

BUILDINGENERGY NYC

Bridging the Gap Between NYC Local Laws and Decarbonization

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**Northeast Sustainable Energy Association (NESEA)
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SPEAKERS



Develop a better understanding of NYC building and energy local laws



Better advise building decision makers



Be better equipped to facilitate and lead discussions with stakeholders



Make better, more cost-effective decisions regarding which measures to implement and how to study them

Learning Objectives

Agenda

Overview of Energy & Sustainability Laws

Project Examples & Discussion

- Multifamily cooperative in Kips Bay, Manhattan
- LMI multifamily rental in Brownsville, Brooklyn
- Multifamily condominium in West Village, Manhattan

Q&A

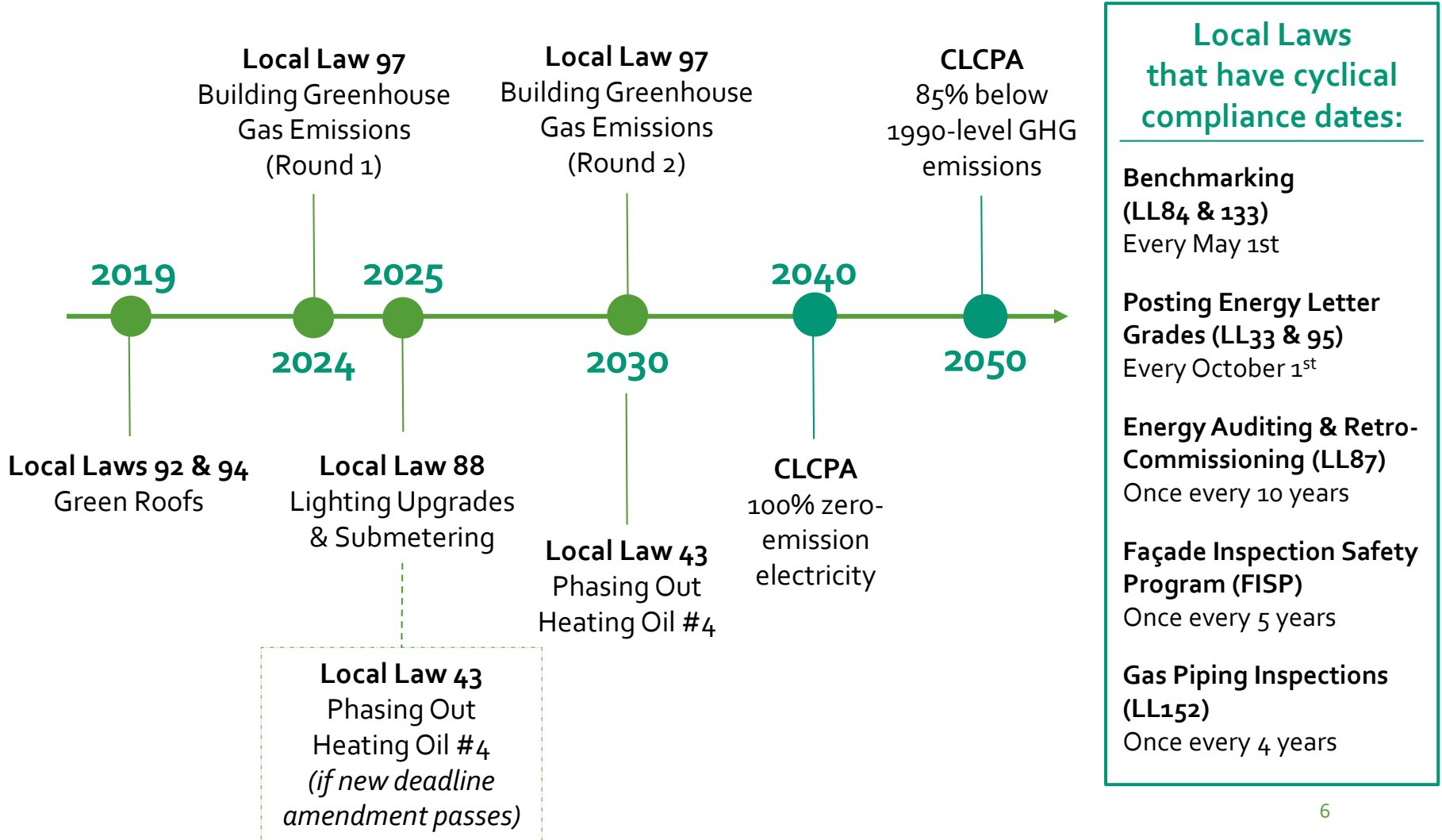
Energy & Sustainability Laws



Scan for Handout

- **Local Law 97** – Building Greenhouse Gas Emissions
- **Local Laws 84, 133, 33, & 95** – Energy Benchmarking & Letter Grades
- **Local Law 87** – Energy Auditing & Retro-Commissioning
- **Local Law 88** – Lighting Upgrades & Submetering
- **Local Law 43** – Phasing Out Heating Oil #4
- **Local Law 152** – Mandatory Gas Piping System Inspection
- **FISP (Local Law 11)** – Façade Inspections
- **Local Laws 92 & 94** – Green Roofs
- **NYS CLCPA** – Climate Leadership and Community Protection Act
(i.e., the Climate Act)

Energy & Sustainability Laws Timeline



Let's discuss some projects

**Multifamily cooperative
in Kips Bay, Manhattan**

Six (6) local laws

**Low-to-Moderate Income (LMI) multifamily rental
in Brownsville, Brooklyn**

Five (5) local laws

**Multifamily condominium
in West Village, Manhattan**

Six (6) local laws



Multifamily Cooperative in Kips Bay, Manhattan

- Property Profile:
 - Year Built: 1976
 - Square Footage: 145,000
 - Number of Buildings: 1
 - Units: 179
 - BBL: 1-xxxx5-xxx6
 - FISP compliance year: 2015 – 2017 and 2020 - 2022
- This building is doing FISP and has a LL97 penalty. What should they be thinking about, what are the options?

Local Law 97 Impact	ROUND 1 (2024-2029)	ROUND 2 (2030-2034)
Current Emissions (tons CO ₂ e)	631	631
Emissions Limit (tons CO ₂ e)	851	484
Estimated Annual Penalty	\$0	\$39,350
% Reduction Required for \$0 Penalty	-	23%
Letter Grade	C	
ENERGY STAR SCORE	67	

