

*Local Law 97  
Carbon Emission  
Compliance*

*Geatain Engineering*

*October 2023*

# Takeaways:

1. Know two benefits of electrification

2. Is old color TV, greatly discounted, your best option?

3. Seven not six Good Faith paths

# Question:

How many times has LL97 been revised since being passed May 2019?

1. Once
2. Twice
3. Three times
4. Four times

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# What Changes does LL97 Require?

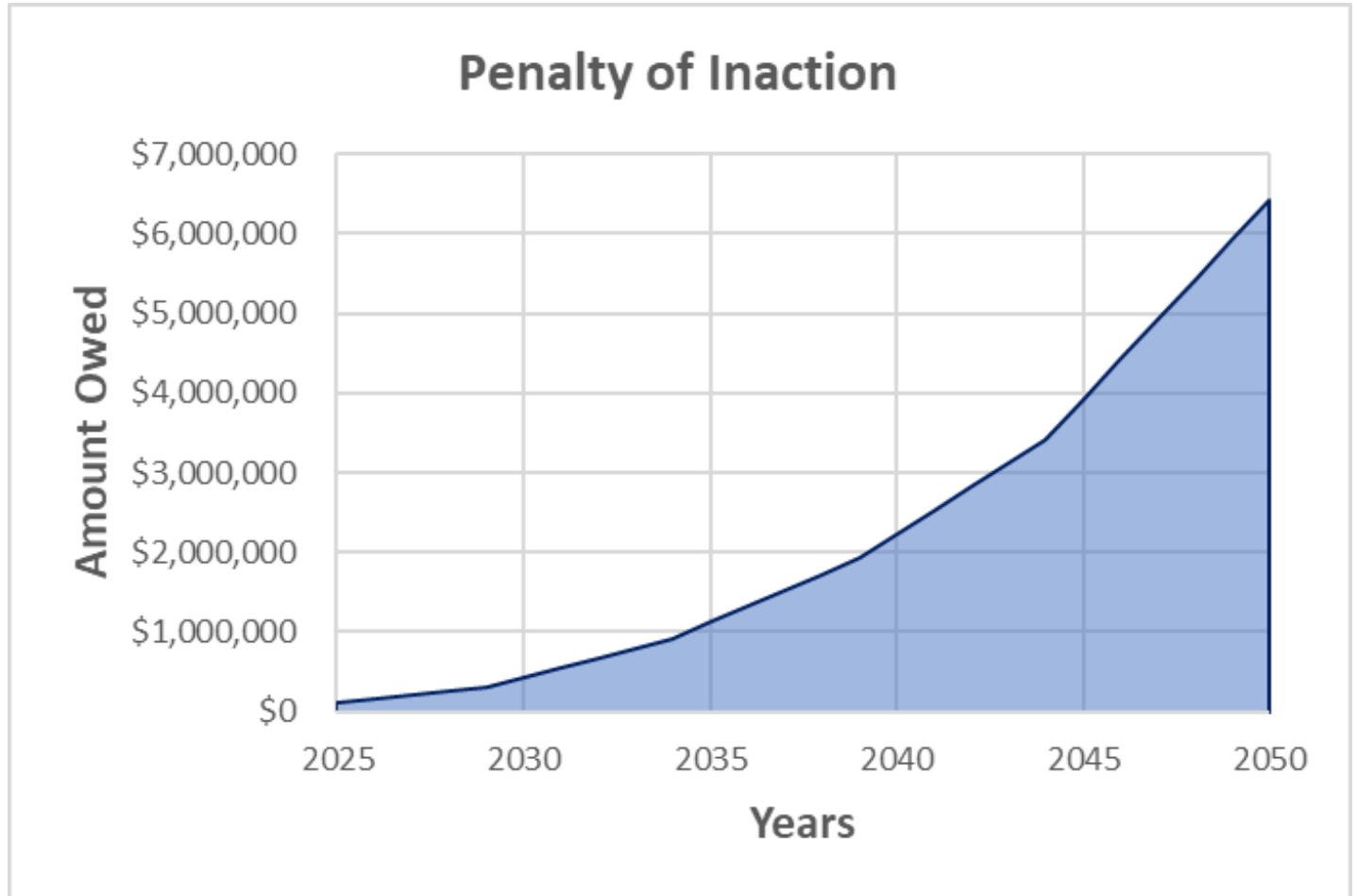
- Is NYC requiring lighting changes through LL97?
- Is NYC requiring HVAC improvements through LL97?
- Is NYC requiring any certain improvements through LL97?
- **How does LL97 drive down energy consumption?**
  - **Through ANNUAL tons/sf carbon emission limit**
  - **Lower limits Jan 2024, 2030, 2035, every five years**
  - **Leaves compliance for each owner to determine**

