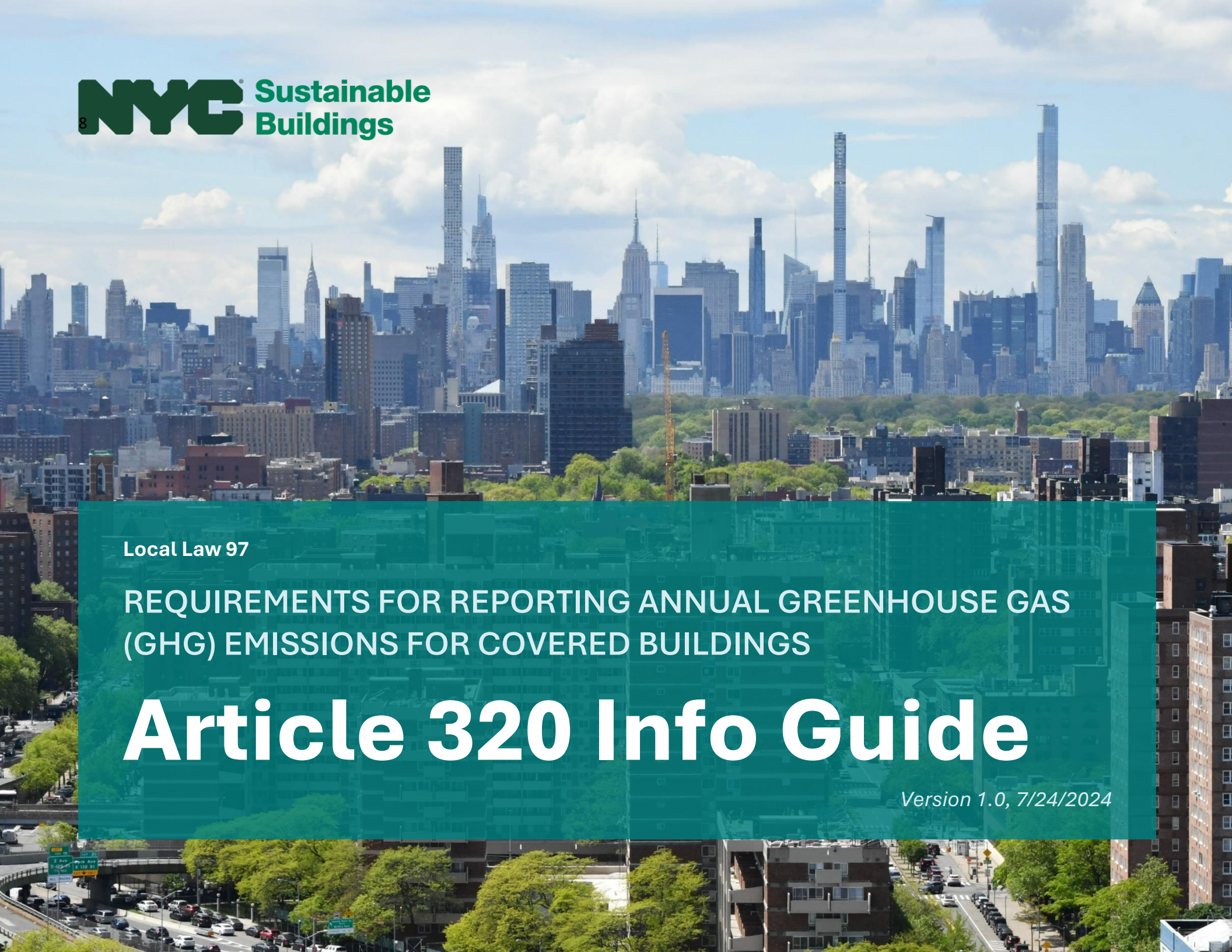
NYC Sustainable Buildings



Local Law 97

REQUIREMENTS FOR REPORTING ANNUAL GREENHOUSE GAS (GHG) EMISSIONS FOR COVERED BUILDINGS

Article 320 Info Guide

Version 1.0, 7/24/2024

I. Background

This Article 320 Info Guide has been developed through collaboration between the Department of Buildings ("the Department") and members of the design, auditing, and energy services communities. Comments and questions related to the Guide can be sent to the Department at GHGEmissions@buildings.nyc.gov.

Greenhouse gas ("GHG") emissions – which are not limited to carbon dioxide (CO_2) but are often collectively referred to as "carbon emissions" or simply "carbon" – greatly alter climate and weather patterns when concentrated in the Earth's atmosphere. Therefore, to slow the increasing frequency of extreme weather events, it is imperative to reduce the production of GHG emissions through a strategy of decarbonization.

Local Law 97 of 2019 ("LL97"), as amended, is designed to greatly reduce building operational carbon emissions toward a goal of net zero by 2050. To understand LL97 as a whole, please see this presentation from the Department's Office of Building Energy and Emissions Performance ("OBEEP"), this page on the Department's website, and the citywide strategy outlined here by the New York City ("NYC") Mayor's Office of Climate and Environmental Justice ("MOCEJ").

LL97 was first enacted in 2019 as part of a package known as the Climate Mobilization Act. The original LL97 text was later modified by LL147 of 2019, LL95 of 2020, LL116 of 2020, LL117 of 2020, LL126 of 2021 and LL77 of 2023; the composite law is still referred to as LL97. It is made up of Articles, which are primary legislation enacted by the NY City Council, and supported by Rules, which are secondary legislation enacted by the Department. LL97's Articles pertaining to privately-owned buildings are Article 320 and Article 321 of Chapter 3 of Title 28 of the NYC Administrative Code. Article 320's corresponding Rule is 1 RCNY §103-14; Article 321's corresponding rule is 1 RCNY §103-17.

Articles 320 and 321 apply to certain structures categorized as **covered buildings**, as described in Section I(A) below. Two groups of covered buildings are allowed to follow Article 321, both of which are addressed in the Department's *Article 321 Filing*

Guide: **certain types of affordable housing** and **houses of worship**. Other covered buildings must follow one of the Article 320 compliance pathways, as described in Section II of this Guide.

While some Article 321 compliance pathways do not require the assistance of a **registered design professional** ("RDP"), almost all Article 320 compliance pathways do. Specifically, an RDP must certify the various computations that go into an emissions report, which can include detailed floor area takeoffs, calculations to compare GHG emissions limits with GHG emissions generated, and equations to determine applicable deductions.

I(A). Covered buildings

The size threshold for LL97 is over 25,000 gross square feet ("GSF") for a single building or over 50,000 GSF for multiple buildings that are either on a single lot or governed by the same board of managers; see chart on page 5 of this Guide.

Covered buildings lists ("CBLs"), compiled by the Department using Department of Finance ("DOF") data on lots with buildings that meet LL97's size thresholds, are downloadable here. The CBLs are intended as a preliminary reference only and are subject to change due to circumstances unknown to the Department. The absence of a lot from the list cannot be construed to mean relief from LL97 or any other applicable law; conversely, the presence of a lot on the list can be challenged, with DOF or the Department revising the list upon evidence of more accurate/current information. Building owners should consult with legal representatives and RDPs if there are any perceived discrepancies with the CBLs. (For more details, a webinar describing CBL-related issues is available on the Department's YouTube channel here.)

Because CBLs are compiled at tax lot level, the entire lot is flagged even if individual buildings within it may be excepted or follow alternative compliance paths. Each covered building must show compliance with the specific LL97 compliance pathway

that applies to that building – see the "Building-level compliance" section of this Guide for more details. Combined reports covering more than one building are possible in certain cases; see Section III(B)(7) of this Guide.

Covered buildings that require upgrades to improve efficiency and reduce emissions may be eligible for various types of incentives, financing, and technical assistance. NYC Accelerator has a list of financing options here. The New York State Energy Research and Development Authority ("NYSERDA") lists financial and technical support options here.

GSF vs. GFA:

- GSF = *Gross Square Feet or Gross Square Footage*, as defined in 1 RCNY §103-06, is the "total square footage as provided in Department of Finance records." As noted above, it is GSF that determines whether or not a building is "covered" under LL97. Recorded GSF will not be revised simply because a different GFA number is submitted for LL97 reporting purposes; GSF can only be revised if a specific petition is made to DOF, as described here.

- GFA = *Gross Floor Area*, as defined in 1 RCNY §103-06, 1 RCNY §103-14(a), and Section 202 of the NYC Building Code ("BC"), includes "all floors and spaces in a covered building" and may be different than the building's GSF as recorded by DOF. GFA should be verified by an RDP; see the "Gross floor area" section of this Guide for more details.

	Definitions of "covered building"	**General exceptions** (for more specific exceptions, see the law)
Article 320 / 1 RCNY §103-14, Building Energy and Emissions Limits (Local Law 97)	- Single building > 25,000 GSF; - Multiple buildings, either on the same tax lot or governed by the same board of managers, which are in aggregate > 50,000 GSF (even if individual buildings are < 25,000 GSF). *Not covered until CY2026:* - Buildings with at least one, but no more than 35%, rent-regulated dwelling units. *Not covered until CY2035:* - Certain types of affordable housing not subject to Article 321, as per the rightmost (green) column in this flowchart. Annual CBLs here.	- Certain utilities; - Certain garden-style apartments; - City buildings, except for the eleven CUNY senior (4-year) colleges; - Buildings covered under Article 321.
Article 321 / 1 RCNY §103-17, Energy Conservation Measure Requirements for Certain Buildings (Local Law 97)	Buildings meeting the same size thresholds as Article 320 that: - Are certain types of affordable housing; or - Have verified more than 50% of the space is used for the purpose of worship (as explained here). Annual CBL here.	- Certain utilities; - Certain garden-style apartments.

I(B). Definitions

The following terms are used throughout this guide and may benefit from additional information:

BBL, BIN

Refer to Section III(A), "Building-level compliance", of this Guide.

Benchmarking

The recording of total energy and water use for a covered building for the previous calendar year to an online database such as the US Environmental Protection Agency ("EPA")'s Energy Star Portfolio Manager ("ESPM"). In NYC, the local laws governing benchmarking are LL84 of 2009 as amended by LL133 of 2016, known as "LL84" and codified in Article 309 of Chapter 3 of Title 28 of the NYC Administrative Code. Article 309's corresponding Rule is 1 RCNY §103-06.