LL97 PENALTY

MULTIFAMILY COOPERATIVE IN KIPS BAY, MANHATTAN





Multifamily Cooperative in Kips Bay, Manhattan



FISP Repairs Needed



Electrification Opportunity



**Local Law 87 Study
Due 2025**



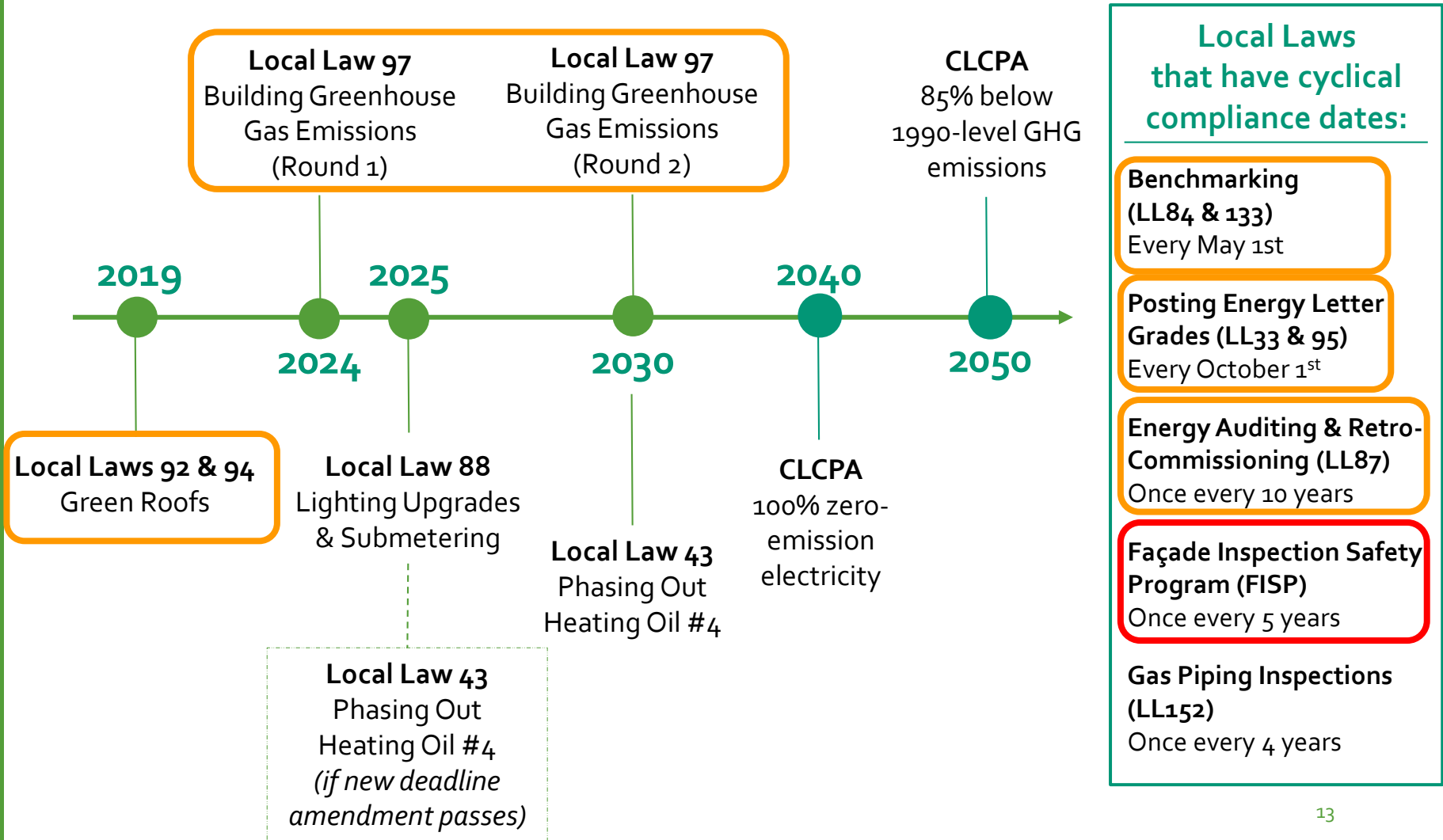
**Review of LL84
Benchmarking Data
Needed**



LL92/94: GREEN ROOFS

Since the building needs this façade work, what about the roof?

Energy & Sustainability Laws Timeline



LMI Multifamily in Brownsville, Brooklyn



- Property Profile:
 - Year Built: 1976
 - Square Footage: 253,000
 - Number of Buildings: 2
 - Units: 260
 - BBL: 3-xxxx3-xxx0
- This building has to complete LL87 compliance and is preparing for LL97 compliance. How should the building proceed?

Local Law 97 Impact	ROUND 1 (2024-2029)	ROUND 2 (2030-2034)
Current Emissions (tons CO2e)	3,599	3,599
Emissions Limit (tons CO2e)	3,454	2,060
Estimated Annual Penalty	\$38,897	\$412,595
% Reduction Required for \$0 Penalty	4%	43%
Letter Grade	D	
ENERGY STAR SCORE	27	

LL97 PENALTY

LMI MULTIFAMILY IN BROWNSVILLE, BROOKLYN

LMI multifamily in Brownsville, Brooklyn

Description	Typical for LL87 ECM	Typical for LL87 RCM	Typical for LL88
Heat and hot water setpoints	✓	✓	
Repair heating system leaks	✓	✓	
Heating system in good condition	✓	✓	
Install individual radiator temperature controls	✓		
Insulate heating and hot water pipng	✓	✓	
Insulate steam system condensate tank or water tank	✓	✓	
Install indoor and outdoor heating system sensors and boiler controls	✓		
Repair or replace all steam traps	✓	✓	
Install or upgrade steam system master venting	✓	✓	
Upgrade lighting to comply with NYCECC	✓		✓
Weatherize and air seal , including windows and ductwork	✓	✓	
Install timers on exhaust fans	✓		
Install radiant barriers behind all radiators	✓	✓	

