

REGULATIONS DEMYSTIFIED

Enforcing NYC's **SUSTAINABILITY** Laws

Transforming NYC Buildings for a Low-Carbon Future

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NYC Sustainability Plan

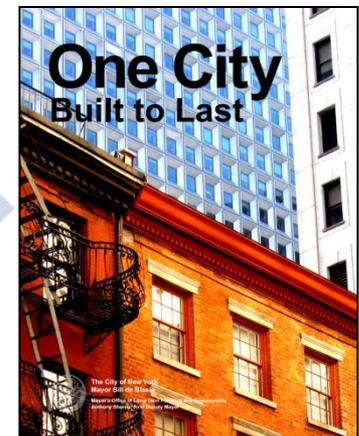
PlaNYC

- 30% x 2030

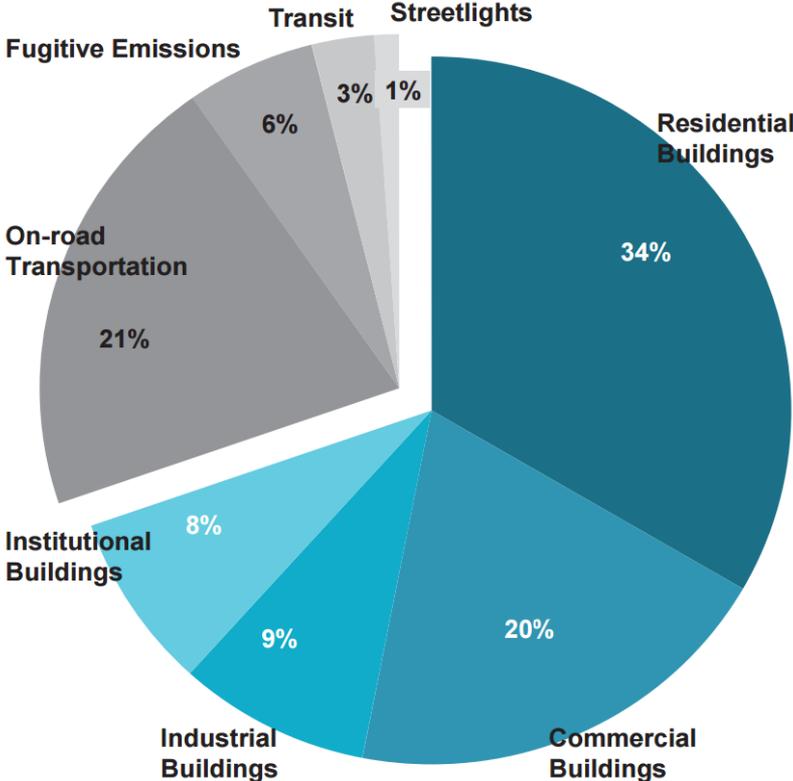


OneNYC

- 80% x 2050

