

NYC Local Law 97

Intro and context

ULI Toronto

September 2021

Christopher Cayten
Partner, Senior Director
CodeGreen

CODEGREEN



Introductions – CodeGreen



Christopher Cayten

Partner, Senior Director of Strategic Growth

CodeGreen Solutions



Our History

Founded in 2006

National Leader in Sustainability and Energy Efficiency to commercial real estate sector



Our Mission

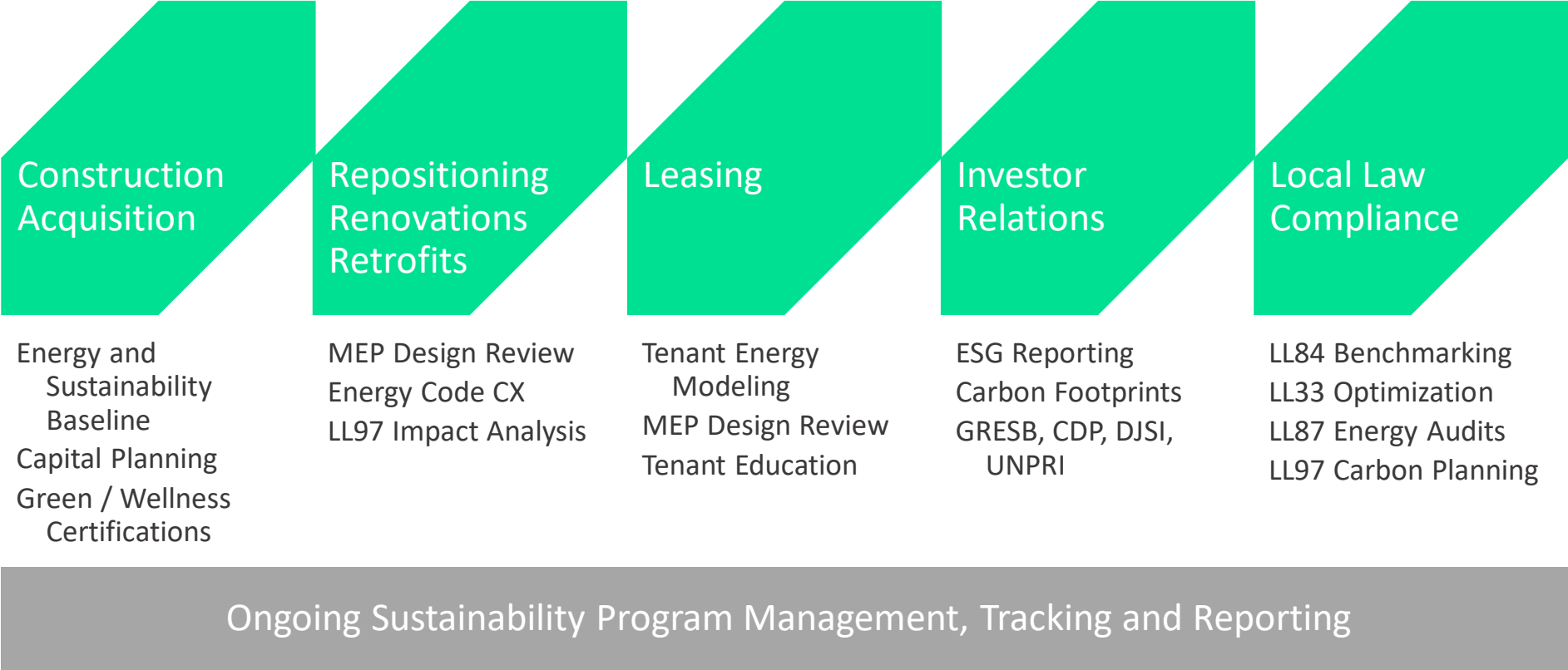
To provide strategies and actionable solutions that promote a fundamentally healthier more sustainable built environment



Our Team

All technical and engineering services provided by our in-house staff of engineers, technicians and professionals – LEED AP's, PE's, RA's, CEM's, CxA's etc.