LL88: Lighting and Submetering

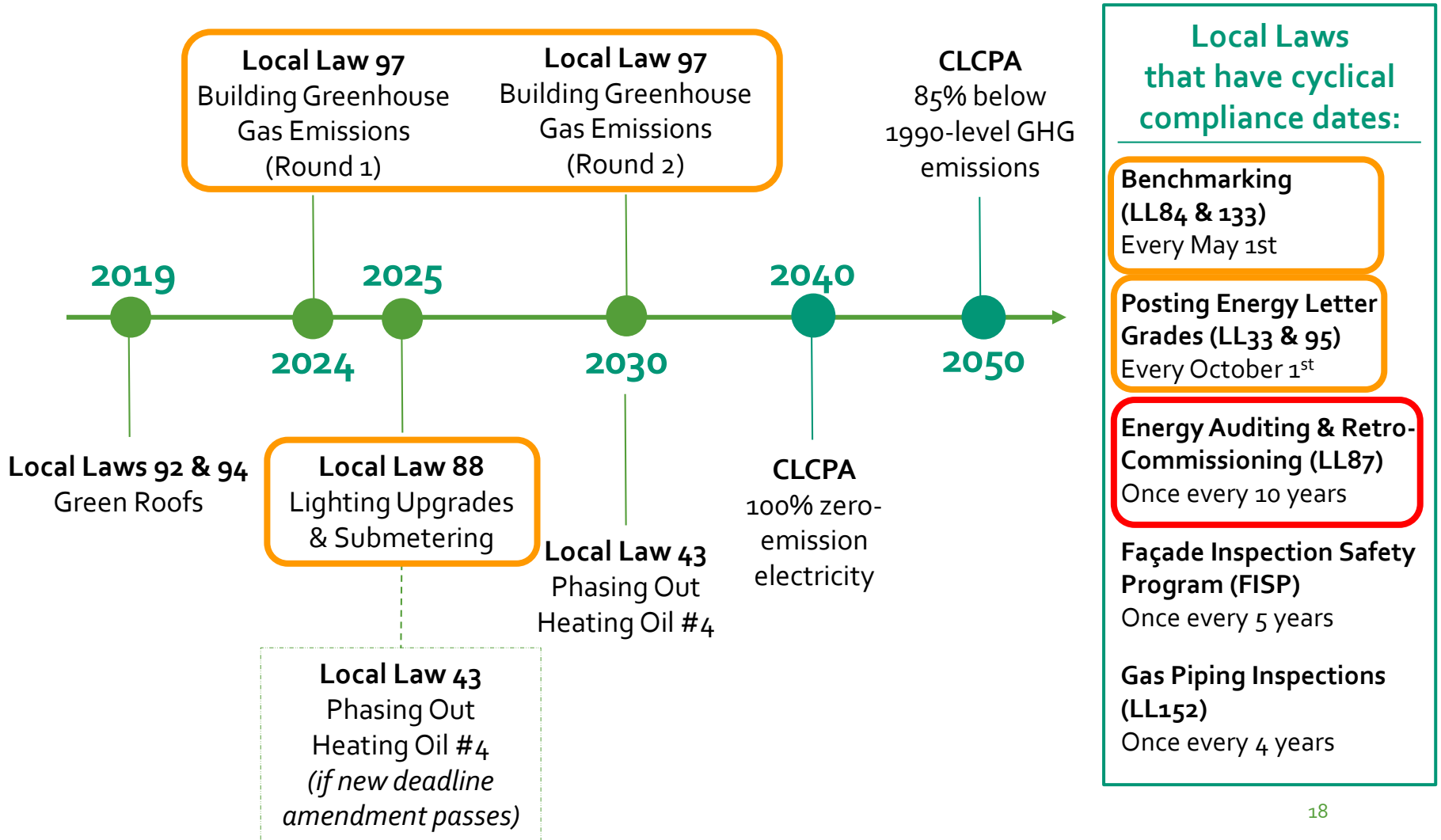


What does the building need to do for LL88?



What does the filing involve?

Energy & Sustainability Laws Timeline





Multifamily Condominium in West Village, Manhattan

- Property Profile:
 - Year Built: 1931
 - Square Footage: 107,000
 - Number of Buildings: 1
 - Units: 112
 - BBL: 1-xxxx0-xxx1
- Building is currently on oil #4 and I've heard about a fossil fuel moratorium coming up.
- Also has large LL97 penalties, including for Round 1 in 2024. What should we do?