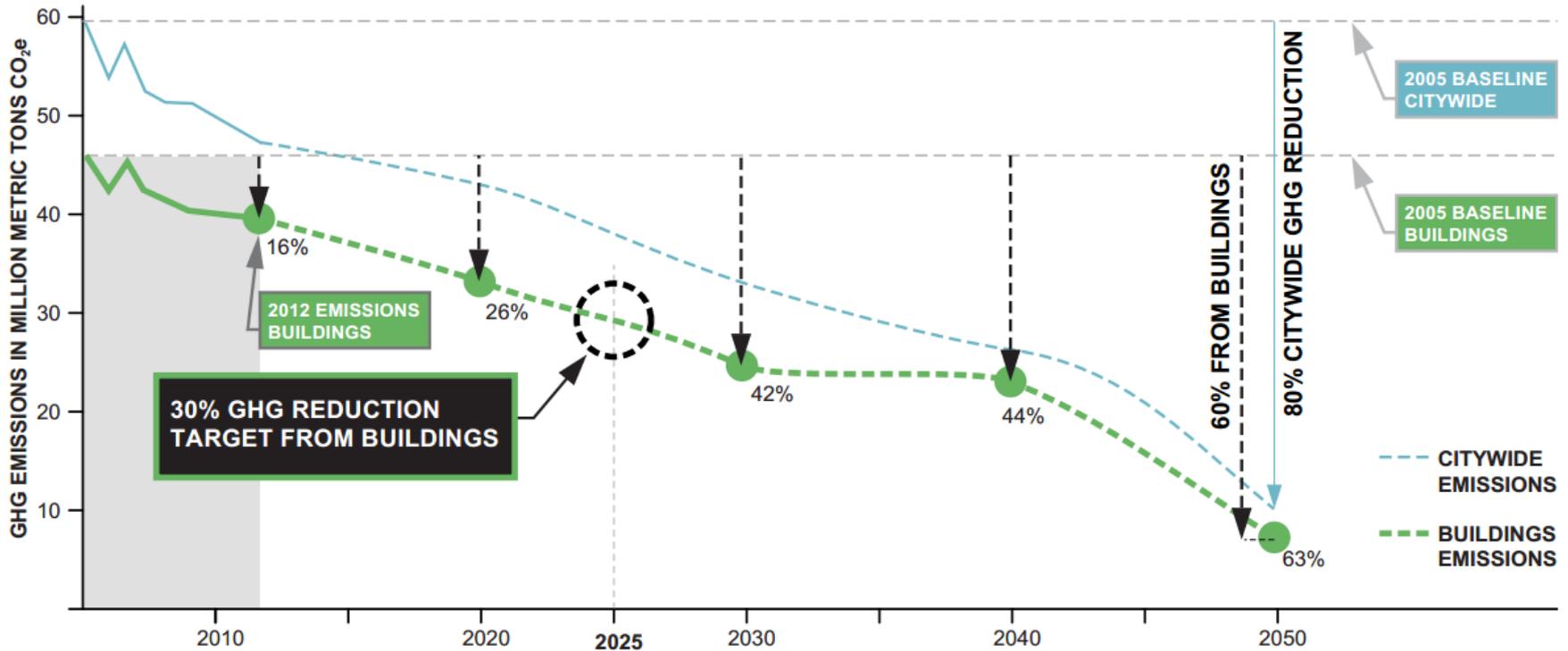


2013 Citywide Emissions by Sector



Source: NYC Mayor's Office of Sustainability

Pathways for Reductions in Greenhouse Gas Emissions from Buildings



Source: New York City Mayor's Office of Long-Term Planning and Sustainability

80x50: NYC committed to reducing emissions 80% from 2005 levels by 2050

Interim targets:

