and private sectors, we recognize the need to lead by charting new pathways and testing new technologies."

NYC Green Building Policies

Taking Sustainable Action



¹ NYC Capital Green Building Program
² Greater, Green Buildings Plan
³ Climate Mobilization Act

NYC City Capital Green Building Program

Local Laws and Charter Revision

- Local Law 51 requires City-owned and city-funded capital projects to be designed and constructed to meet more stringent LEED® design standards and to consume less energy than buildings built under current standards.
- Charter Section 224.1 is labeled, “Green Building Standards, and codifies Local Law 51 within the City’s Charter and Administrative Code.

NYC City Capital Green Building Program

Summary of Changes from Local Laws 31/32 to Local Law 51

LL31/32

- Energy use (source EUI / energy cost) reductions (OR max source EUI) >>>>>
- Non-City-owned and City-owned w/o envelope scope required to reduce energy cost by 20% (\$12M-\$30M) and 25% (\$30M+) >>>>>
- Provisions for HVAC, boiler, lighting system installations or replacements >>>>
- HVAC system installations or replacements required to reduce energy cost by 5% compared to ASHRAE 90.1-2010 >>>

LL51

- **Energy use (site EUI) reductions** (OR max source EUI) (*baselines: ASHRAE 90.1-2013, existing site EUI*)
- Non-City-owned and City-owned w/o envelope scope required to reduce energy use (site EUI) by **25%** (\$12M-\$30M) and **30%** (\$30M+)
- **Only HVAC** system installations or replacements in systems category
- HVAC system installations or replacements required to reduce **site EUI** by **10%** from **NYCECC** baseline

Reaching Compliance

Applicability Criteria and Requirements

- | | | | | |
|------------------------------|--------------------------|----------|--------------------------|--|
| City-owned or City-funded | <input type="checkbox"/> | CRITERIA | <input type="checkbox"/> | Green Building Rating System Certification (LEED or approved alternative) |
| Occupancy group | <input type="checkbox"/> | | <input type="checkbox"/> | Energy Use Intensity Reduction |
| Construction cost | <input type="checkbox"/> | | <input type="checkbox"/> | Potable Water Use Reduction |
| Scope of work / project type | <input type="checkbox"/> | | <input type="checkbox"/> | Feasibility studies |
| Plumbing system cost | <input type="checkbox"/> | | | <ul style="list-style-type: none">• Onsite renewable energy generation• Net zero energy building• Green infrastructure |

Reaching Compliance

Applicability Criteria

City-owned

- Applies also to Cultural Institutions Group organizations (museums, botanic gardens, etc.)

City-funded

- 50% of total project budget is funded by City
- OR
- City contribution is \$10,000,000 or more

Occupancy

- Assembly (A)
- Business (B)
- Education (E)
- Factory (F)
- Hazard (H)
- Healthcare (I-2)
- Institutional (I)
- Mercantile (M)
- Residential (R)
- Storage (S)

Exempt: Outdoor assembly (A5), Utility (U)

Reaching Compliance

Applicability Criteria

Construction cost

- \$2,000,000+
- \$12,000,000 - \$30,000,000
- \$30,000,000+

Plumbing system cost

- \$500,000+

Scope of work / project type

- New building
- Addition
- Substantial reconstruction
 - With substantial envelope scope
 - Without substantial envelope scope
- HVAC system replacement or installation

Reaching Compliance

Applicability Criteria

Substantial reconstruction:

- At least 2 of the following building systems are undergoing rehabilitation:
*(*rehabilitation does not include minor alterations or ordinary repairs)*
 - HVAC
 - Electrical
 - Plumbing

AND

- 50%+ of gross floor area of existing building is affected by construction work

Substantial envelope scope:

- 50%+ of building envelope's total glazing area is altered or replaced

OR

- 50%+ of building envelope's total area of opaque components is altered or replaced

Reaching Compliance

Green Building Rating System Certification

- Projects with an estimated construction cost of \$2,000,000 or more involving the construction of a new building, an addition to an existing building, or the substantial reconstruction of an existing building, across most occupancy groups, are required to be designed and constructed to achieve a LEED® Gold or higher rating.
- Specific occupancy groups (F, H, E, R) have different designated green building rating systems, and some are exempt (A5, U).