CodeGreen Expertise: Energy and Sustainability Management



Select Client List

nuveen
A TIAA Company

CBRE
GLOBAL
INVESTORS

 **LaSalle**
INVESTMENT MANAGEMENT®

GREYSTAR

KILROY
REALTY
CORPORATION


JBG SMITH


MACQUARIE


SUN COMMUNITIES, INC.®

BLACKROCK®


Columbia
Property Trust

VORNADO
REALTY TRUST


TISHMAN SPEYER

 **CUSHMAN &
WAKEFIELD**

Hines

 **FWR**
First Washington Realty



bxp Boston
Properties®

 **ROCKEFELLER
GROUP**

 **Jonathan Rose
Companies**

12+ Years of Leadership in NYC Sustainable Real Estate



Energy Audits and RCx

>100M ft²



Local Law 84 Energy Benchmarking

>150M ft²



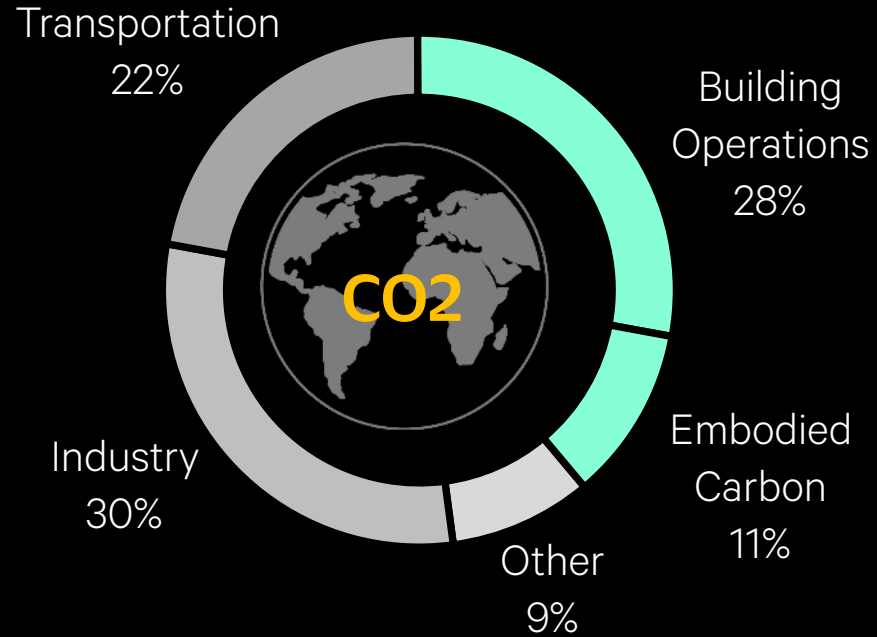
LEED Certification

>100M ft²

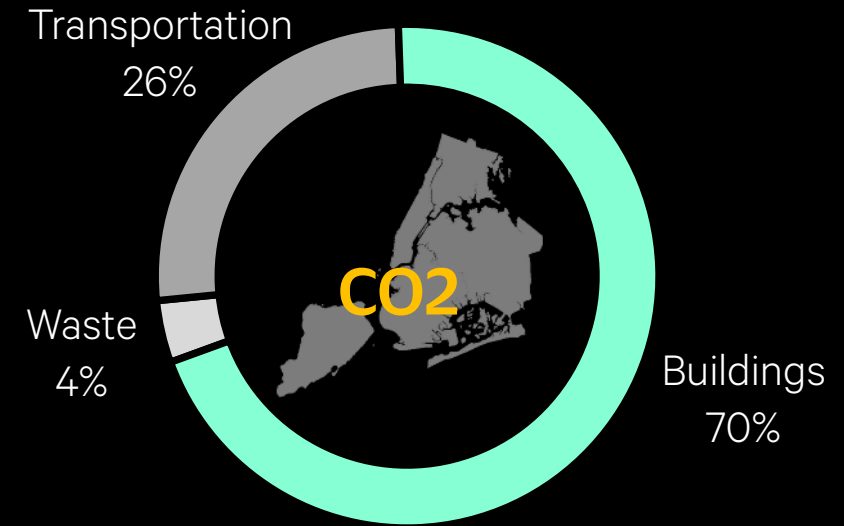


NYC Legislation Overview

Why Buildings Matter



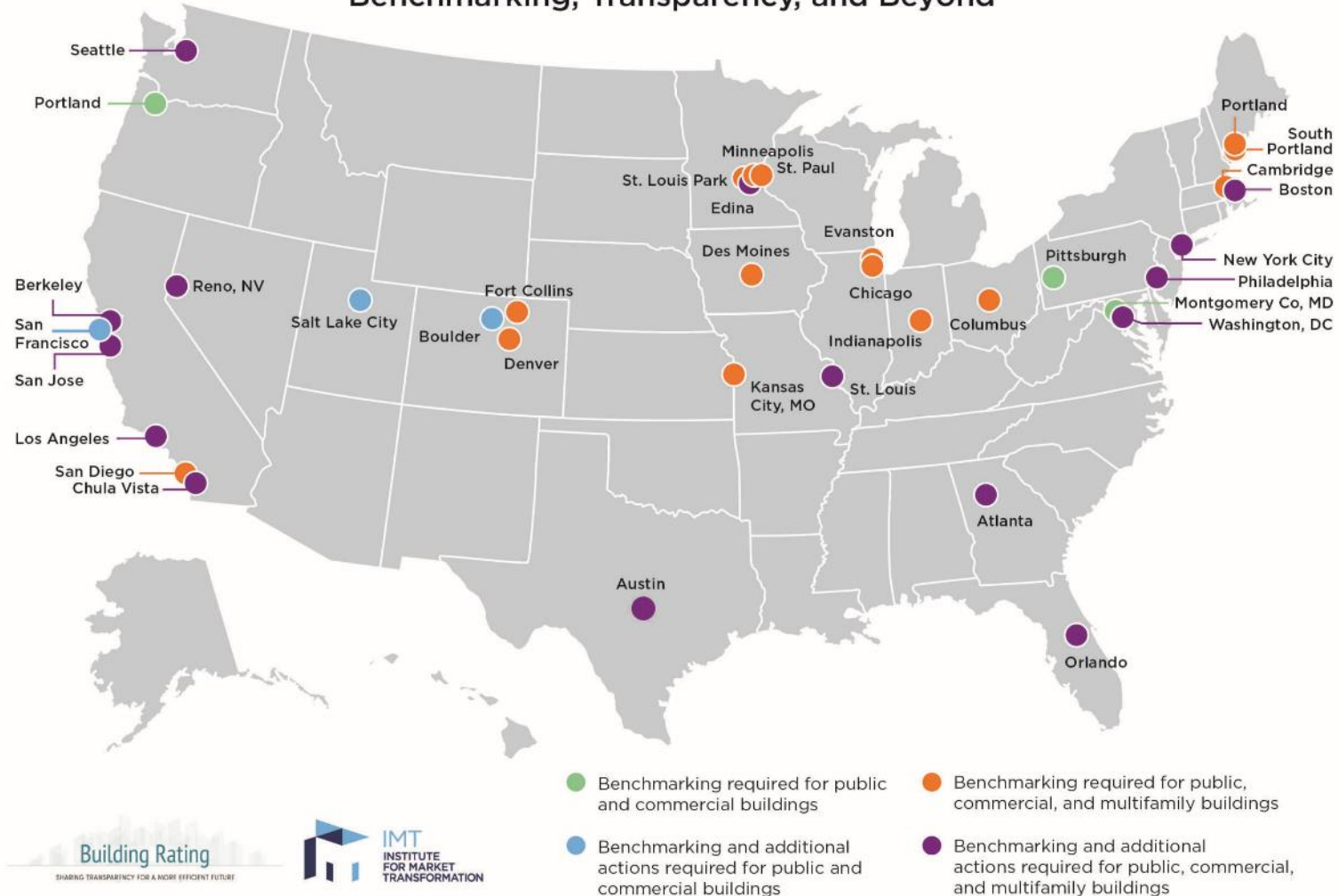
Buildings = **40%** of global GHG



Buildings = **70%** of NYC GHG
(similar for most large cities)