40x30: 40% reduction in emission by 2030 from all sectors

30x25: 30% reduction in emission by 2025 from buildings

NYC Department of Buildings Sustainability Enforcement

LL 84/09

Benchmarking

LL 85/09

NYC Energy
Conservation
Code

LL 87/09

Audits & Retro-
commissioning

LL 88/09

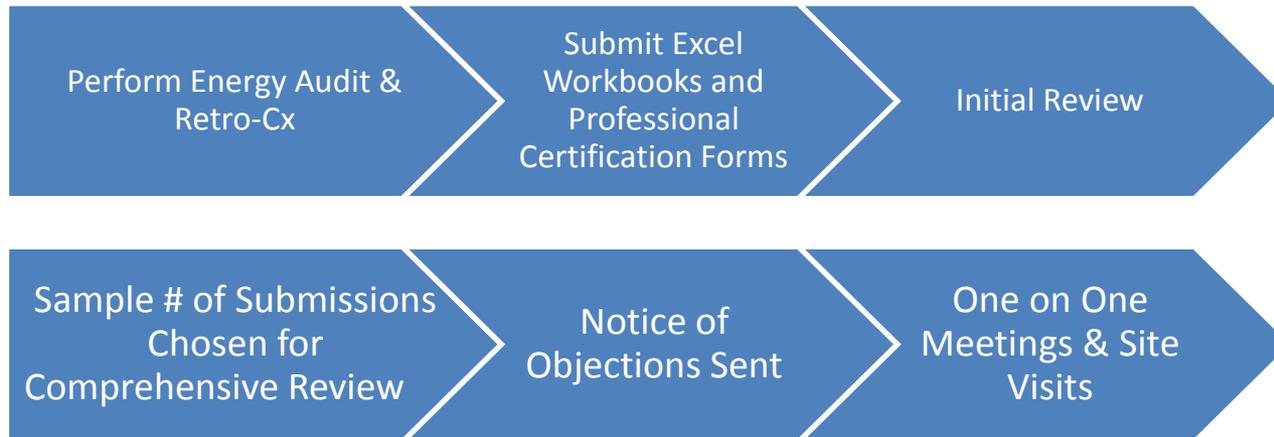
Lighting
Upgrades & Sub-
metering

Focus of Today's Presentation

Local Law 87/09 (LL87/09)

Energy Auditing & Retro-Commissioning (Base Building Systems Only)

Process Schematic



- ✓ *Process is mostly electronic through email submissions*
- ✓ *Over 70% Compliance in first two years (2013 & 2014)*
- ✓ *LL87/09 minimum expectations are clearly defined and transferred to service providers through one-on-one sessions and other public outreach efforts.*
- ✓ *May also conduct site visits as part of comprehensive review*

LL87/09 - Defined Scope of Work

Energy Audit

- Project & Team Info
- Building Operating Schedule
- Space Function Analysis
- Building Key Operating Parameters
- Building Description
- Utility Billing Analysis (Base Building + Tenant)
- List of Mechanical Equipment and Lighting Inventory
- List of Testing Equipment Used
- Tenant Impact
- Master List of Findings & ECMs List
- Energy Savings Calculations
- Economic & Environmental Analysis
- End Use Breakdown

Retro-Commissioning

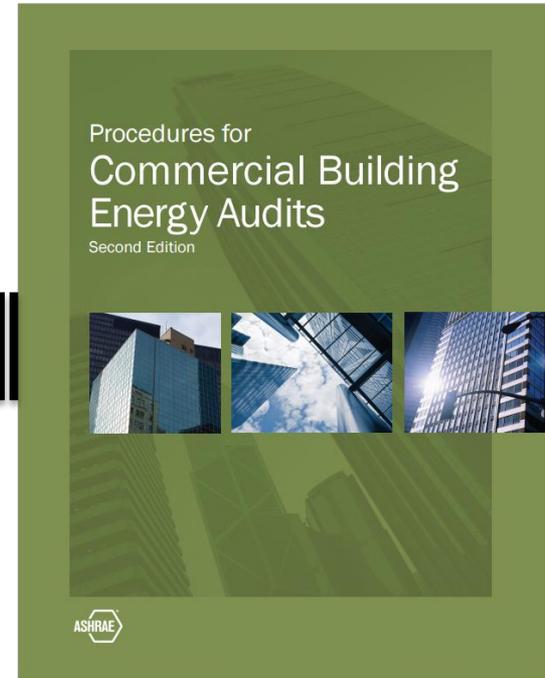
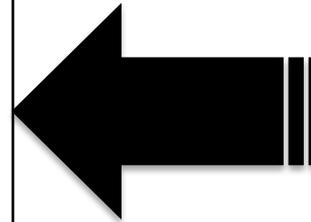
- Project and Team Information
- Baseline Building information
- Current Facility Requirements (CFR)
- Testing Protocols / Functional Performance Testing (FPT)
- Master list of findings
- Deficiencies corrected
- Training and Documentation

- ✓ *Energy Auditing & Retro-Cx go hand in hand together and shall not be considered as two mutually exclusive or disjoint exercises.*
- ✓ *Retro-Cx has Energy Auditing component integral to it.*

LL87/09 - Defined Scope of Work

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- ✓ *As Referenced within §28-308.1 of LL87/09 under “Energy Audit or Audit” Definition.*
- ✓ *At a minimum ASHRAE Level-II Energy Audit, as per the interpretation of Department of Buildings.*

LL87/09 - Defined Scope of Work

Retro-Commissioning

As per §28-308.3.1 of LL87/09
“Contents of Retro-
Commissioning Report”.

