

Mid- to High-Rise Multifamily Buildings, Post-1980



Is this guide for me?
Post-1980, mid- to high-rise multifamily buildings are typically 8 stories and up. They can be lot-line or free-standing with a wide variety of layouts. Many include tenant amenities like laundry rooms, gyms, or storage, as well as mixed-use space, like retail or offices, at the ground level.

Maximize occupant comfort, save energy, and get your building climate-ready with high-performance upgrades. **The recommendations in this guide can help you meet Local Law 97 emissions limits and prepare for New York City’s carbon-neutral, climate-friendly future. By planning for upgrades today, you can align them with capital improvement cycles and phase in projects at the pace that works for you, minimizing costs and tenant disruption.**

typical building systems

envelope
load-bearing masonry walls or steel stud frame with cavity insulation; punched window openings; aluminum double-hung frames.

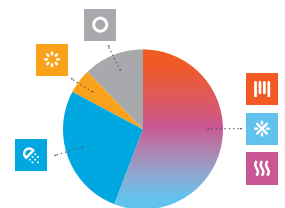
heating & distribution
oil or gas-fired boiler; steam or hot water distribution

cooling
through-wall or window A/C

ventilation
central rooftop fans for kitchen & bath exhaust

domestic hot water
steam boiler heat exchanger; constant recirculation loop

building GHG distribution



■ heating ■ hot water
■ cooling ■ lighting
■ ventilation ■ other








moderate retrofit

Moderate decarbonization improvements include upgrading boilers, modernizing controls, installing high-efficiency lights, appliances, and fixtures, and implementing relatively minor insulation and air sealing measures. Combined, these improvements can reduce greenhouse gas (GHG) emissions in a typical post-1980, mid- to high-rise multifamily building by as much as 35%.*

deep retrofit

Deep decarbonization improvements typically involve comprehensive, whole-building upgrades, in addition to some items from the moderate decarbonization list. Key measures include replacing fossil fuel-based heating and cooling systems with electric-powered heat pumps, installing energy recovery ventilation, upgrading insulation and windows, and integrating controls with real-time building management systems. Combined with renewables like on-site solar panels, deep decarbonization measures can reduce GHG emissions by as much as 80%.

BUILDING SYSTEMS	GHG SAVINGS	ENERGY CONSERVATION MEASURES (ECMS)	ADDED BENEFITS	GHG SAVINGS	ENERGY CONSERVATION MEASURES (ECMS)	ADDED BENEFITS
 envelope	4 icons	<ul style="list-style-type: none"> Increase roof insulation Weatherstrip windows, exterior doors, and through-wall air conditioning units 	<ul style="list-style-type: none"> operations & maintenance health & comfort marketability future-proofing 	4 icons	<ul style="list-style-type: none"> Increase roof insulation Upgrade to high-performance windows Overclad building with a Passive House standard façade system like EIFS 	<ul style="list-style-type: none"> operations & maintenance health & comfort marketability future-proofing
 HVAC	4 icons	<ul style="list-style-type: none"> Upgrade to direct drive, variable speed exhaust fans Install boiler and pipe insulation Install new boiler controls with indoor temperature feedback and in-unit thermostats 	<ul style="list-style-type: none"> operations & maintenance health & comfort marketability future-proofing 	4 icons	<ul style="list-style-type: none"> Install high efficiency, electric PTACs or packaged cold-climate heat pumps Integrate controls with a building management system (BMS) Install energy recovery ventilation units to serve apartments and corridors 	<ul style="list-style-type: none"> operations & maintenance health & comfort marketability future-proofing
 domestic hot water	4 icons	<ul style="list-style-type: none"> Install dedicated 10-year boiler prior to electrification Install variable speed drive pumps Install pipe insulation Install low-flow fixtures 	<ul style="list-style-type: none"> operations & maintenance health & comfort marketability future-proofing 	4 icons	<ul style="list-style-type: none"> Install central heat pumps with hot water storage Install pipe insulation Install low-flow fixtures 	<ul style="list-style-type: none"> operations & maintenance health & comfort marketability future-proofing
 lighting	4 icons	<ul style="list-style-type: none"> Install new LED fixtures or retrofit existing light fixtures with LED bulbs 	<ul style="list-style-type: none"> operations & maintenance health & comfort marketability future-proofing 	4 icons	<ul style="list-style-type: none"> Upgrade to LED lighting fixtures with controls Install occupancy/vacancy sensors for common areas Set scheduling controls for common areas and exterior 	<ul style="list-style-type: none"> operations & maintenance health & comfort marketability future-proofing
 plug loads	4 icons	<ul style="list-style-type: none"> Upgrade to ENERGY STAR® appliances 	<ul style="list-style-type: none"> operations & maintenance health & comfort marketability future-proofing 	4 icons	<ul style="list-style-type: none"> Upgrade to ENERGY STAR® appliance Upgrade stoves to induction cook-tops Install ballasted rooftop solar PV system 	<ul style="list-style-type: none"> operations & maintenance health & comfort marketability future-proofing

legend	emissions reduction from baseline					added benefits			
	1 icon	2 icons	3 icons	4 icons	5 icons				
	≤5% savings	6–10% savings	16–20% savings	26–30% savings	36–40% savings	operations & maintenance Keeps building performing optimally and reduces maintenance time and/or costs	health & comfort Enhances indoor environmental quality and advances occupant wellbeing	marketability Improves aesthetics and upgrades occupant spaces, increasing appeal to potential tenants	future-proofing Puts building on a path for long-term emissions reduction and regulatory compliance

* Baseline building emissions, recommended upgrade measures, and GHG savings estimates are based on data from an average 100-unit, post-1980 mid-rise in the Bronx.

What is Local Law 97?

NYC Local Law 97 (LL97) was passed in 2019 as part of the Climate Mobilization Act (CMA), a package of ground-breaking legislation that addresses New York City's largest source of greenhouse (GHG) gas emissions – our buildings. LL97 establishes annual GHG emissions limits on buildings greater than 25,000 sf. Beginning in 2024, buildings that exceed their annual emissions limits will face financial penalties that can total millions of dollars each year that the building is out of compliance. Emissions are calculated based on tons of CO2 equivalent per square foot, and the annual penalty is equivalent to \$268 per ton over the limit:

$$(\text{actual emissions} - \text{annual emissions limit}) \times \$268 = \text{maximum annual penalty}$$

What can you do?

We can help.

1

check

the building's compliance status

Use NYC Accelerator's Building Energy Snapshot tool to gauge carbon emissions and potential LL97 fines:
www.accelerator.nyc/snapshot

2

assess

the need for building upgrades

Work with an NYC Accelerator Account Manager to assess building portfolio and upgrade needs

3

prioritize

applicable energy conservation measures

Determine your LL97 compliance pathway and set an implementation timeline.

4

implement

your building upgrade plans

Get connected to vetted service providers, lenders, and financial incentives through your NYC Accelerator Account Manager.

NYC Accelerator offers free advisory services to help your building navigate compliance. Here's how we can help:

Peace of mind

We confirm compliance requirements, emissions caps, and estimated penalty amounts if steps are not taken to reduce greenhouse gas emissions.

Lower costs

We provide technical assistance to help you identify opportunities to reduce your building's carbon emissions and operating costs.

Financial options

We connect you to financial incentives and financing products, including NYC Housing Preservation & Development financing programs, NYC Accelerator PACE financing, and vetted lenders.

Trusted providers

We help you find vetted service providers and contractors to solicit project proposals.

Get started today.
Contact NYC Accelerator.

visit
call
email

www.accelerator.nyc/ll97
(212) 656-9202
info@accelerator.nyc