Mandates: Energy and Carbon Regulations

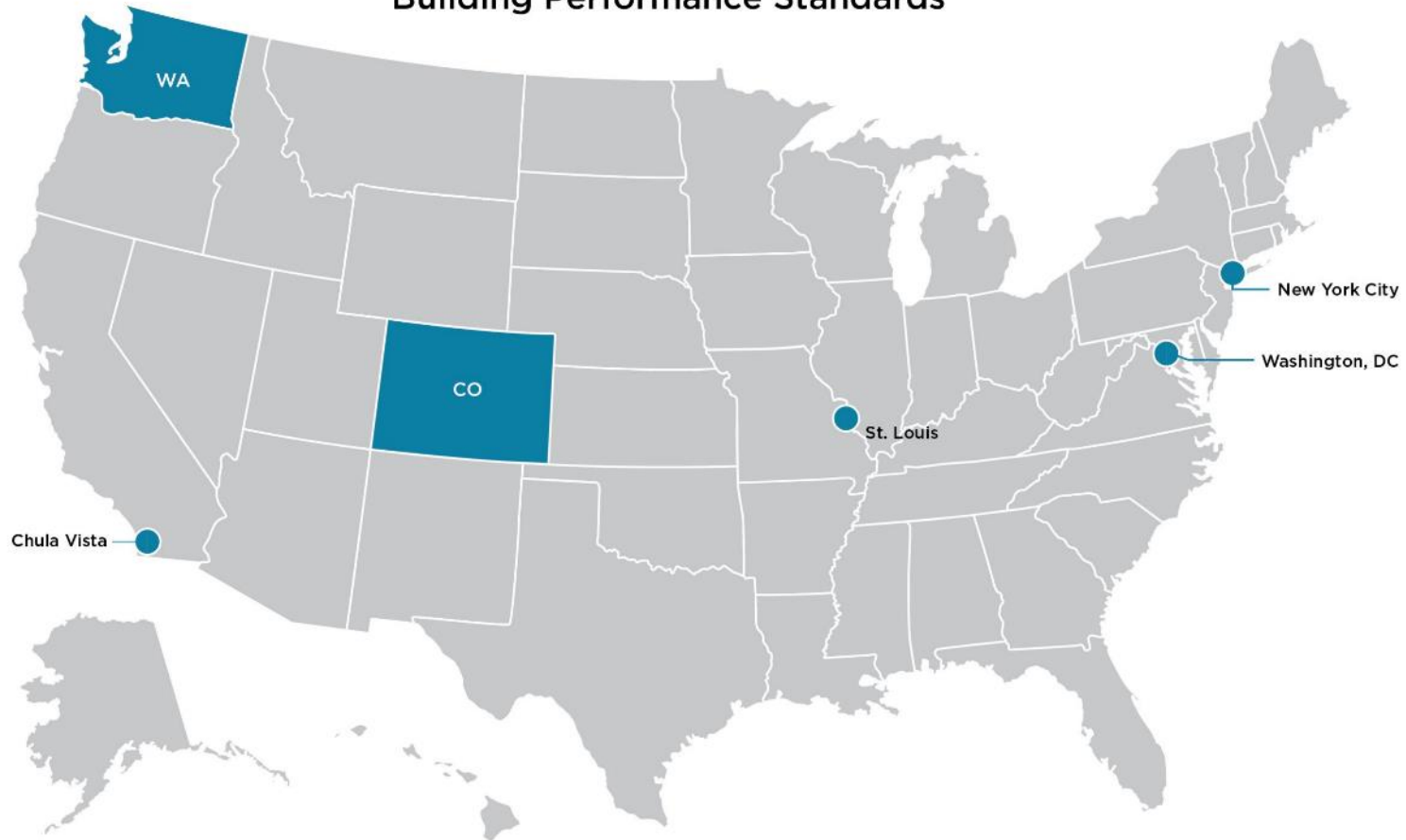
U.S. City and County Policies for Existing Buildings: Benchmarking, Transparency, and Beyond



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Mandates: Energy and Carbon Regulations – Performance Standards

U.S. City and State Policies for Existing Buildings:
Building Performance Standards



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New York City

STATUS

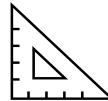
Passed 2019, many details TBD by 2023

Citywide GHG
from Buildings



70%

Metric Used



GHG/SF/YR

Timeline



2024 (annual)

Offsite Allowances
(RECs/Offsets)



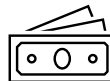
Local RECs;
Offsets (capped)

State Renewable
Electric Grid Target



70% by 2040
100% by 2050

Fine Structure



\$268/mtCO2e/yr

Industry Engagement
Process



No official program
Was run by private sector

NYC
Mayor's Office
of Sustainability



Washington, DC

STATUS

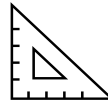
To be finalized by Jan 2021

Citywide GHG
from Buildings



74%

Metric Used



Energy Star

(2018/19 baseline)

2023 evaluate GHG metric

Timeline



2021 (every 5yrs)

Offsite Allowances
(RECs/Offsets)



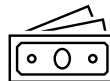
TBD

State Renewable
Electric Grid Target



100% by 2032

Fine Structure



Up to \$2/sf/yr

Based on % over the limit

Industry Engagement
Process



12+m public meetings



**CLEAN ENERGY DC
OMNIBUS AMENDMENT
ACT OF 2018, TITLE III....**

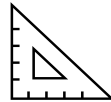
Boston

STATUS
Passed Sep 21, 2021

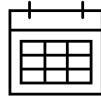
Citywide GHG
from Buildings



Metric Used



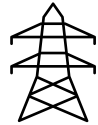
Timeline



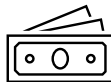
Offsite Allowances
(RECs/Offsets)