Energy audit

Refer to 1 RCNY §103-14(a) for definition and applicable standard, as well as how the audit differs for buildings above and below a 50,000 GSF floor area threshold.

Energy type

As defined in 1 RCNY §103-06, energy type is "electricity, natural gas, steam, and/or [bulk fuel]. Energy type for a building may take the form of chilled or hot water when heating, cooling and/or service (domestic) hot water systems are shared by multiple buildings."

GFA, GSF

Refer to Section I(A), "Covered buildings", and Section IV(B), "Gross floor area", of this Guide.

Good faith efforts ("GFE")

Refer to Section VI(A) of this Guide.

Qualified energy auditor

Refer to 1 RCNY §103-14(a) for list of acceptable credentials/certifications. Such credentials must be valid both at the time of audit and at the time of LL97 report submission.

Registered design professional ("RDP")

A professional engineer ("PE") or registered architect ("RA") holding a license that is valid at the time of LL97 report submission, with such license following the requirements of the New York State Education Law. Links to directories of current RDPs are available on the Department's website here.

II. Article 320 compliance pathways

If a LL97 covered building is not one of *certain types of affordable housing* (as defined in the *Article 321 Filing Guide*) or a *house of worship* (as described in the Department's CBL FAQ) then it cannot follow Article 321 and must instead follow one of the Article 320 compliance pathways. The specific pathway depends on the building's characteristics, with affordable housing being a primary delineator.

- Article 320 compliance pathways for grouped buildings (i.e. multiple buildings on one lot, shared energy service) are described in later sections of this Guide.

The five possible Article 320 compliance pathways for a **stand-alone building** on a CBL are as follows:

A. Non-covered building
B. Exception
C. 2026 Rent Regulated ≤ 35% pathway
D. 2035 Income Restricted extension pathway
E. Article 320 typical pathway

For guidance on which pathway to choose in cases where more than one pathway applies, including which pathways take precedence over the others – please refer to the CBL FAQ under *Why is my building's BBL listed on multiple LL97 CBLs?*

A. Non-covered building

If an RDP's floor area analysis finds that GFA is less than or equal to 25,000, then it may be that the DOF GSF numbers on file need to be updated and the building does not belong on the CBL. In this case, a dispute can be filed with DOF via the process described in the CBL FAQ under *My building should not be subject to LL97 - how do I remove it from the CBL?*

- If DOF agrees with the dispute, then the lot is taken off the CBL and no LL97 reporting is required. If DOF disapproves the dispute, then the first annual LL97 report is due within 120 days of the date of disapproval.
- A building that is delayed in submitting a report due to an open DOF dispute must request an extension before the annual LL97 report due date.
- If the building is enlarged above 25,000 GSF at any point, then it will become a LL97 covered building beginning with the first full calendar year following completion of the alteration.

B. Exception

Certain utilities and garden-style apartments are excepted from LL97 compliance; links to specific reasons why are included in the table in the "Covered Buildings" section of this Guide. Also excepted by Article 320 are "city buildings" (as defined in §28-320.1) and buildings on NYC Housing Authority ("NYCHA") property. However, an excepted building may still inadvertently end up on a CBL; the process for challenging such inclusion is described in the CBL FAQ.

- If the building is altered such that the exception no longer applies, then it will become a LL97 covered building beginning with the first full calendar year following completion of the alteration.

C. 2026 Rent Regulated ≤ 35% pathway

Per §28-320.3.10.1, residential buildings where at least one dwelling unit, but not more than 35% of all units, are rent regulated (as described in the definition of *rent regulated accommodation* in §28-320.1), are not obligated to comply with LL97 emission limits until CY2026 (i.e. their initial annual report would use 2026 benchmarking data and would be due May 1, 2027).

- A CBL of lots that may fall under the 2026 ≤ 35% Rent Regulated pathway is available here. Lots appearing on the 2026 CBL will automatically be noted within the LL97 reporting portal as not needing to submit annual reports for CY2024 and CY2025.
- Lots that are not shown on the 2026 CBL may still be eligible for the 2026 pathway if supporting documentation, as listed in the Department's CBL Matrix, is provided and approved per the process described in the CBL FAQ under *How do I dispute my building's compliance pathway, as listed on one or more of the LL97 CBLs?*

Note that an Article 321 building can become a 2026 pathway building if its percentage of rent-regulated units falls from above 35% to 35% or below, with the one-time Article 321 report superseded by annual Article 320 emissions reports beginning with the first full calendar year following the status change. (The reverse situation, where a 2026 pathway building becomes an Article 321 building, is unlikely.)

D. 2035 Income Restricted extension pathway

Residential buildings with at least one income-restricted rental unit are not obligated to comply with LL97 emission limits until CY2035 (i.e. their initial annual report would use 2035 benchmarking data and would be due May 1, 2036), as outlined in §28-320.3.9 and this chart developed by the Department in collaboration with the Department of Housing Preservation and Development ("HPD").

- A CBL of lots that may fall under the 2035 Income Restricted extension pathway is available here. Lots appearing on the 2035 CBL will automatically be noted within the LL97 reporting portal as not needing to submit annual reports for CY2024 through CY2034.
- Lots that are not shown on the 2035 CBL may still be eligible for the 2035 pathway if supporting documentation, as listed in the Department's CBL Matrix, is provided and approved per the process described in the CBL FAQ under *How do I dispute my building's compliance pathway, as listed on one or more of the LL97 CBLs?*

More specifically, the 2035 Income Restricted extension pathway covers:

1) buildings in the Mitchell-Lama program that are not also subject to Article 321 or the 2026 pathway; and
2) buildings (that are not also subject to Article 321 or the 2026 pathway) with at least one income-restricted unit, whether through an agreement with HPD or through a DOF tax exemption such as 420-c or Public Housing Finance Law ("PHFL") Article II, Article IV, Article V, or Article XI.

Note that if a building loses all of its income-restricted units or leaves the Mitchell-Lama program (e.g. through privatization / demutualization), then it will fall out of the 2035 pathway and become subject to annual reports beginning with the first full calendar year following the status change.

E. Article 320 typical pathway

If an Article 320 building does not fall into any of the categories listed in items A through D above, then it will have to file an annual emissions report that reflects performance in CY2024 (i.e. its initial annual report would use 2024 benchmarking data and would be due May 1, 2025), as outlined in §28-320.3.7 and 1 RCNY §103-14(b). Most Article 320 buildings fall under this typical pathway.

- There is no specific CBL of lots that fall under the Article 320 typical pathway, so the method for determining eligibility is to check the CBL of all covered buildings and then see if the lot is also on the 2026 CBL, the 2035 CBL, and/or the Article 321 CBL. If the lot is only present on the CBL of all covered buildings, then the lot is subject to the 320 typical pathway.

III. Reporting and extension requests

Code language

§28-320.3.7 Reports required to be filed by owner.

By May 1, 2025, and by May first of every year thereafter, the owner of a covered building shall file with the department a report, certified by a registered design professional…that for the previous calendar year such building is either:

1. In compliance with the applicable building emissions limit established pursuant to section 28-320.3; or
2. Not in compliance with such applicable building emissions limit, along with the amount by which such building exceeds such limit.

(…)

§28-320.3.7.1 Extension of time to file report.

An owner may apply for an extension of time to file an annual report required by section 28-320.3.7 in accordance with this section and the rules of the department…An extension granted pursuant to this section shall not modify the owner's obligation to comply with the applicable emission limits for such calendar year.

1 RCNY §103-14

(b) Reporting. By May 1, 2025, a building emissions report for calendar year 2024, and by May 1 of every year thereafter…a building emissions report for the previous calendar year is required to be submitted to the Department by the owner of a covered building and must be submitted in accordance with the requirements of this section.

(1) Reporting tool. Energy use and emissions information for a covered building must be submitted in a form and manner as determined by the Department. Owners must maintain all documentation and information used in preparing the building emissions report for a minimum of six (6) years. Such documentation and information shall be submitted to the Department upon request.

(2) Condominium buildings. Building emissions for a covered building held in the condominium form of ownership must be submitted in a single report that includes the emissions for all condominium units in such building. Such report shall be submitted to the Department by the board of managers of such covered building.

(3) Multiple buildings that do not share energy service. [see "Shared energy service" section of this Guide]

(4) Multiple buildings that share energy service. [see "Shared energy service" section of this Guide]

(5) New buildings. An owner of a new covered building for which a Certificate of Occupancy ["CO"] or a Temporary Certificate of Occupancy ["TCO"] is issued on or after January 1, 2023, must begin reporting for such building for the first full calendar year following the year that such Certificate of Occupancy or Temporary Certificate of Occupancy is issued.

(6) Buildings with change in ownership. Notwithstanding any other provision of this section, for any covered building for which title is transferred to a new owner during a calendar year, such new owner is not required to submit a building emissions report for such building for such calendar year, provided the new owner is a subsequent bona fide purchaser of the covered building pursuant to Department rules.

(7) Full demolition of a covered building. An owner of a covered building for which a full demolition permit has been issued is not required to submit a building emissions report for the calendar year during which demolition work has commenced, provided that, no later than May 1 of the following year, the owner submits a written certification by a registered design professional that one or more energy-related systems within such building have been compromised and legal occupancy is not possible prior to January 1 of such following year.

(…)

(g) Penalty for failing to file a building emissions report. An owner of a covered building shall be liable for a civil penalty for failing to file a building emissions report within 60 days of the reporting deadline or by the date of any extension deadline granted by the Department pursuant to this rule.

(1) Calculation. Such penalty shall be an amount equal to the gross floor area of such building, multiplied by $0.50, for each month such report is not submitted within the 12 months following May 1 of each year, including the 60 days following the deadline.

(2) Extension of time to file. An owner who is unable to file the building emissions report by the reporting deadline despite such owner's good faith efforts may apply for an extension in accordance with section 28-320.3.7.1 of the Administrative Code and this paragraph. An application for an extension must be filed with accompanying documentation no earlier than 30 days before and no later than 60 days after May 1 of each year. For purposes of this subdivision, an owner demonstrates good faith efforts for consideration of an extension where:

(i) The registered design professional hired for purposes of completing the building emissions report could not complete such report by the reporting deadline. For purposes of this paragraph, acceptable documentation in support of such extension request includes a contract between the owner and the registered design professional executed no later than February 1 of the year such report is required to be filed and an affidavit signed by the owner and the registered design

professional stating that such professional was unable to complete the report on time and that the report will be completed and filed within 120 days of the reporting deadline; or

(ii) The owner has challenged a determination by the Department of Finance regarding whether the square footage of the building qualifies such building as a covered building, provided that such owner must file the building emissions report within 120 days of the first determination by the Department of Finance that such building qualifies as a covered building following the commencement of such challenge. For purposes of this paragraph, acceptable documentation in support of such extension request includes an attestation signed by the owner indicating why the square footage of the building does not qualify such building as a covered building and all correspondence between the Department of Finance and such building owner related to such dispute.