Reaching Compliance

Green Building Rating System Certification

LEED:

- Most building types will have to be designed and constructed to achieve a LEED Gold rating

Enterprise Green Communities:

- Residential projects can use Enterprise Green Communities as an alternative to LEED

NYC SCA Green Schools Guide:

- Education projects can use the SCA's Green Schools Guide as an alternative to LEED

Envision:

- Projects classified as Factory (F) or Hazard (H) occupancy can use Envision as an alternative to LEED

**Projects required to meet achieve green building rating system certification must register and submit project to relevant third-party certifying body (ex. GBCI for LEED) and complete certification.*

Reaching Compliance

LEED Overview

LEED (Leadership in Energy and Environmental Design) is the world's most widely used green building rating system. LEED certification provides a framework for healthy, highly efficient, and cost-saving green buildings, which offer environmental, social and governance benefits.

It is a **holistic** system that factors in all critical elements that work together to create the best building possible.

The goal of LEED is to create better buildings that:

- Reduce contribution to global climate change
- Enhance individual human health
- Protect and restore water resources
- Protect and enhance biodiversity and ecosystem services
- Promote sustainable and regenerative material cycles
- Enhance community quality of life

Reaching Compliance

LEED Overview

How LEED works

To achieve LEED certification, a project earns points by adhering to prerequisites and credits that address carbon, energy, water, waste, transportation, materials, health and indoor environmental quality. Projects go through a verification and review process by GBCI and are awarded points that correspond to a level of LEED certification: Certified (40-49 points), Silver (50-59 points), Gold (60-79 points) and Platinum (80+ points).



Platinum

80+ points earned



Gold

60-79 points earned

Occupancy: A, B, I, M, I2, S



Silver

50-59 points earned



Certified

40-49 points earned

Occupancy: F, H

Reaching Compliance

Lead by Example: Synergies between LEED and PlaNYC

Protecting Us from Climate Threats

- 35 of the 100 total points in LEED v4 are distributed to reward climate change mitigation strategies
 - Sustainable Sites credit category (heat island reduction, rainwater management, etc.)
 - Energy & Atmosphere credit category (reduce operational carbon emissions, renewable energy, refrigerant management, etc.)
 - Materials & Resources credit category (reduce embodied carbon emissions, material reuse, etc.)
 - Resilience planning and design Pilot Credits