Local Law 97 Impact	ROUND 1 (2024-2029)	ROUND 2 (2030-2034)
Current Emissions (tons CO2e)	961	961
Emissions Limit (tons CO2e)	748	434
Estimated Annual Penalty	\$56,996	\$141,003
% Reduction Required for \$0 Penalty	22%	55%
Letter Grade	D	
ENERGY STAR SCORE	22	

LL97 PENALTY

MULTIFAMILY CONDOMINIUM IN WEST VILLAGE, MANHATTAN

Multifamily Condominium in West Village, Manhattan

- First step, analyze fuel comparison, keeping in mind LL43

Projected Carbon Emission Penalty & Letter Grade						
	Existing - Oil #4		Projected - Oil #2		Projected - Natural Gas	
Local Law 97 Impact	2024-2029	2030-2034	2024-2029	2030-2034	2024-2029	2030-2034
Your Emissions (tons CO ₂ e)	961	961	910	910	776	776
Emission Limit (ton CO ₂ e)	748	434	748	434	748	434
Estimated Annual Penalty	\$56,996	\$141,003	\$43,497	\$127,504	\$7,635	\$91,642
Letter Grade	D		D		D	

- Review LL87 report
 - Contained air infiltration measure, which could also be an opportunity for improving façade first and then doing oil-to-gas conversion work