Reporting and extension requests – summary

Starting in 2025 for most buildings, an annual LL97 compliance report is due by **May 1st** covering emissions and emissions limits from the calendar year prior (January 1st through December 31st). There is an annual grace period through **June 30th** where the report may be submitted without penalty, but reports submitted after June 30th will incur a $0.50/sf penalty for each month that has passed since May 1st. Calculations and floor area diagrams used to create the report should ideally be included in the submission; otherwise, the Department may request such supporting documentation at any time.

If an owner wishes to pursue penalty mitigation using GFE (including the decarbonization plan option), the GFE petition must be submitted with the annual emissions report. Non-compliant reports submitted after the end of the grace period and not pursuing penalty mitigation will incur fines for both late submission and non-compliance. Annual deadline extension requests may be submitted until June 30th and are allowed for two reasons:

i) The RDP submitting the report needs until **August 29th** to finish (e.g. due to delayed utility-provided energy data) and was hired on or before **February 1st**; or
ii) There is a pending dispute at DOF challenging the building's recorded GSF and presence on a CBL, as described in Section II(A) of this Guide.

Certain building statuses may affect reporting and are elaborated upon in 1 RCNY §103-14:

- Condominiums ("condos")
- Multiple buildings on one lot
- Newly constructed buildings
- Ownership changes
- Fully demolished buildings

Condos are single structures that have been subdivided into condo lots, which are individual units that can each be under separate ownership. Condo units can be stacked or otherwise agglomerated, and they often share egress and life safety systems with other condo units. Department-related matters in condos are generally handled by the property manager and/or condo board.

Multiple buildings on one lot have unique reporting requirements, especially when the buildings follow different compliance pathways and/or share energy service. These topics are covered in Sections III(B) and III(C) of this Guide.

New buildings ("NBs") are obligated to report emissions beginning with the first full calendar year following the building's initial Temporary Certificate of Occupancy ("TCO"). The entire building – not just the areas under TCO – must be accounted for in GFA, emissions limit, and energy use calculations. If unoccupied areas of the building temporarily have to use energy types other than the utility-provided energy types used in the rest of the building, those must be noted in the LL97 report.

Ownership changes for an existing building exempts such building from LL97 reporting for the entire calendar year in which the sale/transfer was closed (e.g. a building sold in April 2026 would not need to submit a CY2026 emissions report by May 1st, 2027). The submitted documentation would need to show that the *"owner is a subsequent bona fide purchaser"* as described in the Department's benchmarking page and 1 RCNY §102-04(d)(1), which is basically verification that the new owner is not merely the old owner under a different name/entity.

Buildings undergoing **full demolition** ("demo") potentially become exempt from LL97 immediately but must still file an annual report (by May 1st of the following year) attesting that the building's energy-using systems ceased to be operational by the end of the calendar year in which demo work commenced. When demo phasing results in systems staying online and/or legal occupancy continuing past the end of the year, a LL97 compliance report must be submitted for that year.

Reporting and extension requests – additional information

1. Deadline extension requests may be submitted as early as **April 1st**.

2. For more on condo lots, see the "Lots / BBLs – additional information" heading in the "Building-level compliance" section of this Guide.

3. The initial TCO for a NB can be downloaded from *DOB Now: Build* using the address search function. Once the building pops up, the "Certificate of Occupancy" tab will list all of the TCOs, with the "Initial" TCO shown under the "CO Submission Type" column. Click on the "Print" icon (not the "View" icon) to see the document's issuance date.

4. Even if the initial TCO covers only a small percentage of the building floor area, it still starts the clock for LL97 compliance reporting purposes.

5. If a NB shows up on a CBL but is still within its grace period following initial TCO, then an exception request can be submitted to the Department following the steps under *My building should not be subject to LL97 - how do I remove it from the CBL?* in the CBL FAQ.

6. Partial demo may or may not make a building exempt from LL97; this depends on the scope of the partial demo and whether it results in energy-using systems being taken offline.

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III(A). Building-level compliance

Building-level compliance – Code language

n/a

Building-level compliance – summary

Owner submission of LL97 compliance reports, as well as issuance of associated penalties by the Department, takes place at the level of an individual building (or "BIN", Building Information Number), even though the identifying information in the CBLs is at the level of the tax lot (or "BBL", Borough-Block-Lot).

Eligibility for adjustments and exceptions applies to individual buildings, not to entire lots. Therefore, when more than one building exists on a lot, it is up to the Owner(s) to demonstrate LL97 compliance status for each building individually – this process is covered in more detail in the "Multiple buildings on one lot" section of this Guide.

Lots / BBLs – additional information

1. Every official tax lot in the City has a unique ten-digit BBL assigned by the Department of Finance ("DOF") for recordkeeping.

   A. The first digit of the BBL is the borough code.
      - Manhattan = 1, Bronx = 2, Brooklyn = 3, Queens = 4, Staten Island = 5.

   B. The next five digits of the BBL are the block number.

- Manhattan blocks go from 1 to 2255; Bronx blocks go from 2260 to 5958, with block 9999 used for various green spaces; Brooklyn blocks go from 1 to 8955; Queens blocks go from 1 to 16350; and Staten Island blocks go from 1 to 8050.
- Leading zeros are used in the BBL if the block number is fewer than five digits long (e.g. Block 1 = 00001).

C. The last four digits of the BBL are the lot number.
   - Most lot numbers are one or two digits, beginning on each block at 1; lots created through plan subdivisions are three digits since they generally add multiples of 100 to the original lot number.
   - Condo lot numbers start at 1000. All condo lots within a building are grouped under a single "billing lot" number, which is four digits beginning with 75 (e.g. 7501).
   - When the upper portion of a building is subdivided off as an "air lot" for tax purposes, it receives a four-digit lot number beginning with 9 (e.g. 9001). Similarly, when the below-grade portion of a building is subdivided off as a "subterranean lot", it receives a four-digit lot number beginning with 8 (e.g. 8001). Air and subterranean lot floor areas must be combined with base building floor area for LL97 reporting, even if they are under different ownership – similar to condo lot reporting.
   - Leading zeros are used in the BBL if the lot number is fewer than four digits long (e.g. Lot 1 = 0001).

2. Condo building records are sometimes kept under the original pre-condo lot number, which can be found by zooming into the official NYC Property Information Portal (aka DOF tax map) and locating the crossed-out number next to the "C". Meanwhile, the condo billing lot number ("75XX") is the one shown on the official NYC Zoning and Land Use Map ("ZoLA"); the Department's Property File database uses the condo billing lot number.

3. Zoning lot boundaries can be different from tax lot boundaries, in that one zoning lot might encompass multiple tax lots. Zoning lots and the related concept of zoning floor area ("ZFA") generally do not factor into LL97 compliance.

4. For more information on what happens to BBLs in special situations, such as when they are merged or cut through with new streets, see the Department of City Planning ("DCP")'s Geosupport help page on BBLs.

Buildings / BINs – additional information

1. Every stand-alone building in New York City has its own seven-digit BIN.

    A. The first digit of the BIN is the borough code.

    B. The second digit of the BIN is used to indicate permanent vs. temporary vs. dummy status (see below).

    C. The last five digits of the BIN do not have any special significance, except that BINs are assigned by DCP sequentially so buildings on the same block will often have sequential BINs.

2. BINs are assigned for a building's lifetime and only retired when that building undergoes full demo; a new building going up in the same location is assigned a completely new BIN.

3. To see all the BINs on a BBL, along with their associated address ranges, use one of the search functions in DCP's Geographic Online Address Translator ("GOAT").
    - Sometimes there are more BINs on a BBL than discrete buildings, meaning that at least one of the buildings has more than one BIN. In such cases, the LL97 report for such a building would be filed under one of the BINs; guidance on this scenario is forthcoming.
    - A less common situation is for there to be fewer BINs on a BBL than discrete buildings. In such cases, DCP's Geographic Research ("GR") Unit can assign the missing BIN(s) if contacted at gss_feedback@planning.nyc.gov. DCP will occasionally assign a temporary BIN ahead of a permanent BIN; temporary BINs have a 9 as the second digit and are automatically retired after permanent BINs are assigned.

4. Unfortunately, the Department's Property File database will not recognize a BIN listed in DCP's Geosupport database unless there is an address range associated with that BIN.

- This is evident when creating a new filing in the *DOB Now: Build* system, as the only option for building identification is to input an address – the BIN then populates automatically based on the address.
- To issue violations or permits on a building without an address, the Department sometimes creates a "dummy" BIN where the second digit is an 8. Since dummy BINs are created by the Department and not DCP, they only exist in the Property File database, not in Geosupport, and are not automatically retired when a permanent BIN is assigned.

5. To associate an address range to a BIN, DCP must receive a House Number Certification from the corresponding borough's Topographical Bureau ("Topo"). The certification process differs slightly in each borough, but generally requires the services of an RDP and takes between 1-3 months upon submission of the application.
    - The building owner is responsible for applying to Topo and then forwarding the Topo certification to DCP at gss_feedback@planning.nyc.gov. DCP updates their database on a set schedule, so there may be a delay between when they receive the certification and when the public database changes to reflect it.
    - Information on Manhattan Topo's application process is here; Bronx's is here; Brooklyn's is here; Queens' is here; and Staten Island's is here.

6. In general, a condo billing lot for a single building has only one BIN associated with it.

7. For more background on how BINs are useful, see DCP's Geosupport help page on BINs.

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III(B). Multiple buildings on one lot

Code language

1 RCNY §103-14

(b) Reporting.

(...)

(3) Multiple buildings that do not share energy service. Where two or more covered buildings (i) are on the same tax lot, and (ii) do not share energy service, the owner must submit individual and separate building emissions calculations for each covered building on the tax lot.