Improving Our Quality of Life

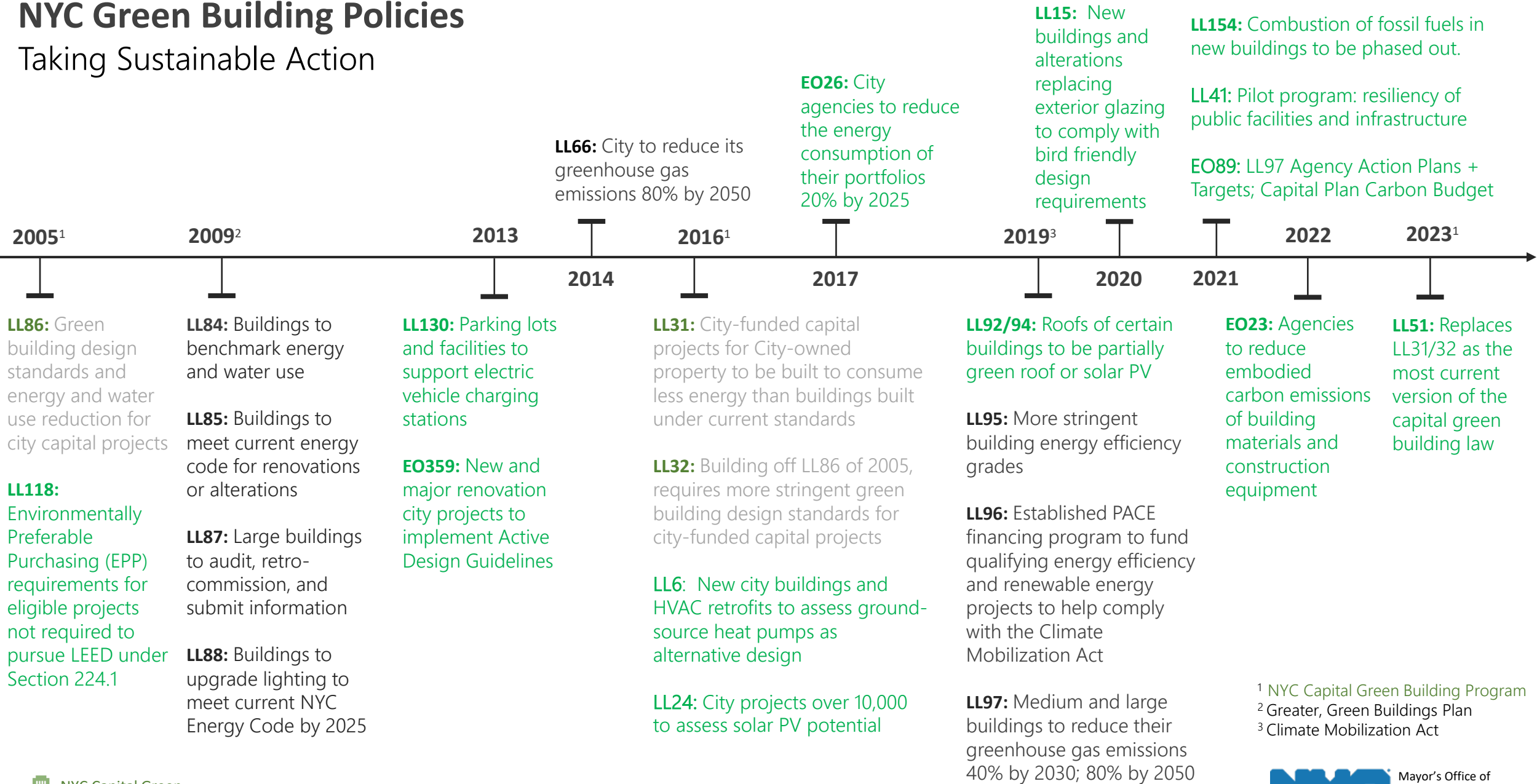
- Location & Transportation credit category (quality public transit, bicycle infrastructure, electric vehicles)
- Sustainable Sites credit category (habitat restoration, open space, sensitive land protection, etc.)
- Water Efficiency (water use reduction)
- Local Food Production Pilot Credit

Building the Green Economic Engine

- Material & Resources credit category (optimized EPDs, responsible sourcing, construction waste management)
- Comprehensive Composting credit
- Circular Products credit
- Design for Flexibility credit

NYC Green Building Policies

Taking Sustainable Action



¹ NYC Capital Green Building Program
² Greater, Green Buildings Plan
³ Climate Mobilization Act

Reaching Compliance

Policy Alignments with LL51 LEED Requirement

LL130

- LT Electric Vehicles

EO359

- IN Design for Active Occupants

LL6 + LL24

- EA Renewable Energy

LL92/94

- SS Protect or Restore Habitat
- EA Renewable Energy

LL154

- EApc Electrification ACP: Energy Simulation Performance Path / Prescriptive Path
- EApc Community Contaminant Prevention - Airborne Releases

EO23

- MR Building Life-Cycle Impact Reduction
- MR Environmental Product Declarations
- SSpc Clean Construction
- MRpc Procurement of Low Carbon Construction Materials

LL41

- SS Rainwater Management
- SS Heat Island Reduction
- IPpc Assessment and Planning for Resilience
- IPpc Design for Enhanced Resilience
- IPpc Passive Survivability and Back-up Power During Disruptions

LL15

- IN Bird Collision Deterrence

LL66 + EO26

- EA Optimize Energy Performance
- EA Enhanced Commissioning
- EA Advanced Energy Metering
- EA Enhanced Refrigerant Management

Reaching Compliance

☑ Energy Use Reduction

- Construction of a new building, an addition to an existing building, or the substantial reconstruction of an existing building that involves substantial work on the building envelope, across most occupancy groups, are required to reduce energy use intensity (EUI) per one of the following:
 - 50% reduction in energy use intensity compared to a baseline building that meets the minimum requirements of ASHRAE Standard 90.1-2013

OR

- A maximum source energy use intensity of 38 kBTU/ft²/yr (new buildings); 42 kBTU/ft²/yr (additions and substantial reconstructions)

Reaching Compliance

Energy Use Reduction

Non-city owned projects, and City-owned projects that do not include substantial work on the envelope:

- Projects with an estimated budget between \$12,000,000 and \$30,000,000 are required to reduce energy use intensity by 25% compared to ASHRAE 90.1-2013 or existing EUI.
- Projects with an estimated budget of \$30,000,000 or more are required to reduce energy use intensity by 30% compared to ASHRAE 90.1-2013 or existing EUI.