State Renewable
Electric Grid Target



Fine Structure



Industry Engagement
Process



70%
50/50 fuel/electric

GHG/SF/YR
threshold limits vs % self improvement

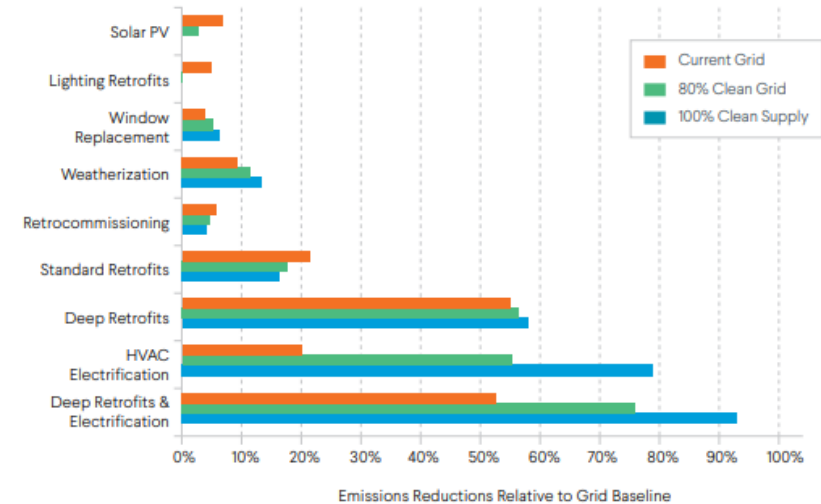
2025 (annual)

Local RECs only

80% by 2050

\$234/mtCO2e/yr
“Alternative Compliance Payment”

12+m
TAG + public meetings



Program Variations

Metric (Energy, Energy Star, GHG)

Target (relative vs. absolute)