(4) Multiple buildings that share energy service. For building emissions reports for calendar years 2024 -2029, emissions for two or more covered buildings, regardless of whether such buildings are on the same tax lot, may be included in an aggregated building emissions calculation in a single building emissions report, provided all such covered buildings share energy service.

1 RCNY §103-17 (Article 321)

(b) Required report for certain buildings.

(...) Where an owner has multiple covered buildings on a lot, such owner may choose to provide a separate report for each such covered building on the lot, or a single report pursuant to either section 28-321.3.1 or section 321.3.2 of the Administrative Code for all such covered buildings on the lot.

Where buildings share an energy system, such buildings must be reported in a single report pursuant to the same section of the Administrative Code. Two or more covered buildings located on adjacent but separate tax lots may be included in a single report pursuant to the same section of the Administrative Code, provided all such covered buildings share energy service.

Multiple buildings on one lot – summary

When a lot appears on a CBL, then every building on that lot is generally required to submit an individual LL97 report under its own BIN. Each building potentially follows a different compliance pathway, which would be one of the following:

1. **Non-covered**
2. **Exception**
3. **2026 Rent Regulated ≤ 35%**
4. **2035 Income Restricted extension**
5. **Article 320 typical pathway**
6. **Article 321 (Performance-based pathway, Prescriptive pathway)**
7. **Combined reports**

1. Non-covered – multiple buildings on one lot

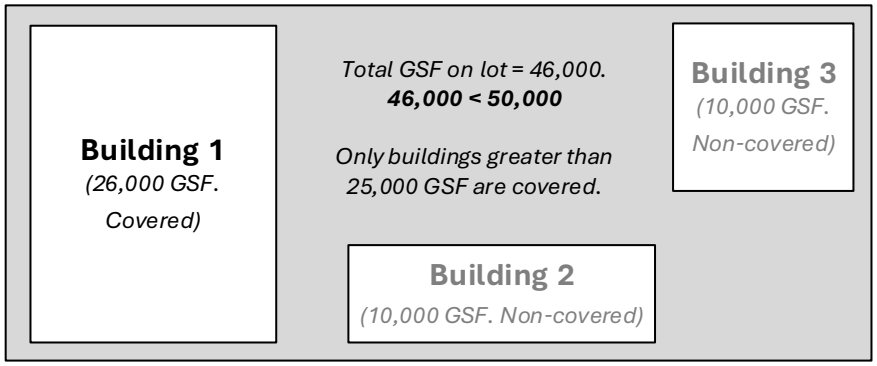
a. Lot should not be on CBL

If a detailed analysis of the lot's GFA finds that no building on the lot is larger than 25,000 GSF and the aggregate area of all buildings combined is not more than 50,000 GSF, then it may be that the DOF GSF numbers on file need to be updated and that the building does not belong on the CBL.

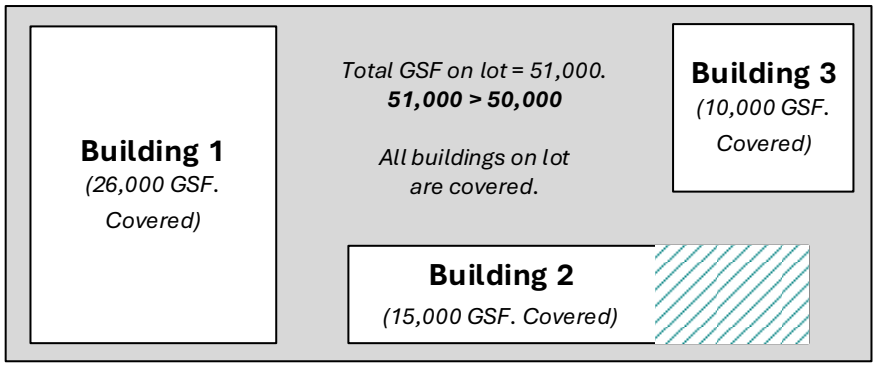
- The steps to address this are the same as described in Section II(A)(1) of this Guide.

b. Non-covered building on the same lot as a covered building

If one building on a lot is larger than 25,000 GSF, then the entire lot will be pulled onto the CBL even when the aggregate GSF is less than or equal to 50,000 (the threshold at which every building on the lot must comply with LL97). In this case, the other buildings on the lot could be considered non-covered.



If the aggregate GSF increases above 50,000 (due to enlargements, extensions, additional structures), all buildings on the lot would then be considered covered buildings.



2. Exception – multiple buildings on one lot

Buildings falling under this category are the same as described in Section II(B) of this Guide, with the addition of certain garden-style apartments as defined in §28-320.1 and described in the CBL FAQ under *My building should not be subject to LL97 - how do I remove it from the CBL?*

3. 2026 Rent Regulated ≤ 35% – multiple buildings on one lot

Buildings falling under this category are the same as described in Section II(C) of this Guide.

4. 2035 Income Restricted extension – multiple buildings on one lot

Buildings falling under this category are the same as described in Section II(D) of this Guide.

5. Article 320 typical pathway – multiple buildings on one lot

Buildings falling under this category are the same as described in Section II(E) of this Guide.

6. Article 321 – multiple buildings on one lot

For lots with multiple buildings, the Department-published CBL of all BBLs that may fall under Article 321 indicates that at least one building may be subject to Article 321, but it does not indicate which one(s). Therefore, it is up to the owner to demonstrate Article 321 eligibility for each building on the lot individually.

If a building is eligible for Article 321, then the following compliance pathways are possible:

a. Performance-based pathway

This requires a report certified by an RDP that describes the building as if it were subject to Article 320. In this report, the building's emissions for 2024 must be shown to be under the emissions limit for calendar year 2030, using the 2030 emissions coefficients, as described in §28-320.3.2 and expanded upon in 1 RCNY §103-14.

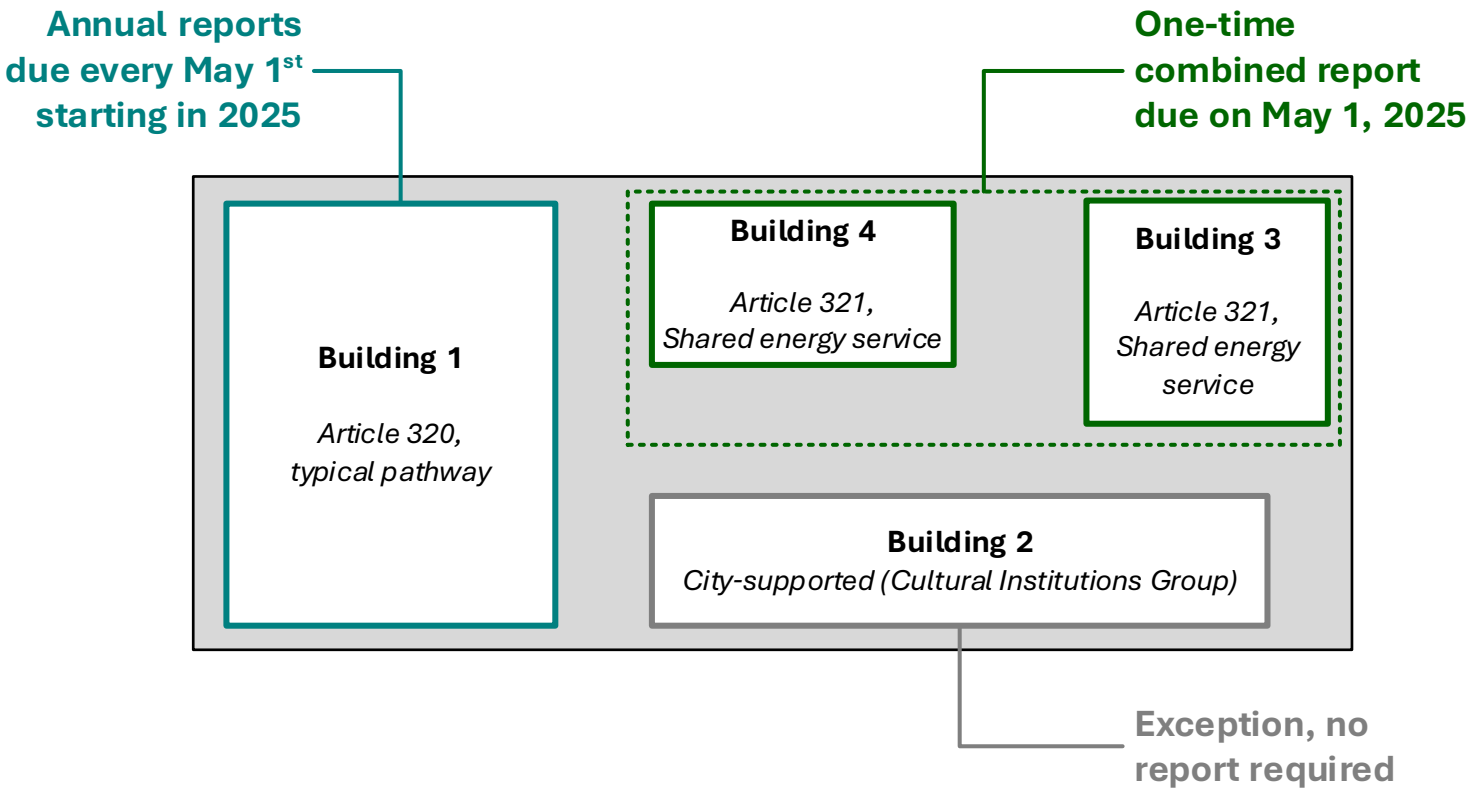
b. Prescriptive Pathway

This requires a report certified by a qualified retro-commissioning ("RCx") agent that demonstrates the completion or non-applicability of the 13 Prescriptive Energy Conservation Measures ("PECMs") listed in §28-321.2.2 and detailed in 1 RCNY §103-17 and the *Article 321 Filing Guide*. A PECM report can include Department-provided templates and/or other approved documentation, as noted in the guidance.

Unlike Article 320, which requires annual emissions reports, Article 321 only requires a one-time report submitted in 2025. Under certain circumstances, Article 321 buildings can apply for mediated resolution to extend the reporting window beyond 2025 (for example, if they need more time to complete the PECMs, or if they will not be able to comply with 2030 emissions limits until 2030).