Reaching Compliance

HVAC System Installation or Replacement

- Capital projects that solely involve or include the installation or replacement of an HVAC system upgrade that has a construction cost of \$2,000,000 or more are required to reduce energy use intensity by 10% compared to the current NYC Energy Conservation Code.

Reaching Compliance

Potable Water Use Reduction

- Each project involving the installation or replacement of plumbing systems at an estimated construction cost of \$500,000 or more is required to reduce potable water use in the aggregate by 30% or more, as prescribed in the LEED Indoor Water Use Reduction credit.

Reaching Compliance

☑ Design Alternate Studies

City-owned capital projects with an estimated construction cost of \$2,000,000 or more and that include envelope scope are required to perform design alternate / feasibility studies.

All non-city owned projects (and city-owned projects with no envelope scope) with estimated construction costs greater than \$12,000,000 are exempt from performing design alternate studies.

- Onsite Energy Generating Building
- Net Zero Energy Building
 - *Only applies to buildings that are 1-3 stories above grade*
- Green Infrastructure

Reaching Compliance

☑ Executive Order 23 – Clean Construction

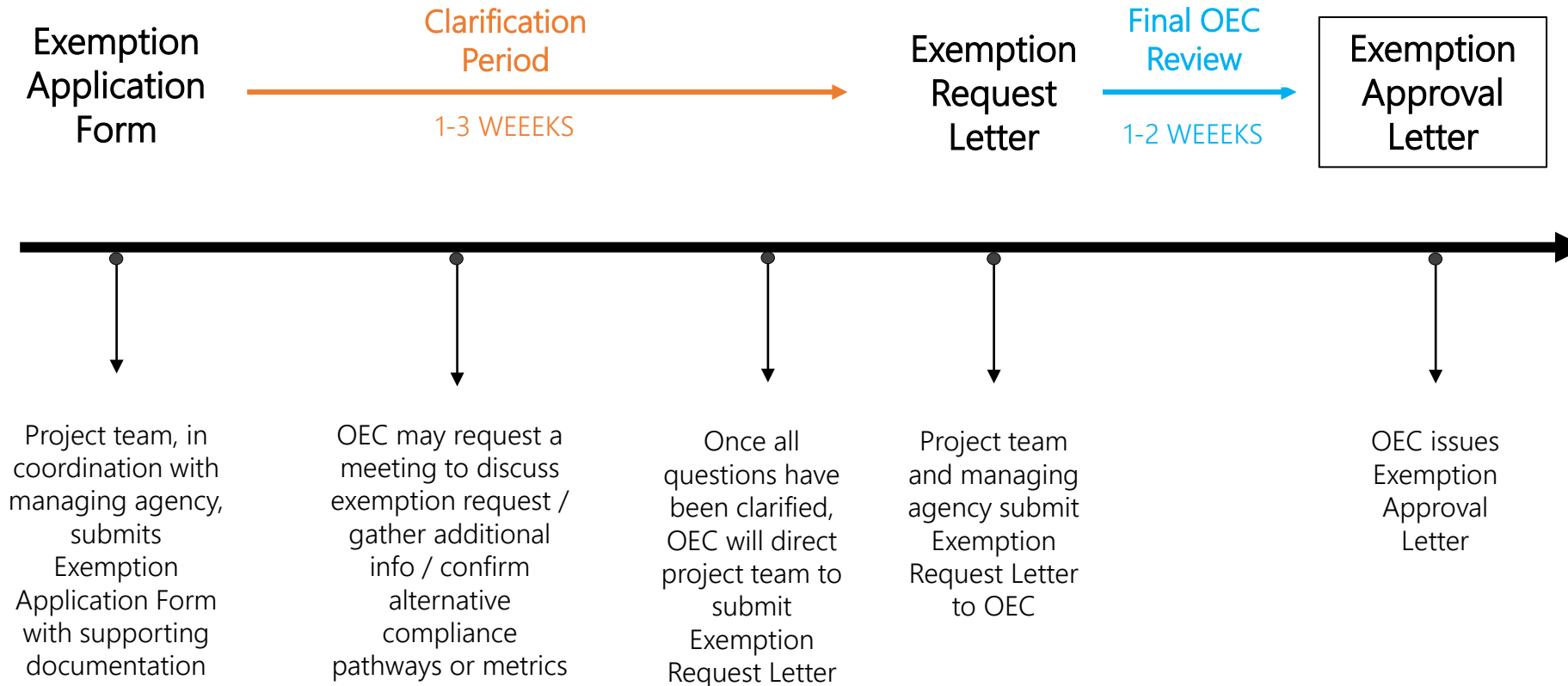
- Low-carbon concrete specifications
- Environmental Product Declarations (EPDs)
 - Concrete
 - Structural steel
- Low-emission construction vehicles and equipment
- Life cycle assessments
- Action Plan for reducing embodied carbon impact of agency's capital projects