- Project and Team Information
- Baseline Building information
- Current Facility Requirements (CFR)
- Testing Protocols / Functional Performance Testing (FPT)
- Master list of findings
- Deficiencies corrected
- Training and Documentation

- ✓ *Retro-Cx is a Sequential Exercise*
- ✓ *CFR → FPT → List of RCMs*
- ✓ *Comprehensive reviews are focused towards “Approach Taken to Reach Conclusion”.*
- ✓ *Good Reference for Retro-Commissioning – Commissioning in General. **ASHRAE Standard 202-2013** (Not referenced in LL87/09)*

STANDARD

ANSI/ASHRAE/IES Standard 202-2013

Commissioning Process for Buildings and Systems

Approved by the ASHRAE Standards Committee on June 22, 2013; by the ASHRAE Board of Directors on June 23, 2013; by the IES Board of Directors on June 28, 2013; and by the American National Standards Institute on July 1, 2013.

This standard is under continuous maintenance by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. The change submittal form, instructions, and deadlines may be obtained in electronic form from the ASHRAE website (www.ashrae.org) or in paper form from the Manager of Standards. The latest edition of an ASHRAE Standard may be purchased from the ASHRAE website (www.ashrae.org) or from ASHRAE Customer Service, 1791 Tullie Circle, NE, Atlanta, GA 30329-2305. E-mail: orders@ashrae.org. Fax: 404-321-5478. Telephone: 404-435-8400 (worldwide), or toll free 1-800-527-4723 (for orders in US and Canada). For reprint permission, go to www.ashrae.org/permissions.

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Local Law 87/09 (LL87/09)

Useful Information | Common Errors | Challenges

- ✓ *Is the building even listed under covered buildings list (DOF Record)*
- ✓ *Deferral – less than 10 year old buildings*
- ✓ *What is a base building system*
- ✓ *Buildings sharing base building systems*
- ✓ *Who is qualified to perform LL87/09*
- ✓ *Importance of building a balanced team and teamwork*
- ✓ *Defining roles and responsibilities early in the process*
- ✓ *Failure to vet and peer review information prior submitting to DOB*
- ✓ *Plan ahead for compliance – depending upon complexity of building systems*
- ✓ *Incomplete or blank forms & tools*
- ✓ *Missed Opportunities under Energy Auditing*
- ✓ *Proof of deficiencies corrected under Retro-Commissioning*
- ✓ *Inconsistent, incomplete and insufficient information provided*
- ✓ *May also conduct site visits as part of comprehensive review*
- ✓ *Generic information – template based and not specific to building in attention*
- ✓ *Retro-Cx agent to follow up and verify corrected deficiencies*

Local Law 88/09 (LL88/09)

Lighting Upgrades & Sub-Metering

- ✓ *Commercial lighting is responsible for almost 18% of the total energy used in NYC buildings and roughly 18% of carbon emissions from buildings*
- ✓ *Electrical usage by commercial tenants is significant and such usage is often not known by tenants*

- **Article 310:** *Upgrade existing lighting system of the **entire covered building** to be completed on or prior to January 1, 2025.*

[Must meet the latest applicable **NYC Energy Conservation Code** at the time of new installation or existing modification & technical standards of the **NYC Electrical Code**]

- **Article 311:** *Sub-metering per every tenant space **10,000 Sq.Ft. or greater**, or per every floor **10,000 Sq.Ft. or greater**, in commercial occupancies.*

- ✓ *Report to be prepared and certified by a **Registered Design Professional or a Licensed Master or Special Electrician**.*

The Goal is
COMPLIANCE
not VIOLATIONS!

Audience Questions

*For more information on Sustainability Laws, visit our website:
http://www.nyc.gov/html/dob/html/sustainability/sustainability_main.shtml*

OR

Email: LL87Questions@buildings.nyc.gov