7. Combined reports – multiple buildings on one lot

Combined reports are individual building reports that are grouped together under one LL97 submission and subject to a single filing fee; each individual report still only describes a single covered building's emissions and emissions limits. According to 1 RCNY §103-14(b)(4) and 1 RCNY §103-17(b), combined reports under both Article 320 and Article 321 are possible when buildings share energy service and follow the same compliance pathway, as described in the next section of this Guide. Article 320 combined reports are only allowed for the 2024-29 reporting period and they are optional, not mandatory.



III(C). Shared energy service

Code language

1 RCNY §103-14

(a) Definitions.

(...)

Energy service. Energy service is the delivery of energy from the energy supply or energy distribution system to or throughout a building, including any equipment used for such delivery. Two or more buildings may share energy service. Two or more buildings share energy service if such buildings share a meter or other point of connection to the energy supply or energy distribution system.

(...)

(b) Reporting.

(...)

(3) Multiple buildings that do not share energy service. Where two or more covered buildings (i) are on the same tax lot, and (ii) do not share energy service, the owner must submit individual and separate building emissions calculations for each covered building on the tax lot.

(4) Multiple buildings that share energy service. For building emissions reports for calendar years 2024 -2029, emissions for two or more covered buildings, regardless of whether such buildings are on the same tax lot, may be included in an aggregated building emissions calculation in a single building emissions report, provided all such covered buildings share energy service.

Shared energy service – summary

Each energy type (such as electricity, natural gas, steam, bulk fuel, and chilled or hot water) that enters a building should be able to be tracked back to a meter or submeter. If the nearest meter covers more than just that one building, then all buildings under such meter are considered to share energy service and may be combined into a single report for LL97 submission as long as their compliance pathways are the same, as described in Section III(B)(7) of this Guide. Combined reports may not combine

emissions and emissions limits calculations; instead, they must feature separate emissions reporting for each building in the group. Therefore, when buildings share energy service, the total consumption of each energy type shared must be mathematically apportioned among each building served using a consistent methodology.

The methodology for apportioning energy use should be determined by an RDP and must be the same for all buildings within the shared service group. Some methodology examples (floor area-based, emissions limit-based) are listed in the "Gross floor area" section of this Guide. Calculations should reflect actual energy use and will generally not be as simple as dividing the total energy use by the number of buildings.

NOTE: Energy losses incurred during transmission and distribution may not necessarily be measurable and will end up being apportioned among the buildings served.

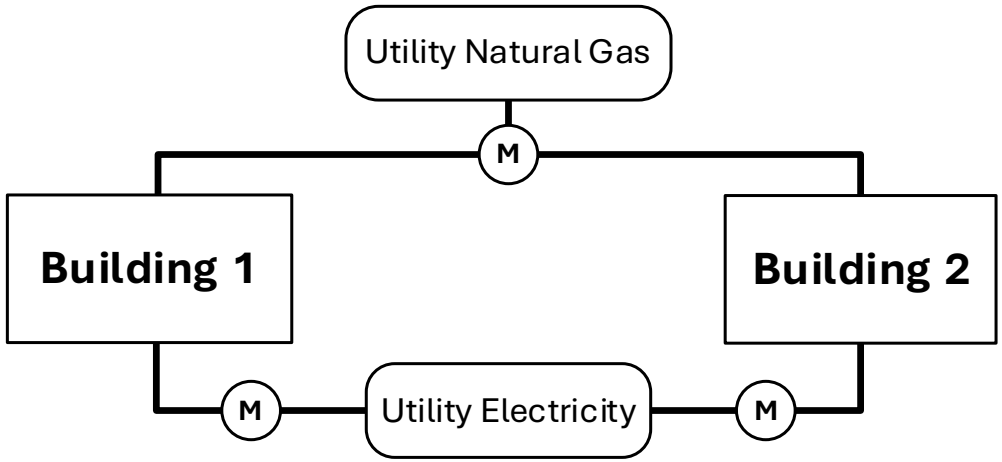
Shared energy service – additional information

1. Combined reports for buildings with shared energy service are possible even when the buildings are on separate tax lots.

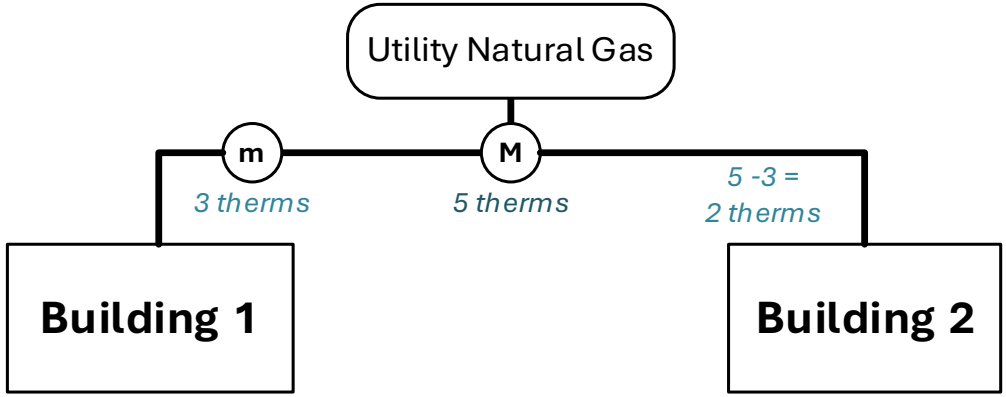
2. The methodologies for apportioning energy use among different buildings that share energy service may also be used to apportion energy use among different tenant spaces that share a meter (and are under the 5,000 sf threshold that would require retroactive installation of submeters per LL88).

3. Under ESPM, shared energy service corresponds to having a "multi-building property" where a meter is associated at the "Parent" (group) level rather than at the "Child" (individual) level.

4. Buildings are considered to share service even if only one energy type is shared while all others are individually metered. In the example below, the two buildings may file a combined report because of the shared gas meter, even though the incoming electricity is separately metered:



5. With submeters, it is acceptable if one building out of a group lacks a submeter, since that building's energy use can be mathematically determined by subtracting all the other submeter readings from the main meter reading:



IV. Emissions calculations

Code language

§28-320.1 Definitions.

(...)

BUILDING EMISSIONS. (...) The term "building emissions" shall not include greenhouse gas emissions emitted during a local state of emergency declared by the mayor pursuant to section 24 of the executive law or a state of emergency declared by the governor pursuant to section 28 of the executive law, where such local or state emergency has an impact on building emissions.

(...)

§28-320.3 Building emissions limits.

Except as otherwise provided in this article, or otherwise provided by rule, on and after January 1, 2024, a covered building shall not have annual building emissions higher than the annual building emissions limit for such building as determined in accordance with this section based on the occupancy group of the building.

§28-320.3.1 Annual building emissions limits 2024-2029.

(...) For a covered building with spaces classified in more than one occupancy group, the annual building emissions limit shall be the sum of the calculated values from items 1 through 10 of this paragraph, as applicable for each space.

1. For spaces classified as [occupancy group]: multiply the building emissions intensity limit of [specific factor per occupancy group] by the corresponding gross floor area (sf);

[refer to Article 320 for list of 2024-2029 building emissions intensity limits]

§28-320.3.1.1 Greenhouse gas coefficient of energy consumption for calendar years 2024 through 2029.

The annual building emissions of a covered building in accordance with this section, greenhouse gas emissions shall be calculated as follows for calendar years 2024 through 2029: (...)

[refer to Article 320 for list of 2024-2029 emissions coefficients]

§28-320.3.2 Building emissions limits for calendar years 2030 through 2034.

(...) The department may establish different limits, including a different metric or method of calculation, set forth in the rules of the department, where the department determines that different limits are feasible and in the public interest. (...)

[refer to Article 320 for list of 2030-2034 building emissions intensity limits]

§28-320.3.2.1 Greenhouse gas coefficients of energy consumption for calendar years 2030 through 2034.

(...) When developing such coefficients, the commissioner shall consider factors, including but not limited to the best available New York state energy research and development authority and State Energy Plan marginal forecasts for Zone J for the end of the compliance period and beneficial electrification.

§28-320.3.3 Reserved.

§28-320.3.4 Building emissions limits for calendar years 2035 through 2050.

...the commissioner shall establish by rule annual building emissions limits and building emissions intensity limits applicable for calendar years 2035 through 2039 and building emissions limits and building emissions intensity limits applicable for calendar years 2040 through 2049. (...)

§28-320.3.5 Building emissions limits on and after calendar year 2050.

...the commissioner shall establish by rule annual building emissions limits and building emissions intensity limits applicable for calendar years commencing on and after January 1, 2050. (...)

1 RCNY §103-14

(a) Definitions. (...)

Emissions factor. An emissions factor is the building emissions intensity limit for an occupancy group or property type as determined in accordance with section 28-320.3 of the Administrative Code.

(...)

(c) Occupancy groups and emissions factors. (...)

(3) Annual emission factors. For purposes of reporting annual greenhouse gas emissions pursuant to this section, emissions factors shall be determined in accordance with this paragraph.

[refer to Rule for lists of 2024-2029, 2030-2034, 2035-2039, and 2040-2049 emissions factors]

(vi) For purposes of reporting for calendar years 2050 or later, an emissions factor of 0.00 applies to all Energy Star Portfolio Manager property types.

(d) Calculations. (...)

(2) Building emissions limits.

(i) Buildings with a single occupancy group. The building emissions limit for a covered building with a single occupancy group or property type must be calculated as the gross floor area multiplied by the emissions factor for the building's occupancy group or property type.