Exemptions + Alternative Compliance

- OEC has authority to **grant limited partial exemptions** and **approve alternative compliance approaches**
- Exemption requests are evaluated based on **public interest**
- Managing agencies / project teams must provide substantial **supporting documentation** to justify partial exemption / propose alternative compliance approaches and/or metrics that convincingly demonstrates that the project is **unable to comply with a specific provision without undue burden**.
- In all cases, projects will be **required to meet the applicable provisions to the greatest extent possible**. Full exemptions from all provisions will not be granted except in the most extraordinary circumstances.
- The number of exemptions that can be granted each year is **limited by law** and will only be considered and potentially granted under special circumstances.

Exemptions + Alternative Compliance

Standard Exemption Request + Approval Process and Timeline



Alternative Standards

- OEC has **authority to establish alternative standards** to those established in Charter Section 224.1
 - Green building standard (LEED rating) requirement
 - Energy intensity requirement
- Alternative standards must be **no less stringent** than the established LEED and energy intensity use standards as prescribed by the defined criteria.
- Potential alternative standards will only be considered and potentially granted under the **most special of circumstances**.

LL51 of 2023 (Charter Section 224.1)

Applicability Criteria and Requirements Map - *City-Owned Projects* (**Section 224.1 applies only to New Buildings, Additions, Substantial Reconstructions, and HVAC Upgrades.*)
 (Projects provided a CP for Construction, CP for Design and Construction (design-build) or that submitted for a building permit prior to April 16, 2023 should comply with LL31/32.)

Project Type	Occupancy Group	Envelope Scope	Estimated Cost of Construction	Rating System	Building Energy Performance Requirements	Water Use Reduction	Additional Provisions	
New building OR Addition OR Substantial Reconstruction =50% GFA affected AND 2+ systems rehabilitated (HVAC, electric, plumbing)	O. Assembly (A5) Utility (U)				EXEMPT			
	Assembly (A) Business (B) Institutional (I) Mercantile (M) Healthcare (I2) Storage (S)	Includes substantial envelope scope	\$2M+	LEED v4 Gold rating	50% reduction in site EUI compared to ASHRAE 90.1-2013 OR Max source EUI 38 kBTU/SF/yr (new); 42 kBTU/SF/yr (reconstructions, additions)	If plumbing system construction cost is \$500K or more: Minimum 30% potable water use reduction	Study feasibility of onsite energy generating building alternate Projects 3 stories above grade or less, study feasibility of net zero energy building alternate Study feasibility of incorporating green infrastructure	
			\$2M - \$12M		Not Applicable			
		\$12M - \$30M	25% reduction in site EUI compared to existing EUI					
		\$30M+	30% reduction in site EUI compared to existing EUI					
	Residential (R)	Includes substantial envelope scope	\$2M+	Enterprise Green Communities OR LEED v4 Gold	50% reduction in site EUI compared to ASHRAE 90.1-2013 OR Max source EUI 38 kBTU/SF/yr (new); 42 kBTU/SF/yr (reconstructions, additions)			
			Does not include substantial envelope scope		\$2M+	Not Applicable		
	Education (E)	Includes substantial envelope scope	\$2M+	Green Schools Guide OR LEED v4 Gold	50% reduction in site EUI compared to ASHRAE 90.1-2013 OR Max source EUI 70 kBTU/SF/yr			
			Does not include substantial envelope scope		\$2M+	Not Applicable		
	Factory (F) Hazard (H)	Includes substantial envelope scope	\$2M+	Envision Gold OR LEED v4 Certified (additions, reconstructions w/ construction cost <\$10M EXEMPT)	50% reduction in site EUI compared to ASHRAE 90.1-2013 OR Max source EUI 38 kBTU/SF/yr (new); 42 kBTU/SF/yr (reconstructions, additions)			
			\$2M - \$12M		Not Applicable			
		\$12M - \$30M	25% reduction in site EUI compared to existing EUI					
		\$30M+	30% reduction in site EUI compared to existing EUI					
	All occupancy types except Outdoor assembly (A5) and Utility (U): Projects not subject to above, that include HVAC installation or replacement costing \$2M or more					10% reduction in site EUI compared to NYC Energy Conservation Code		