	Responsible	Late	Do Nothing
2022	\$50,000	\$0	\$0
2023	\$50,000	\$0	\$0
2024	\$0	\$50,000	\$50,000
2025	\$0	\$100,000	\$50,000
2026	\$0	\$100,000	\$50,000
2027	\$0	\$0	\$50,000
2028	\$100,000	\$0	\$50,000
2029	\$0	\$0	\$50,000
2030	\$0	\$100,000	\$125,000
2031	\$0	\$200,000	\$125,000
2032	\$0	\$0	\$125,000
2033	\$0	\$0	\$125,000
2034	\$200,000	\$0	\$125,000
2035	\$0	\$200,000	\$200,000
2036	\$0	\$350,000	\$200,000
2037	\$0	\$0	\$200,000
2038	\$0	\$0	\$200,000
2039	\$250,000	\$0	\$200,000
2040	\$0	\$300,000	\$300,000
2041	\$0	\$400,000	\$300,000
2042	\$0	\$0	\$300,000
2043	\$0	\$0	\$300,000
2044	\$300,000	\$0	\$300,000
2045	\$0	\$400,000	\$500,000
2046	\$0	\$500,000	\$500,000
2047	\$0	\$0	\$500,000
2048	\$0	\$0	\$500,000
2049	\$0	\$0	\$500,000
Total	\$950,000	\$2,700,000	\$5,925,000

# Example of Penalty

- Benchmarking Score-15
- Roughly 200,000 sf
- Approximation of Penalty

Cumulative  
Penalty



# How Many Think – Time to Comply?

- Filing deadline May 1<sup>st</sup> every year with previous 12 month data
- Filing deadline May 1, 2025, for January 2024-December 2024 data
- Begin tracking energy use January 2024
- LL97 begins in just two months



# What Changes does LL97 Require?

- Unlike past energy Local Laws,

LL97 is not a paperwork exercise to be filed by May 2025

# Official January 2024 LL97 Changes

- A. Good Faith mitigated penalties if LL84 and LL88 compliance & one of six:
  1. DOB permits approved for retrofit work to meet 2024 limit
  2. Contracts are in place with ConEd for electrification
  3. Submit Decarbonization Plan-more next slide
  4. Demonstrate prior year compliance, not available for 2024
  5. Critical facility-hospital
  6. Financial Hardship-NYC tax lien sale list

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1. DOB permits approved **or signed contract and proof of payment if no DOB permit is necessary** for retrofit work to meet 2024 limit
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# Official January 2024 LL97 Changes

## 3. Details for Carbon Emission Plan:

- Submit a plan for net zero carbon emissions by 2050
- Waive use of RECs until 2030
- Meet 2024 limits by January 1, 2026
- DOB permits approved for 2030-2034 improvements by 2028

# Official January 2024 LL97 Changes

Other Aspects of September 2023 LL97 Changes:

B. Inspection and documentation requirements for the affordable 13 prescriptive energy measures

C. Beneficial electrification credit

D. LL88-penalty of \$1,500 per building for lighting and separate \$1,500 for submetering violations

# Double Electrification Benefit

## Penalties:

- 2024 penalty of 0.000289 tCO<sub>2</sub>e/kWh
- 2030 penalty of 0.000145 tCO<sub>2</sub>e/kWh
- 2030-Electric use conversion cut in half

## Credits:

- Operating January 2027-December 2029 is -0.00065 tCO<sub>2</sub>e/kWh
- Operating January 2021-December 2026 is -0.0013 tCO<sub>2</sub>e/kWh

# Double Electrification Benefit

## What Qualifies?

- Electric-based heating, cooling and domestic hot water systems to displace the use of fossil fuel sources (e.g., fuel oil, natural gas, district steam) and/or replace less efficient electric-based heating systems.
- > 1.5 COP @ 5°F outdoor dry bulb (maximum heating capacity)



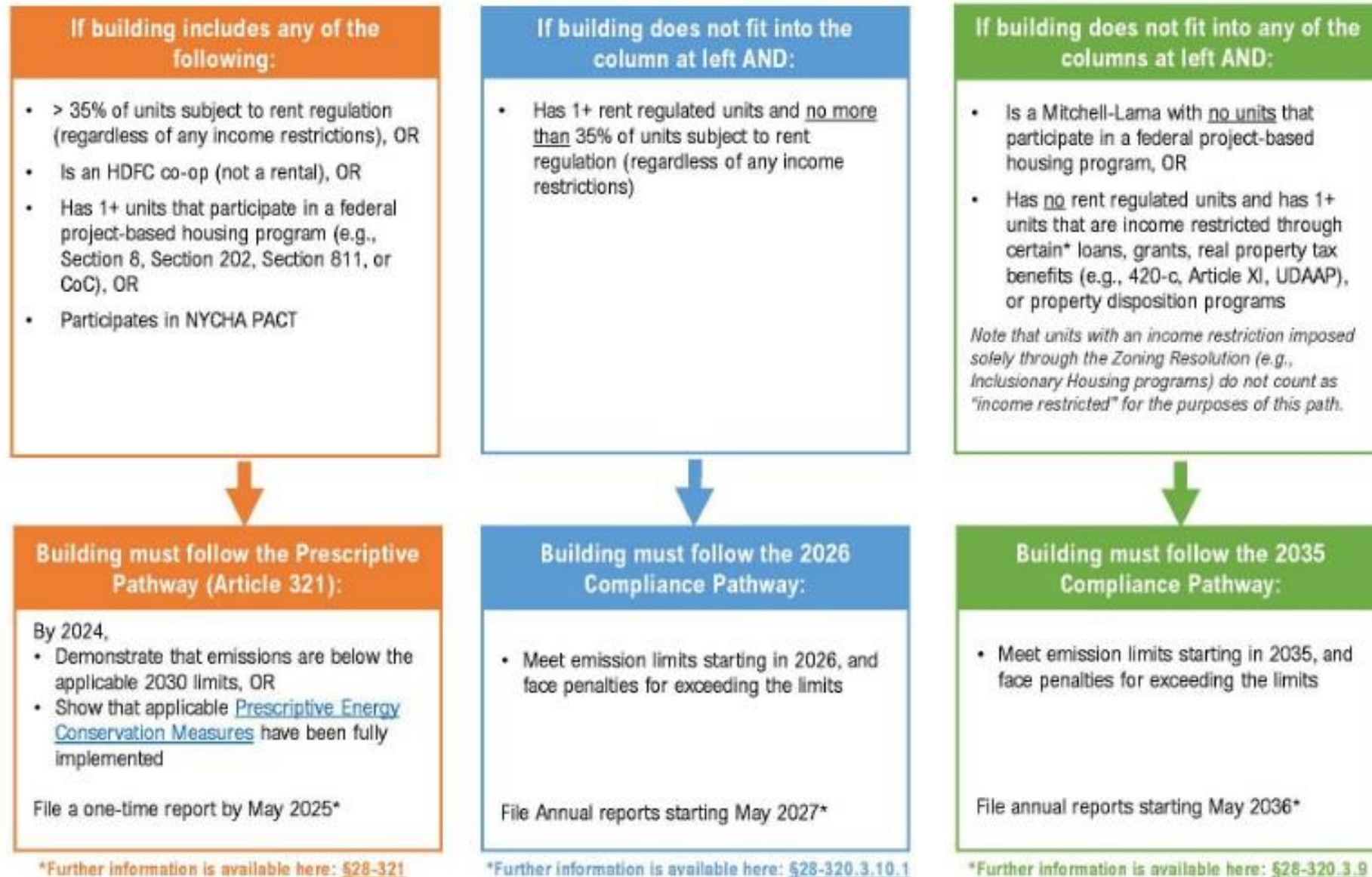
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# Affordable-Rent Regulated Accommodation