(ii) Buildings with multiple occupancy groups. The building emissions limit for a covered building with multiple occupancy groups or property types must be calculated as the sum of the emissions factor for each occupancy group or property type multiplied by the floor area of each occupancy group or property type in the covered building:

[refer to Rule for Equation 103-14.1]

(3) *Greenhouse gas coefficients of energy consumption.* Greenhouse gas coefficients for energy consumption shall be determined in accordance with this paragraph (3):

(i) Greenhouse gas coefficients for certain fuels combusted or consumed on premises for calendar years 2024 - 2034. For building emissions reports for calendar years 2024 - 2034, the GHG coefficients for fuel types combusted or consumed on premises provided in section 28-320.3.1.1 of the Administrative Code apply, except as provided in this subparagraph (i) or in subparagraph (ii) of this paragraph, provided that for any fuel type with a biogenic blend, the owner may propose an alternate coefficient pursuant to clause c of this subparagraph.

a. For the following fuel types combusted or consumed on premises, greenhouse gas emissions must be calculated as generating the following amounts of tCO_2e per kBtu:

[refer to Rule for list of emissions coefficients for 18 uncommon bulk fuels]

b. Exceptions. Notwithstanding any other provision of this subparagraph, for building emissions reports for calendar years 2030 – 2034:

[refer to Rule for 2030-2034 emissions coefficients for #2 and #4 fuel oil]

c. For any fuel type that is combusted or consumed on site, not listed in this subparagraph or section 28-320.3.1.1 of the Administrative Code and not prohibited by applicable rule or law, the owner must propose a carbon coefficient, in tCO_2e per kBtu, that serves the public interest of reducing GHG emissions…

(ii) Greenhouse gas coefficients for utility energy consumption for calendar years 2030 through 2034. For building emissions reports for calendar years 2030 - 2034, the GHG coefficients for consumption of energy generated by a utility shall be determined in accordance with this subparagraph (ii).

[refer to Rule for 2030-2034 emissions coefficients for utility electricity, natural gas, and district steam]

(iii) Greenhouse gas coefficient for utility electricity based on time of use (TOU). (…)

(iv) Greenhouse gas coefficient for campus-style electric systems. (...)

(v) Greenhouse gas coefficients for certain campus-style energy systems. (...)

(vi) GHG coefficients for distributed energy resources. (...)

a. GHG coefficient for certain distributed energy resources. (...)

b. Greenhouse gas coefficient for subscription to off-site solar energy generation. (...)

c. GHG coefficient for energy storage. (...)

(vii) GHG Coefficient for beneficial electrification. (...)

(4) Annual building emissions. Annual building emissions for a covered building must be calculated in accordance with this paragraph (4).

(i) Calculation. Annual building emissions must be calculated as follows:

[refer to Rule for Equation 103-14.13]

(ii) Energy consumption to be included. All energy consumed by a covered building, including fuels used for normal testing of emergency or stand-by power generators, must be included in the calculation of the annual building emissions for such covered building, provided, however:

(...)

b. Energy consumed during a local state of emergency declared pursuant to section 24 of the NYS Executive Law or a state of emergency declared pursuant to sections 28 of the New York State Executive Law, where such state of emergency has an impact on building emissions, such as a state of emergency resulting from severe thunderstorms or flooding.

Emissions calculations – summary

LL97's approach to compliance is straightforward. First, a building calculates its allowable **emissions limit**, which is the maximum GHG emissions that it can generate; this limit ratches down in stages until it reaches zero by CY2050. Second, a building must calculate its GHG **emissions** for the previous calendar year. If a building's emissions are lower than its allowable emissions limit, then it is compliant with LL97.

A building's emissions limit is the ∑ (sigma or sum) of the emissions limits for each of its property types. Each property type's emissions limit is the product of its prescribed **emissions factor** (as listed in the Article and/or Rule) and that property type's total **GFA** within the building.

- Property type refers to either ESPM property type or BC occupancy group (under limited circumstances) – see "Selecting ESPM categories" section of this Guide for further clarification.
- GFA must be measured/verified in an energy-focused way that is specific to LL97 – see "Gross floor area" section of this Guide.

A building's emissions are the ∑ of the emissions for each of its consumed energy types. Each energy type's emissions are the product of its prescribed **emissions coefficient** (as listed in the Article and/or Rule) and that energy type's annual **quantity consumed**. Covered buildings subject to LL84 Benchmarking will have already been recording energy consumption via ESPM since 2013; buildings that are covered under LL97 but not covered under LL84 will need to start using ESPM.

The glide path to zero emissions is broken up into five compliance reporting periods of increasing stringency: 2024-2029, 2030-2034, 2035-2039, 2040-2049, and 2050 onward. Stepping down emissions limits in this way allows a building to make incremental changes to achieve compliance during each reporting period, rather than having to make all changes immediately.

Alternate calculations may be possible if a building is non-compliant under the standard calculations. These include:

- **Upward adjustments for emissions limits** if…
  - The building has excessive energy use due to special circumstances (§28-320.8), or the building is a not-for-profit hospital or health care facility (§28-320.9). Requests for such adjustments are due by January 1, 2025, and the request process is covered in detail in the Department's *Adjustments Application Filing Guide*, associated *DOB Now: Build* webinar (slides here), adjustments-related webpage and FAQ, and latest adjustments-related service notice; or

- It is not reasonable to achieve strict compliance with the emissions limits because of a constraint imposed by another provision of law or a physical condition of the building site, or if a building faces financial hardship (§28-320.7). Guidance for these adjustment requests is forthcoming, but buildings interested in pursuing this option should begin to prepare documentation as soon as possible.

- **Emissions methodologies that may result in more favorable coefficients**, such as…
  - Time of Use ("TOU"), which uses hourly emissions coefficients and hourly energy use to create a list of 8,760 (the number of hours in a year) emissions values. TOU is addressed in 1 RCNY §103-14(d)(3)(iii);
  - Campus-style, where a central plant generates electricity and/or other energy types to be distributed among multiple buildings. Campus is addressed in 1 RCNY §103-14(d)(3)(iv) and 1 RCNY §103-14(d)(3)(v);
  - Distributed Energy Resources ("DERs"), including cogeneration and fuel cells, as addressed in 1 RCNY §103-14(d)(3)(vi)(a);
  - Differential emissions from natural gas-powered fuel cells older than January 19, 2023, as addressed in 1 RCNY §103-14(d)(3)(vi)(d);
  - Purchased electricity from off-site solar, as addressed in 1 RCNY §103-14(d)(3)(vi)(b);
  - Energy storage in conjunction with TOU, as addressed in 1 RCNY §103-14(d)(3)(vi)(c); and
  - Beneficial electrification ("BE"), as covered in more detail in Section V(A) of this Guide.

  Emissions coefficient calculation methodologies other than BE will be addressed in future versions of this Guide under separate sections.

- **Deductions**, as covered in more detail in Section V of this Guide.

NOTE: Energy used during a state of emergency, as declared by NYC under an Emergency Executive Order or by NYS under a "Disaster Emergency" Executive Order, must be specifically measured and documented in narrative form if it is to be proposed to be deducted from overall emissions.

Emissions calculations – additional information

1. The number (in units of tCO_2e / sf) by which a space's GFA is multiplied to obtain an emissions limit is called an "emissions factor" under 1 RCNY §103-14 when it applies to ESPM property types but is called a "building emissions intensity limit" under Article 320 when it applies to BC occupancy groups.

2. Future rulemaking will address emissions coefficients for CY2035 and beyond; this provides time to account for changing technologies and grid conditions.

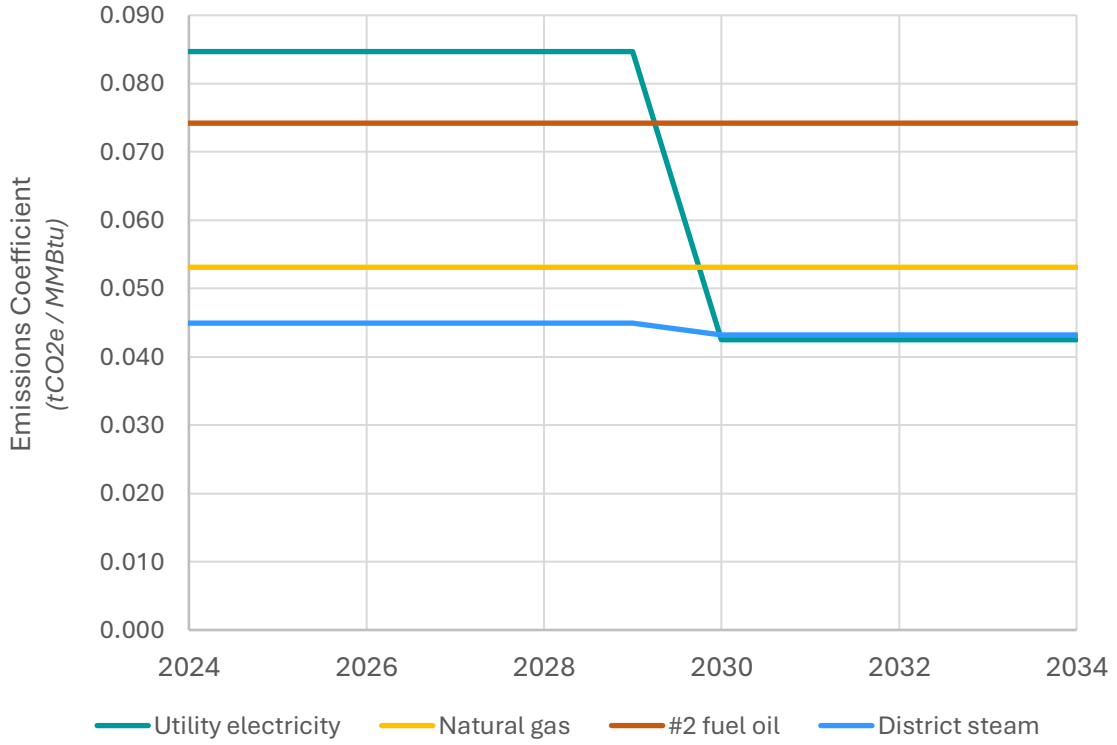
3. A webinar describing various topics related to LL97 emissions calculations is available on the Department's YouTube channel here (note that the first 15 minutes of the video are about NYC Accelerator).

4. A helpful feature of ESPM is that utility electricity use can be automatically uploaded by Con Edison ("Con Ed") and natural gas use can be automatically uploaded by either Con Ed or National Grid ("Nat Grid"). Con Ed's data is uploaded on a BBL basis while Nat Grid's is uploaded per (separately metered) building. Usage of other energy types must be manually entered, with the amounts obtained through auditable measuring techniques.

5. Article 320 requires an average buildings emissions intensity of "no more than 0.0014 tCO_2e /sf/yr" starting in CY2050, reflecting the "80 x 50" policy in effect at the time of LL97's original enactment; this set a goal of reducing City emissions to 80% below 2005 levels by 2050. As both NYC and NYS regulations have gotten more stringent since 2019, 1 RCNY §103-14 now sets the average buildings emissions intensity to zero starting in CY2050.