RECs and Carbon Offsets

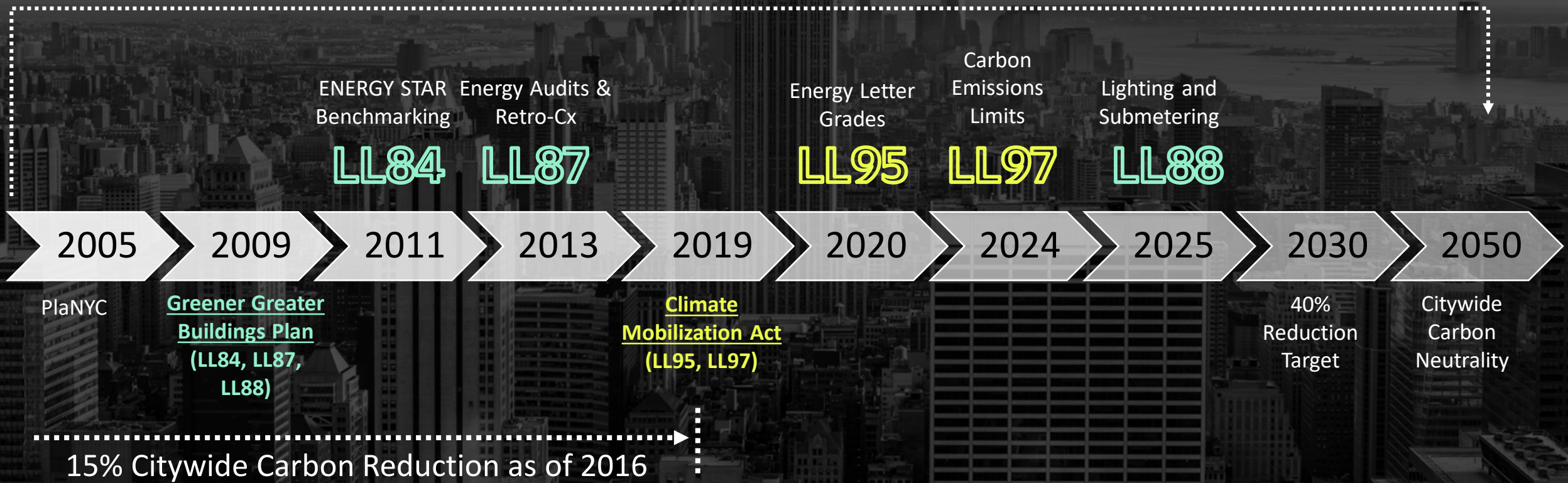
Onsite Combustion

Timeframe

Time of Use GHG

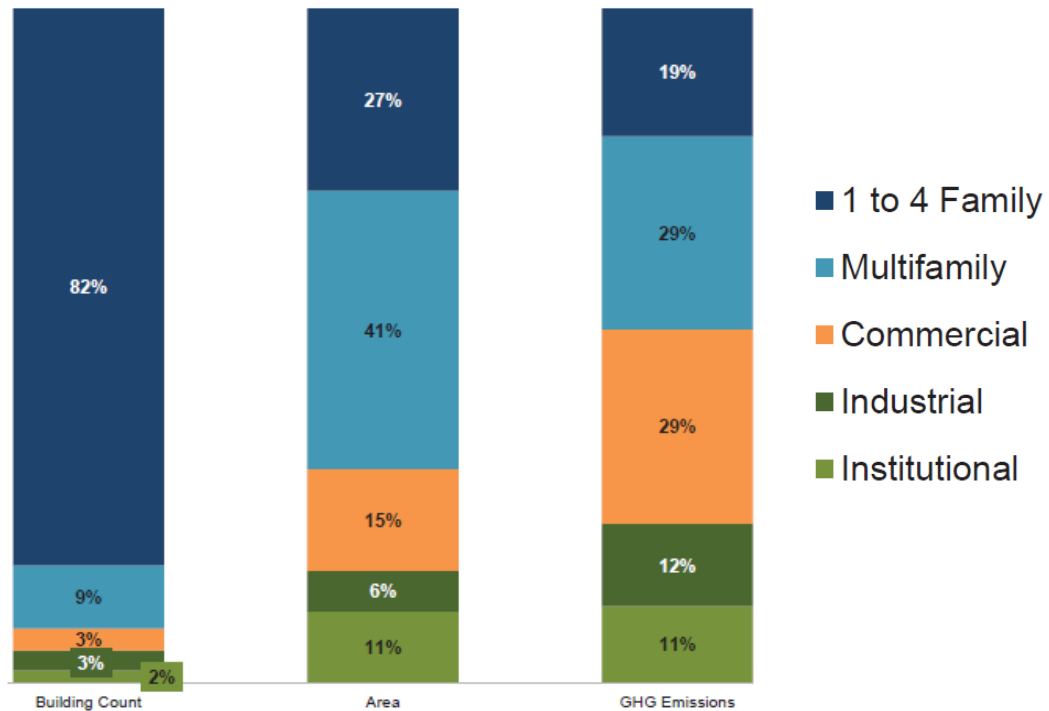
NYC Building Energy Efficiency Regulations