# LL88-Forgotten Local Law

- Required for Decarbonization Pathway
- All buildings shall meet NYCECC July 1, 2010 or later
- Deadline May 1, 2025 to file report
- Recommend separate report to avoid confusion by DOB
- Penalties:
  - Annual \$1,500 for lighting
  - Annual \$1,500 for submetering
  - Annual \$500 per space for submetering

# NYCECC July 1, 2010-Lighting

- Details exactly what is NYCECC July 1, 2010
- ASHRAE 90.1-Prescriptive or Performance Paths
- Lighting (Section 9): maximum indoor lighting power density (LPD, expressed in Watts/Sq.Ft.), minimum lighting controls, exterior lighting, parking garage lighting

# NYCECC July 1, 2010-Lighting

- Sensors and controls, including an occupant sensor, shall be installed that only enable lighting to be turned on by manual control, that automatically turn lighting off within a maximum of 30 minutes of all occupants leaving a space, and that enable lighting to be turned off by manual control:
  1. Classrooms
  2. Conference/meeting rooms,
  3. Employee lunch and break rooms, and
  4. Offices smaller than 200 square feet-exception if photosensor

# LL88-Submetering

- Commercial building tenant spaces greater than 5,000 square feet shall be electrically submetered
- Tenants shall receive monthly energy statements.

# Future LL97 Changes (annual basis?)

- Align local laws-what future of audit section of LL87?
- Landmark, unique zoning addressed
- 320.7 adjustment financial hardship
- Clarify tenant responsibilities
- Carbon trading mentioned in original draft
- Further rent-regulated revisions?
- City to see how market moves in first few years

Review of original and last month changes completed

Now, dive into the Seven Insights





# Insight 1-Focus on Long Term

- Is old color tv, greatly discounted, your best option?
- LL97 is 30-year journey-lower limits every five years
- If install first heat pump now, will you need to upgrade in mid 2030s and mid 2040s-three rounds of upgrades?
- Value in paying small fine now to avoid third capital expenditure?

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# Insight 2-Mitigation not Absolution

- Code Chapter 100, Subchapter C, 103-14, (i)(2):
- "...good faith efforts **may** result in a **mitigated** penalty for the calendar year for which such demonstration is claimed..."

# Insight 3-Focus on Value Today

- Many heat pumps on market
- Most heat pumps today require 240 volts-expensive
- Benefit to waiting for Unitary System, 120-208 volt, winter COP >3
- Few absolutely must install heat pumps today

# Insight 4-How Choose Your Path

- Six good faith paths, city clearly simplifying ConEd electrification
- Decarbonization-Forfeit RECs-DOB approves 2030 plan by 2028
- More heating dominant-lean towards beneficial electric
- DOB approval path-how tough to secure?