6. The process to submit a proposed emissions coefficient for a fuel type that is not listed in the rule is via a Construction Codes Determination ("CCD1") request to the Department, including all information required to substantiate the proposal. For example, a CCD1 for a biogenic fuel could describe blend percentages and combustion technology; a CCD1 for a hydrogen emissions coefficient could describe the origin of the hydrogen (grey, black, brown, blue, green, pink, yellow) and how the hydrogen is consumed. Established benchmarks, such as the GHG Emission Factors Hub published annually by the US Environmental Protection Agency ("EPA"), may be referenced.

7. As currently written in Article 320 and 1 RCNY §103-14 and seen in the below graph, the emissions coefficients for natural gas and fuel oil do not change between the first two LL97 reporting periods whereas the emissions coefficients for electricity and district steam decrease. This reflects the fact that electricity will increasingly be provided through renewable sources – as reflected in the NYS Climate Leadership and Community Protection Act ("CLCPA") – and that district steam is decarbonizing through various means, as outlined in this Con Ed presentation.



IV(A). Selecting ESPM categories

Code language

§28-320.3 Building emissions limits. (...)

§28-320.3.1 Annual building emissions limits 2024-2029.

(...) For the purposes of such calculation the department shall provide a method for converting categories of uses under the United States environmental protection agency Portfolio Manager tool to the equivalent uses and occupancy groups set forth in this section. (...)

§28-320.3.2 Building emissions limits for calendar years 2030 through 2034.

(...) For the purposes of such calculation, the department shall provide a method for converting categories of uses under the United States environmental protection agency Portfolio Manager tool to the equivalent uses and occupancy groups set forth in this section. (...)

Local Law 97 Advisory Board Report

1.0 Calculating and Reporting GHG Emissions

1.1 Metric of Measure and GHG Emissions Limits Changes

1.1.1 Align Emissions Limits with Energy Star Portfolio Manager (ESPM)

LL97 sets annual building GHG emissions limits for calendar years 2024-2029 and 2030-2034, with limits based on Building Code occupancy categories. After discussing the effectiveness and practical impact of using Building Code occupancy categories, the Advisory Board recommends that the City revise emissions limits to align with the United States Environmental Protection Agency Portfolio Manager (ESPM) property types. The ESPM categorization is more reflective of energy use patterns (e.g., hours of operation, process loads, etc.), leading to more accurate reporting as well as a more equitable distribution of carbon reduction responsibility. While the law already directs DOB to provide a method for converting to ESPM categorization, the Board supports the change. (...)

1 RCNY §103-14

(c) Occupancy groups and emissions factors. (...)

(1) For each covered building, the owner must submit the following information:

(i) Each occupancy group or property type within the building during the calendar year for which building emissions are reported; (...)

(2) The occupancy group for each space in a covered building must be determined according to the Energy Star Portfolio Manager (ESPM) property type as set out in this rule, or any successor ESPM name for such property type, that most accurately describes the use of such space during the year for which building emissions are reported, provided that the ESPM property types "Other" and "Mixed Use" may not be assigned to any portion of a covered building. Such determination must be made by the registered design professional preparing the building emissions report.

(3) Annual emission factors. For purposes of reporting annual greenhouse gas emissions pursuant to this section, emissions factors shall be determined in accordance with this paragraph.

(i) Except as provided in subparagraph (ii) of this paragraph, for the purposes of reporting for calendar years 2024 – 2029, the following emissions factors apply to the following Energy Star Portfolio Manager (ESPM) property types:

[refer to Rule for table of 2024-2029 ESPM Emissions Factors]

(ii) For purposes of reporting for calendar years 2024 and 2025, an owner may utilize a building emissions intensity limit for an occupancy group set forth in section 28-320.3.1 of the Administrative Code, provided such building emissions intensity limit is greater than the emissions factor assigned pursuant to subparagraph (i) for the ESPM property type that most accurately describes the use of the building or space, as determined in accordance with paragraph (2) of this subdivision. Building emissions must be calculated in accordance with either this subparagraph or subparagraph (i) of this paragraph, and may not be calculated by using a combination of such provisions. (...)

[refer to Rule for tables of 2030-2049 ESPM Emissions Factors]

(vi) For purposes of reporting for calendar years 2050 or later, an emissions factor of 0.00 applies to all Energy Star Portfolio Manager property types.

Selecting ESPM categories – summary

The original 2019 text of LL97 assigned emissions limits based on NYC Building Code ("BC") occupancy groups, which are familiar to owners and RDPs but tend to be organized around life safety rather than energy considerations. In anticipation of future rulemaking, the original text also contained language pointing to eventual categorization based on the property types in ESPM, an online benchmarking tool maintained by the EPA. LL97-ESPM categorization was finalized in 2023 via the charts in 1 RCNY §103-14(c)(3) and the Department's associated reference guide, webinar, and service notice. ESPM property types are grouped by energy use profiles, making them more suitable than BC occupancy groups for emissions limit projections.

ESPM's official guidance recommends applying a single property type to an entire building or building portion, and a building's online ESPM profile should follow this guidance since streamlined categorization is required for Benchmarking (LL84) and Energy Letter Grades (LL33). However, LL97 reporting does not necessarily use the same property type breakdown listed in the online ESPM profile, and in general, a large building will have more than one ESPM property type listed in its LL97 report.

Under LL97, building property types should at least be subdivided between residential, non-residential (e.g. commercial), and parking, where applicable. Within those broad categories, a single primary ESPM property type may be used to subsume all other property types when that primary property type has the lowest emissions factor of the group. For example, "Multifamily Housing" can cover accessory spaces that would otherwise be "Fitness Center" or "Social/Meeting Hall" because "Multifamily Housing" has the lowest emissions factor.

An alternative to setting a blanket emissions limit using a single property type is to derive a higher emissions limit by giving distinct uses within a building their own property type when their energy use pattern (e.g. room conditioning, lighting) diverges from the primary property type. For example, a trading floor within a commercial high-rise can be broken out as "Financial Office" since that property type has a higher emissions factor than "Office." A lab floor within a university building can be broken out as "Laboratory" since that property type has a higher emissions factor than "College/University". Food-related uses have higher emissions factors than "Retail Store", so they can be broken out as "Food Sales", "Restaurant", etc. instead of being lumped in with other retail tenants.

ESPM property type boundaries may or may not line up with BC occupancy group divisions as listed on the TCO/CO. Multiple occupancy groups on a floor can be consolidated under one ESPM property type if their energy use pattern is similar, and conversely one occupancy group with multiple energy use patterns can be broken out into multiple ESPM property types.

Note that a single building typology may fall under several ESPM property types depending on its physical configuration. Temporary emergency housing comes in many different forms, so the property type(s) chosen for LL97 reporting should reflect the energy use patterns of the space; "Hotel", "Residence Hall/Dormitory", or "Multifamily Housing" could all potentially apply.

Selecting ESPM categories – additional information

1. The ESPM property types of "Mixed use" and "Other (unspecified)" are not allowed for LL97 reporting because they are not specific enough. Similarly, no floor area within a building should be unassigned, including vacant space.

2. For CY2024 and CY2025 reporting years only, BC occupancy groups are allowed to be used to determine emissions limits if it can be demonstrated that the limits calculated using BC occupancy groups are higher than the limits calculated using ESPM property types – in other words, the more lenient emissions limit applies. GFA allocations between differently-categorized spaces may vary between the two approaches, as discussed above; however one approach must be used for a single building (BC occupancy limits may not be mixed with ESPM limits).

3. If it is unclear which property type applies to a space, there are official ESPM definitions and use details for each property type on the Energy Star website, along with an FAQ. Whenever ESPM guidance conflicts with Department guidance, Department guidance governs.

- Note that because ESPM encourages consolidating multiple spaces under a single property type while LL97 does not, the portions of the ESPM definitions beginning with "Gross Floor Area should include…" can be disregarded for LL97 reporting.

- A specific ESPM definition that does not apply to LL97 reporting is the sentence under "Hotel" that says "*Hotel* does not apply to properties where more than 50% of the floor area is occupied by fractional ownership units such as condominiums or vacation timeshares." In NYC, condo and hotel uses located within the same building should always be categorized as separate ESPM property types, regardless of the specific mix.

- Non-GFA-related details within the ESPM definitions can be helpful for categorization, such as:
    - "Properties whose primary business revenues are generated from the sale of food should be entered using one of the Restaurant property uses, even if there is a *Bar*."
    - "Energy use associated with outside areas…should be included with the total energy use for the building(s), but the square footage associated with these outdoor areas should not be included in [GFA]."
    - "Conference facilities located within a Hotel should be included along with your Hotel property use details, rather than added as a separate *Convention Center* property use. Conference facilities primarily serving smaller meetings should be entered as Social/Meeting Hall."
    - "*Data Center* is intended for sophisticated computing and server functions; it should not be used to represent a server closet or computer training area."
    - "*Food Sales* refers to buildings used for the sales of food on either a retail or wholesale basis, but which do not meet the definition of Supermarket/Grocery Store [or] Convenience Store…For example, specialty food sales like a cheese shop or butcher."
    - "*Food Service* refers to buildings used for preparation and sale of food and beverages, but which do not meet the definition of Restaurant or Bar/Nightclub. For example, a bakery or coffee shop."
    - "*Lifestyle centers* have an open-air design, unlike traditional enclosed malls, and often include landscaped pedestrian areas, as well as streets and vehicle parking."
    - "*Personal Services* refers to buildings used to sell services rather than physical goods."

- "If a facility is designed to provide nursing and assistance to seniors only, then the Senior Care Community property type should be used [instead of *Residential Care Facility*]."

4. A detailed report on the Department's methodology for converting from the BC occupancy group-based emissions limits in Article 320 to the ESPM property type-based emissions limits in 1 RCNY §103-14 may be found here.

5. A chart showing the relationship between ESPM property types and BC occupancy groups is on the next page.

- RED text means that there was not enough existing NYC benchmarking data to create an emissions factor for that property type. In such cases, the emissions factors for another type within the same ESPM category may be used; "Suggested Property Type" offers one option, but any chosen substitute should be evaluated by an RDP for equivalency. Additional guidance on how to choose emissions limits for property types that are not listed in 1 RCNY §103-14 are in the Department's 103-14 FAQ.