Citywide Carbon Neutrality by 2050

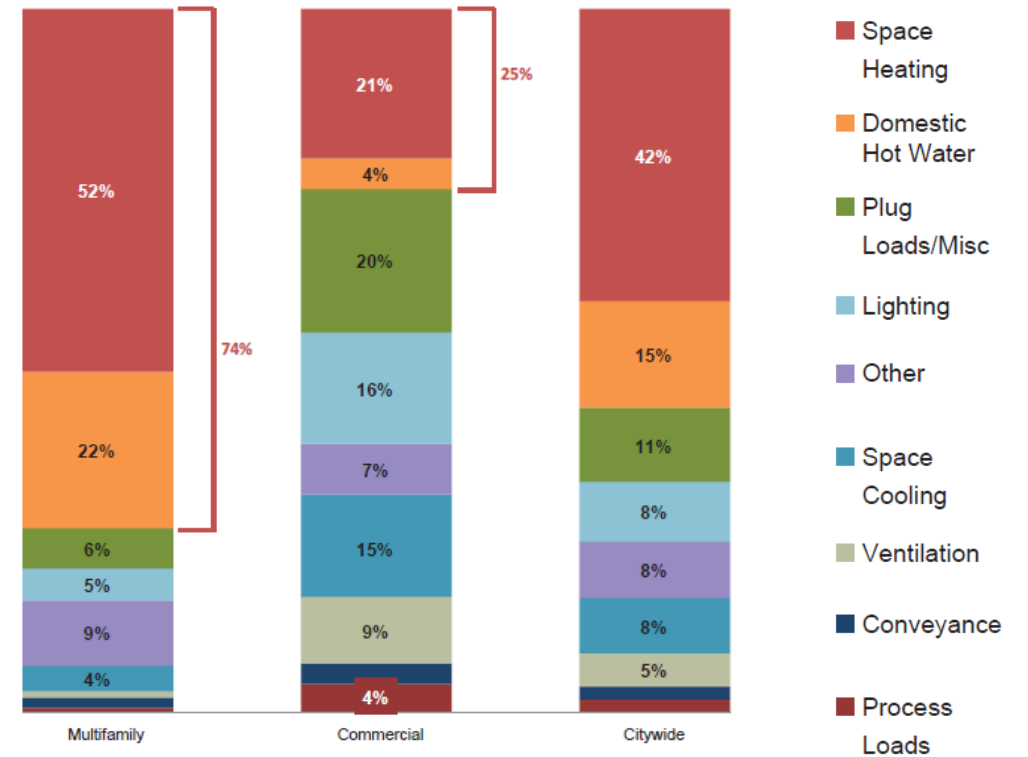


NYC Building Stock and GHG Emissions

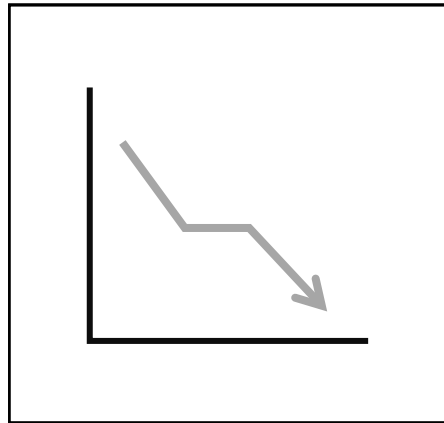
Building Uses by Count, Area and GHG Emissions