# Bonus Insight 4a-Choose Your Limit

- Law allows benchmarking limits or original LL97 property limits

# Insight 5-Know Value of RECs

- RECs must be NYC Tier IV--ZONE J
- RECs only applied to electric use
- City says may be available 2026
- May be more expensive than first considered



# Insight 6-Constant Change

- LL97 not yet finalized:
  - Landmarks
  - 320.7-Financial Hardship-tax lien sale list
  - Rent Regulated Accommodations (RRA)
- Establish bedrock foundation-adjust as opportunities presented

# Insight 7-Seventh Alternative

- If under limit one year, comply all 2024-2029
- If property is close to limit:
- Pike Research shows 10-20% operations improvements
- NBI research shows simple 10-15% savings
- If commercial, state pays 75% of operational measures

# Pike Research Data:

In the broad portfolio of buildings we have examined, the energy savings opportunities presented by operational improvements are roughly equal to those offered by retrofit opportunities. This supports the finding from last year's report from Pike Research, which suggests that operational improvements and retro-commissioning can offer savings of 10 percent to 20 percent in buildings, which have an overall energy savings potential of 10 percent to 50 percent.

# New Buildings Institute Data:

Based on energy data volunteered for just 121 buildings — 22 percent of those eligible for the study — NBI concluded that LEED certified buildings, on average, were saving 25 to 30 percent energy as compared with conventional buildings. The findings

My own [research \(PDF\)](#), using NBI-supplied data, showed that LEED office buildings, on average, used 10 to 15 percent less site energy than comparable, conventional buildings, half the savings reported in the NBI study. More importantly, I [found \(PDF\)](#) that

# Second Bonus Insight

- Importance of May 2025 benchmarking and LL88 compliance for decarbonization path
- Do not unnecessarily close doors

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# Geatain Engineering

- Focus on what differentiates your unique property
- Craft a solution that fits your staffing, budgets and timelines
- Asking better questions to provide your compliance simpler, easier and more economically



Lowering your energy is our **ONLY** priority  
100% Lifetime Guarantee:

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We want your experience to be the best experience from any service firm.

**THAT IS WHY**.....I am offering this audacious guarantee:  
I personally take all the risk so you have **ZERO RISK**.

Should we fail to provide building energy expertise for your property, not demonstrate comprehensive knowledge, experience or judgment, just email Tom at [tjm@geatain.com](mailto:tjm@geatain.com). Together we will discuss your experience, correct any shortcomings, and if you are not completely satisfied, we will refund your entire fee, **GUARANTEED**.

Sincerely,



Tom McGovern

A handwritten signature in black ink that reads "Tom McGovern".

[tjm@geatain.com](mailto:tjm@geatain.com)  
(631) 521-3594





# What topics most helpful to YOU?

- Steps to electrification
- Heat pump operations basics, operations and maintenance
- LL88-lighting and submetering
- Funding sources
- Solely Question & Answer zoom
- Other

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- 
- Please enter your favorite in the chat

# Actions for Calm Future or Face Mayhem?

Lot of work to complete soon:

- Collecting utility bills
- Determining square footage for mixed use
- Learning details of LL97
- Selecting consultant
- Determining best pathway
- How reduce carbon in last few weeks of year?
- Use beneficial electric or not?
- Discussing LL97 with mixed use owners
- Apportioning penalties amongst mixed use
- Many more

We want you to have CLARITY



# We want you to have CLARITY

Get a head start with LL97:

1. How much will your property benefit from beneficial electric?
  2. Understand your monthly emissions
  3. Determine path most suited to your property
  4. Prepare to submit first annual report
    - LL88 assessment-compliance due May 2025
    - Hear more about our “Expertise Guarantee”
- Please enter your favorite in the chat

# Take advantage of Opportunities

- If commercial property,  
state will pay 75% of fee

# 40 West 37<sup>th</sup>-Electrification

- Ideal electrification candidate
  - Condition electrical components
  - Amperage
  - Roof space
  - Roof condition
  - Condenser lift
  - Centrally located shaft way for all electric, coolant lines
- Due to ideal nature, breaks even compared to old oil costs



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