LL152: Gas Inspections

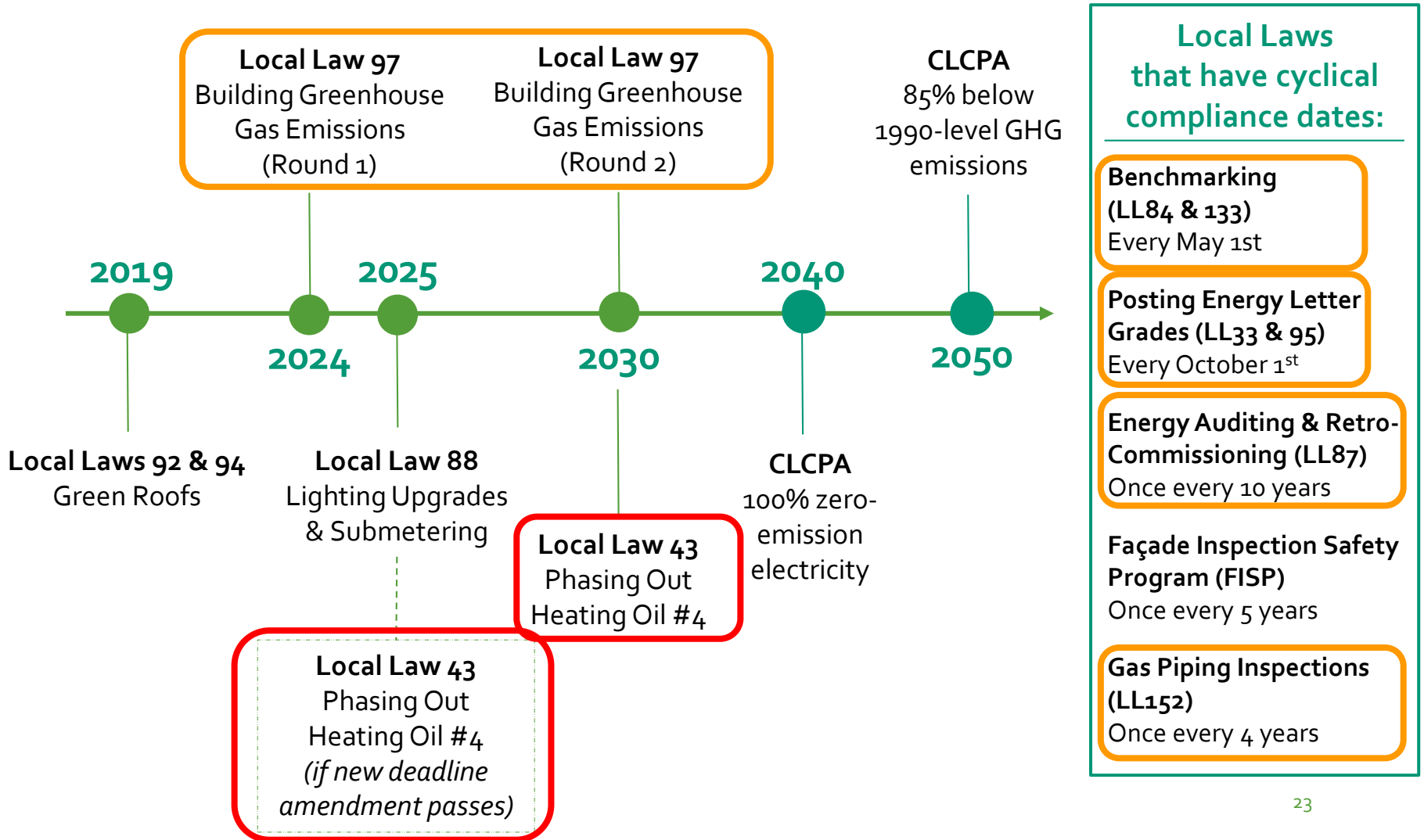


If this building converts to gas, will this be a problem for LL152?



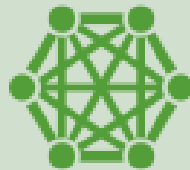
How will the inspection requirements change?

Energy & Sustainability Laws Timeline





Key Takeaways



NYC Local Laws are not in a vacuum

Be sure to ask how current building work is interconnected with other laws



When reviewing any work proposals for your facility, check in with energy consultant to assess how work can impact other laws, especially LL97 work



QUESTIONS?



Local Law 97

Building Greenhouse Gas Emissions

- A major component of the **Climate Mobilization Act (CMA)**
- Aiming to reduce building greenhouse gas emissions
- Starting in 2024, buildings with 25,000+ square feet will be mandated to meet specified **carbon emission limits** or pay penalties. Emission limits will change and become tougher in 2030
- The law also includes emission trading system and renewable energy credits (RECs)

Local Laws 84, 133, 33 and 95 Energy Benchmarking & Disclosure

- Aiming to **increase transparency** regarding properties' annual energy and water usage – the first step to make buildings operate more efficiently
- **Energy Benchmarking (Local Laws 84 & 133):** buildings with 25,000+ square feet are required to benchmark their energy and water consumption by May 1st every year
- **Building Energy Letter Grades (Local Laws 33 & 95):** buildings with 25,000+ square feet are mandated to display their energy letter grades based on the energy benchmarking scores at all public entrances by October 1st every year





Local Law 87

Energy Auditing & Retro-Commissioning

- Aiming to help building owners:
 - **gain a better understanding** of their energy consumption
 - **optimize performance** of their systems
 - **improve buildings' efficiency**