Building GHG Emissions by End Use



Local Law 97 Carbon Limits



2024

Occupancy Group	Space Use	Carbon Limit (kgCO ₂ e/sf)	
		(lowest 20%) 2024-2029	(lowest 80%) 2030-2034
H - Hospital, B - Lab	Hospital/Lab/Medical Office	23.81	11.93
M - Mercantile	Retail	11.81	4.3
A - Assembly	Assembly	10.74	4.2
R1 - Hotel	Hotel	9.87	5.26
B - Business	Office	8.46	4.53
E - Educational	School	7.58	3.44
R2 - Residential	Multifamily Housing	6.75	4.07
F - Factory	Factory	5.74	1.67
S - Storage	Storage/Warehouse	4.26	1.1

Fines: Annual \$268 per mtCO₂e over the limit

LL97 Structure

- GHG/sf Emissions limits by Property Type
- Alternative compliance for certain building types
- Adjustments and variances
- Fines

Governance - Creation of:

- Office of Building Energy and Emissions Performance
- Advisory Board – Appointed by Mayor and Council Speaker

Calculating Your Building's LL97 GHG Limits

Gross Square Footage by Space Type (sf)	x	Emissions Intensity Limit per Space Type (mtCO2e/sf)	=	Carbon Emissions Limit (mtCO2e)
Area of Space 1 (Office)	x	office emissions intensity limit	=	office area emissions limit
				+
Area of Space 2 (Retail)	x	retail emissions limit	=	retail area emissions limit
				TOTAL CARBON EMISSIONS LIMIT (mtCO2e)

Note: Level of detail for submission and/or backup documentation still TBD from DOB

Calculating Your Building's Carbon Footprint

Converting Energy Use To GHG

(Energy Use (Kbtu))	x	(Emissions Factor)	=	(Carbon Emissions (mtCO2e))
Whole Building Electricity Consumption	x	electricity emissions factor**	=	carbon emissions from electricity
				+
Whole Building Gas Consumption	x	gas emissions factor	=	carbon emissions from gas
				+
Whole Building Oil Consumption	x	oil emissions factor	=	carbon emissions from oil
				+
Whole Building Steam Consumption	x	steam emissions factor**	=	carbon emissions from steam
				TOTAL CARBON EMISSIONS (mtCO2e)

**NYC custom factors locked-in through 2029

Calculating your building's GHG limits, compliance and fines

Fines

$$\left(\begin{array}{l} \text{Total Building} \\ \text{Emissions} \\ \text{(mtCO2e)} \end{array} - \begin{array}{l} \text{Total Emissions} \\ \text{Limit} \\ \text{(mtCO2e)} \end{array} \right) \times \$268 = \text{Annual Fine}$$

Failure to submit report

\$0.50/sf per month

False statement

\$500,000

Deductions and Adjustments

Applicable Periods

Deduction/Adjustment	2024-2029	2030-2034	Notes
Carbon Offsets (10% of LL97 GHG limit)	Yes	TBD	
REC Purchases (Zone J)	Yes	Yes	Not currently available in market

Compliance and Fines: Sample Building

Building GSF: 1,100,00 sf

Current Emissions Intensity: 5.9kgCO₂e/sf

Fine: \$268/mtCO₂e over limit

2024-2029 Compliance

Current Emissions Intensity	Limit	% Above or Below	Annual Fine
5.9kgCO ₂ e/sf	8.46	30% Below	N/A

2030-2034 Compliance

Current Emissions Intensity	Limit	% Above or Below	Annual Fine
5.9kgCO ₂ e/sf	4.53	30% Above	\$403,000