* Cost thresholds listed above are denominated in January 2022 dollars and are indexed to inflation annually

LL51 of 2023 (Charter Section 224.1)

Applicability Criteria and Requirements Map - *Non-City-Owned Projects* (*Section 224.1 applies only to New Buildings, Additions, Substantial Reconstructions, and HVAC Upgrades.)
 (Projects provided a CP for Construction, CP for Design and Construction (design-build) or that submitted for a building permit prior to April 16, 2023 should comply with LL31/32.)

Project Type	Occupancy Group	Estimated Cost of Construction	Rating System	Building Energy Performance Requirements	Water Use Reduction
New building OR Addition OR Substantial Reconstruction =50% GFA affected AND 2+ systems rehabilitated (HVAC, electric, plumbing)	Outdoor assembly (A5) Utility (U)			EXEMPT	If plumbing system construction cost is \$500K or more: Minimum 30% potable water use reduction
	Assembly (A) Business (B) Institutional (I) Mercantile (M) Healthcare (I2) Storage (S)	\$2M - \$12M	LEED v4 Gold or higher	Not Applicable	
		\$12M - \$30M		25% reduction in site EUI compared to ASHRAE 90.1 2013 (new construction, additions, reconstructions w/envelope scope); compared to existing EUI (reconstructions w/o envelope scope)	
		\$30M+		30% reduction in site EUI compared to ASHRAE 90.1-2013 (new construction, additions, reconstructions w/ envelope scope); compared to existing EUI (reconstructions w/o envelope scope)	
	Residential (R)	\$2M+	Enterprise Green Communities OR LEED v4 Gold	Not Applicable	
	Education (E)	\$2M+	Green Schools Guide OR LEED v4 Gold	Not Applicable	
	Factory (F) Hazard (H)	\$2M - \$12M	Envision Gold OR LEED v4 Certified (additions, reconstructions w/ construction cost <\$10M EXEMPT)	Not Applicable	
		\$12M - \$30M		25% reduction in site EUI compared to ASHRAE 90.1-2013 (new construction, additions, reconstructions w/ envelope scope); existing EUI (reconstructions w/o envelope scope) (*exclusive of process loads)	
		\$30M+		30% reduction in site EUI compared to ASHRAE 90.1-2013 (new construction, additions, reconstructions w/envelope scope); existing EUI (reconstructions w/o envelope scope) (*exclusive of process loads)	

All occupancy types except Outdoor assembly (A5) and Utility (U): Projects not subject to above, that include **HVAC installation or replacement costing \$2M or more** → 10% reduction in site EUI compared to NYC Energy Conservation Code

* Cost thresholds listed above are denominated in January 2022 dollars and are indexed to inflation annually

Mayor's Office Of Environmental Coordination
NYC Capital Green Building Contacts

James Wilson, Senior Policy Advisor

JaWilson@moec.nyc.gov

212-788-2862

Esther Brunner, Deputy Director

Hilary Semel, Director

capitalgreenbuilding@moec.nyc.gov