- Buildings with 50,000+ square feet to complete an ASHRAE Level II energy audit and retro-commissioning study every ten (10) years
 - **Energy auditing** focuses on identifying energy savings capital upgrades
 - **Retro-commissioning (RCx)** focuses on improving a building's existing equipment to abate energy waste and optimize building performance
- The due year is based on the last digit of a building's Block Number



Local Law 88

Lighting Upgrades & Submetering

- Aiming to **significantly reduce energy consumption** by installing more efficient lighting systems and informing energy usage information to tenants
- Buildings with 25,000+ square feet are required to upgrade lighting and submeter spaces per requirements specified by the New York City Energy Conservation Code (NYCEEC) no later than January 1, 2025
 - **Lighting upgrades:** requirements include installing energy efficient LEDs, providing stipulated light levels, and installing lighting controls to ensure optimal operation
 - **Submetering:** installation of electrical submeters are required for non-residential tenant space 5,000+ gross square feet and floors larger than 5,000 gross square feet consisting of 2+ tenant spaces



Local Law 43

Phasing Out Heating Oil #4

- NYC buildings are required to phase out heating oil #4 by 2030
- The City Council's Committee on Environmental Protection is **considering to ban heating oil #4 by 2025**, five years earlier than the original planned 2030, but law amendment is not confirmed yet



Local Law 152

Mandatory Gas Piping System Inspection

- Property owners are required to have their properties' gas piping systems inspected by a licensed master plumber at least once every five (5) years
- The inspection entity needs to **visually inspect** all exposed gas lines and test public spaces and mechanical rooms with **combustible gas detector**