Compliance

Starting May 1, 2025

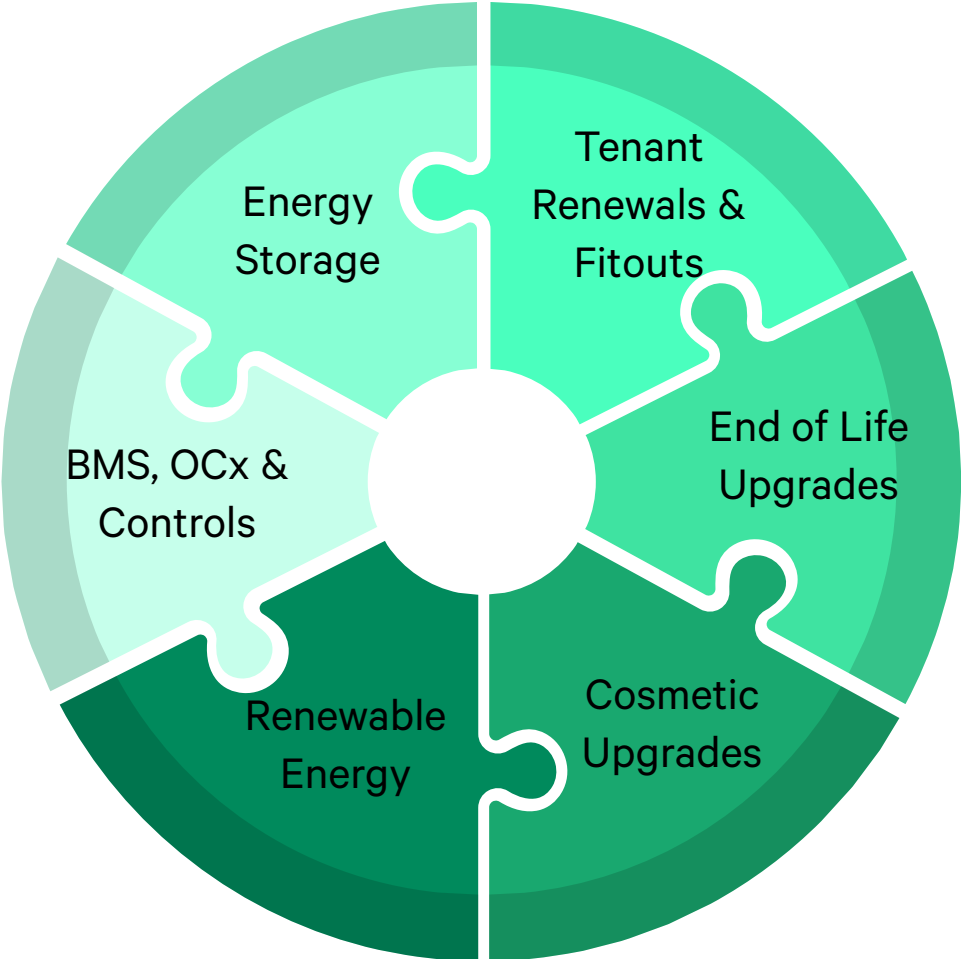
Submit a report annually demonstrating compliance for previous calendar year

Certified by PE/RA

Open Items to be Addressed By DOB and Advisory Board

- Rules for adjustments to limits
- Rules for space/GHG limit allocations
- Rules for submission format/process
- Rules for REC/Offset definitions
- Potential alternative treatment for:
 - High tenant loads
 - Peak demand reductions / Energy Storage
- Potential carbon trading

Carbon Reduction Planning Touches every Facet of a Building Lifecycle



Frequently Asked Questions

I am building a new building that is required to meet the energy code. Will it meet the LL97 carbon limits?

Probably not. The energy code and LL97 (regretfully) use very different approaches and metrics for compliance

Can I do nothing and just purchase offsets or renewable energy to meet the LL97 requirements

Theoretically yes, but only for buildings where 10% or less of their emissions come from fossil fuels, but there is no current supply or known price so this is not a good plan

Can I do nothing and just pass the cost of LL97 fines on to my tenants?

Depends on your lease and you will have a lot of unhappy (ex)tenants

Does LL97 hold the landlord accountable for the tenant energy use and their equivalent emissions?

YES, even if the tenant pays their own utility bill and the landlord never sees it

Does LL97 have higher limits for an office building full of trading desks with 4 monitors each running 24 hours a day?

NO

Does LL97 let you use a lower emissions factor for your electricity if you buy Renewable Energy Credits or have a Virtual Power Purchase Agreement (VPPA) from generation facilities thousands of miles away?

NO

Does LL97 give extensions to new buildings that were already in design or construction when LL97 was passed?

NO

Is it possible for a building to get a good Letter Grade and still get a fine under LL97?

Yes – these laws use different metrics – Letter Grades uses Energy Star and LL97 uses GHG/sf/yr

What will the City do with the collected fines?

Like all other City fines the funds go into the general fund for operations

Thank you



CODEGREEN