FISP (formerly Local Law 11) Façade Inspection Safety Program

- Owners of buildings higher than six stories are required to **have their exterior walls and appurtenances inspected** every five years
- NYC DOB requires staggered inspection cycles, and applicable buildings are divided into three groups based on the last digits of their tax block numbers



Local Laws 92 and 94 Green Roofs

- Starting November 2019, all new buildings and buildings undergoing certain major renovations in NYC must **install a green roof system or a solar photovoltaic (PV) system** or a combination of two

Local Laws 92 and 94 Green Roofs

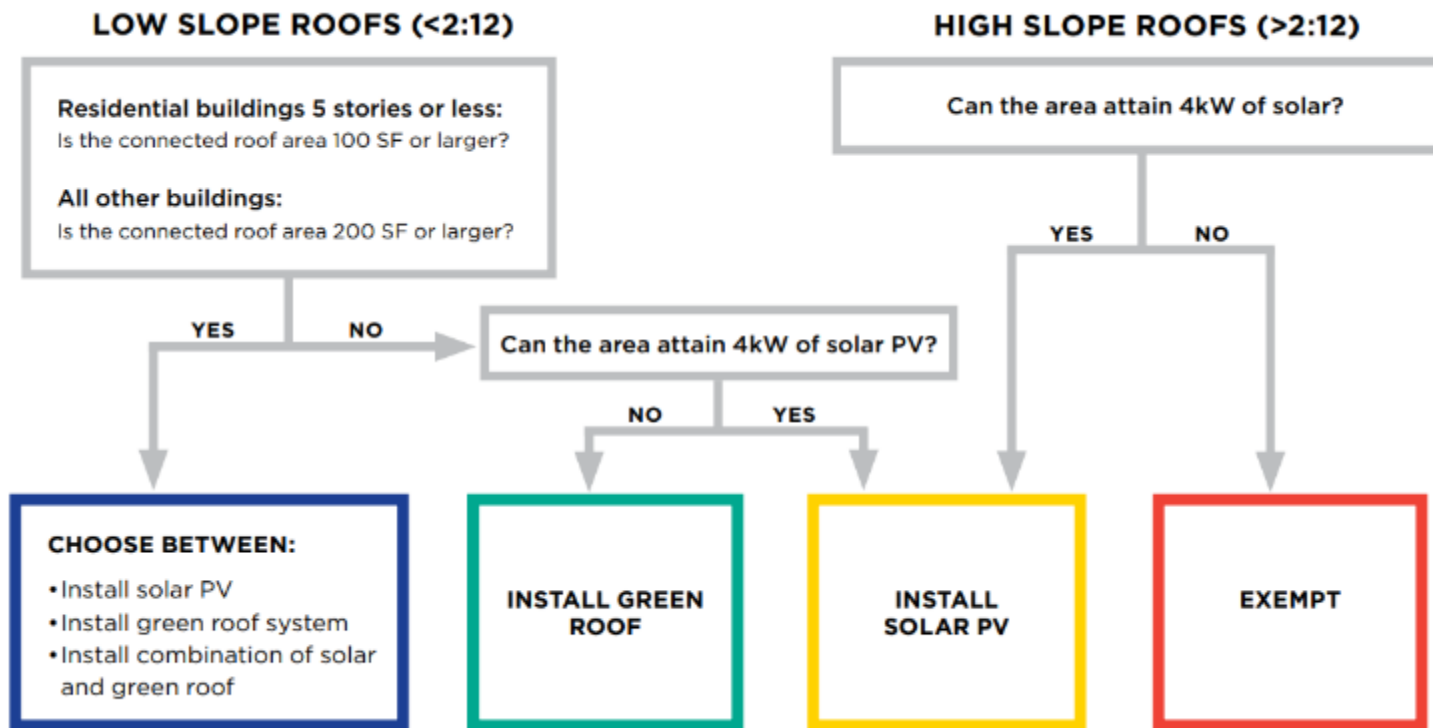


Diagram from Urban Green Council



NYS CLCPA

Climate Leadership and Community Protection Act

- Committing to **100% zero-emission electricity by 2040**, and a reduction of at least **85% below 1990-level GHG emissions by 2050**
- Key initiatives include transportation, power generation, land use, and carbon neutral buildings
- As the grid gets cleaner, greenhouse gas emission limits will change, and building owners will have to **reassess their ECMs and carbon reduction roadmaps**