- ESPM publishes an online table of national median source and site energy use intensity ("EUI") for the various property types. However, this table may not be helpful in selecting equivalent property types for LL97 purposes as it does not necessarily reflect EUI patterns in NYC.

- The asterisk (*) denotes that a Group A space with an occupant load of 74 persons or fewer shall be classified as a Group B occupancy.

- Certain ESPM property types are left off the table because they are unlikely to be LL97 "covered buildings" in NYC. These include zoos, single-family homes, wastewater treatment plants, and power stations.

ESPM Category	ESPM Property Type	BC Occupancy Group	Suggested Property Type
Banking/financial services	Bank Branch	B	
	Financial Office	B	
Education	Adult Education	B	
	College/University	B	
	K-12 School	E	
	Pre-school/Daycare	I-4	
	Vocational School	B	
	Other - Education	tbd	
Entertainment/public assembly*	Aquarium	A-3	Museum
	Bar/Nightclub	A-2	Restaurant
	Bowling Alley	A-3	
	Casino	A-2	Social/Meeting Hall
	Convention Center	A-3	Social/Meeting Hall
	Fitness Center/Health Club/Gym	A-3	
	Ice/Curling Rink	A-4	Fitness Center/Health Club/Gym
	Indoor Arena	A-4	Fitness Center/Health Club/Gym
	Movie Theater	A-1	
	Museum	A-3	
	Performing Arts	A-1	
	Race Track	A-5	Fitness Center/Health Club/Gym
	Roller Rink	A-4	Bowling Alley
	Social/Meeting Hall	A-3	
	Stadium (Closed)	A-4	Fitness Center/Health Club/Gym
	Stadium (Open)	A-5	Fitness Center/Health Club/Gym
	Swimming Pool	A-4	Fitness Center/Health Club/Gym
	Other - Entertainment/Public Assembly	tbd	
	Other - Recreation	tbd	

ESPM Category	ESPM Property Type	BC Occupancy Group	Suggested Property Type
Food sales and service*	Fast Food Restaurant	A-2	Restaurant
	Food Sales	M	
	Food Service	F-1, M	
	Restaurant	A-2	
	Supermarket/Grocery Store	M	
	Other - Restaurant/Bar	tbd	
Healthcare	Ambulatory Surgical Center	B	
	Hospital (General Medical & Surgical)	I-2	
	Outpatient Rehabilitation/Physical Therapy	B	
	Residential Care Facility	I-1	
	Senior Care [Living] Community	I-1	
	Urgent Care/Clinic/Other Outpatient	B	
	Other - Specialty Hospital	tbd	
Lodging/residential	Barracks	R-1	Residence Hall/Dormitory
	Hotel	R-1	
	Multifamily Housing	R-2	
	Residence Hall/Dormitory	R-1	
	Other - Lodging/Residential	tbd	
Manufacturing/industrial	Manufacturing/Industrial Plant	F	
Office	Medical Office	B	
	Office	B	
	Veterinary Office	B	Urgent Care/Clinic/Other Outpatient
Parking	Parking	S-2	

ESPM Category	ESPM Property Type	BC Occupancy Group	Suggested Property Type
Public services*	Courthouse	A-3	
	Fire Station	B	Hotel
	Library	B	
	Mailing Center/Post Office	B	
	Police Station	B	Hotel
	Prison/Incarceration	I-3	Enclosed Mall
	Transportation Terminal/Station	A-3	
	Other - Public Services	tbd	
Religious worship*	Worship Facility	A-3	
Retail	Automobile [Vehicle] Dealership	B	
	Convenience Store with Gas Station	M	Convenience Store w/o Gas Station
	Convenience Store without Gas Station	M	
	Enclosed Mall	M	
	Lifestyle Center	M	
	Retail Store	M	
	Strip Mall	M	
	Wholesale Club/Supercenter	M	
	Other - Mall	tbd	
Services	Personal Services	B	
	Repair Services	S-1, B	
	Other - Services	tbd	
Technology/science	Data Center	B	
	Laboratory	B	
	Other - Technology/Science	tbd	
Utility	Utilities are not covered under LL97	-	-
Warehouse/storage	Distribution Center	S-1	
	Non-Refrigerated Warehouse	S-1	
	Refrigerated Warehouse	S-2	
	Self-Storage Facility	S-1	

IV(B). Gross floor area

Code language

1 RCNY §103-14

(a) Definitions. (...)

Gross floor area. Gross floor area is the total area in square feet of all floors and spaces in a covered building, as measured between the exterior surfaces of the enclosing fixed walls. Gross floor area includes vent shafts, elevator shafts, flues, pipe shafts, vertical ducts, stairwells, light wells, basement space, cellar space, mechanical/electrical rooms, and interior parking. Gross floor area does not include unroofed courtyards or unroofed light wells. For atria, gross floor area only includes the area of atrium floors. For the purposes of calculating gross floor area in tenant spaces, interior demising walls should be measured to the centerline of the wall.

(...)

(c) Occupancy groups and emissions factors. (...)

(1) For each covered building, the owner must submit the following information: (...)

(ii) The total floor area of each such occupancy group or property type in such building.

(...)

(d) Calculations. An annual building emissions report submitted pursuant to subdivision (b) of this section must be prepared using the calculation methodologies set forth in this subdivision.

(1) Gross floor area. The owner must calculate and report the gross floor area of a covered building, and the floor area of each occupancy group or property type in a covered building. The floor area of each occupancy group or property type reported must add up to the covered building's gross floor area.

(...)

(g) Penalty for failing to file a building emissions report. (...)

(1) Calculation. Such penalty shall be an amount equal to the gross floor area of such building, multiplied by $0.50, for each month such report is not submitted within the 12 months following May 1 of each year, including the 60 days following the deadline.

Gross floor area – summary

LL97 accounting follows a specific definition of GFA that is calibrated to capture energy use. That definition is listed in 1 RCNY §103-14 and elaborated upon in the LL97 Adjustments Application Filing Guide and the LL97 ESPM Reference Guide, but is not unique to LL97 as it is virtually the same as the definition of "gross floor area" in the Benchmarking Rule (1 RCNY §103-06) and "floor area, gross" in ASHRAE publications.

GFA, as defined in LL97, includes all above- and below-grade square footage within the enclosing walls of a building as measured to the exterior surface of any architectural features. Roof overhangs are disregarded in plan, along with projecting balconies; the only interior deductions are for the upper floor voids of atrium spaces. Because of the precision required, measured drawings prepared by a surveyor or RDP are the ideal method of obtaining/verifying GFA. Simply taking DOF's GSF number as GFA is not recommended because it may not correspond to the actual dimensions of the building.

Every ESPM property type on a floor will have its own aggregate GFA, and the boundary between property types should be taken at the centerline of the demising walls between them. When ancillary spaces (such as shafts, stairwells, corridors, and mechanical rooms) serve multiple property types, the GFA of the ancillary space should be prorated and assigned proportionally among all property types served. Ancillary spaces serving a single property type would have their GFA included with that property type.

For example, one way to proportionally assign the GFA of a circulation core (e.g. two stairwells, an elevator bank, and a corridor) that serves both a 1,000 sf "Food Service" (kitchen) and a 4,000 sf "Social/Meeting Hall" would be to assign 20% to the former and 80% to the latter, since the social hall floor area is four times as large as the kitchen floor area.

Another way to determine the proportion would be to calculate the emissions limits for each space: (0.01181 * 1000) = 11.81 tCO_2e for the kitchen and (0.00987 * 4000) = 39.48 tCO_2e for the social hall. Based on each property type's share of emissions, 23% of the circulation core GFA should be assigned to the kitchen and the remaining 77% to the social hall.

ESPM Property Type (served by same ancillary space)	**GFA** (sf)	**Emissions factor** (tCO2e/sf)	**Emissions limit** (tCO2e)	**Ancillary space allocation**	
				Based on floor area	*Based on emissions*
Food Service	1,000	0.01181	11.81	20%	23%
Social/Meeting Hall	4,000	0.00987	39.48	80%	77%

Gross floor area – additional information

1. As noted in the "GSF vs. GFA" bullet points at the end of Section I(A) of this Guide, the DOF definition of GSF differs from the LL97 definition of GFA. GSF is used to determine whether a lot is subject to LL97, while GFA is used to determine a building's emissions limit. GSF and GFA will rarely be identical; in general, measured GFA will be greater than GSF as recorded by DOF.

2. LL97 GFA is also different from the definition of "conditioned space" in the Energy Conservation Code ("ECC"), the concept of "modeled floor area" as used in energy models, the definition of "floor area, gross" in the BC, the definition of "floor area" in the NYC Zoning Resolution, and other floor area metrics that can be used in property calculations. For instance, LL97 GFA includes unconditioned parking garage levels and does not deduct shafts or structure.

3. For buildings where the exterior architectural features change in depth as they go from floor and ceiling (i.e. a canted wall), plan cuts are generally taken at 4' above the finish floor.

4. As noted in the "Selecting ESPM categories" section of this Guide, the official ESPM FAQ has commentary on what ESPM thinks should be included in GFA. Whenever ESPM guidance conflicts with Department guidance, Department guidance governs.

IV(C). Special cases

Special cases – summary

Some categories of energy use are so specialized that the language in the LL97 Articles and Rules cannot cover them explicitly. At times, the LL97 language may refer to Department "guidance" – e.g. Bulletins, FAQs, Filing Guides, and other publications that do not require legislative approval or the formal rulemaking process of the City Administrative Procedure Act ("CAPA").

The following are some of these special cases, both of which can lead to deductions from total electricity use:

1. **Electric vehicle ("EV") charging**
2. **Cell towers**

1. EV charging – Code language

1 RCNY §103-14

(d) Calculations. (...)

(4) Annual building emissions. (...)

(ii) Energy consumption to be included. (...)

a. Energy used for unidirectional charging of electric vehicles may be deducted where separately metered or sub-metered pursuant to guidance issued by the Department.

Buildings Bulletin 2021-019

II. APPLICABILITY

A. Definitions

1. *ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE)* refers to the conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.
2. *PLUG-IN ELECTRIC VEHICLES (PEV)* refers to plug-in hybrid electric vehicles (PHEVs) and all-electric vehicles (EVs) that can plug in to an EVSE that is connected to a building's electrical system.

B. Treatment of Electric Vehicle Supply Equipment under Article 320

For the purposes of reporting building emissions in accordance with Section AC 28-320.3.7, an owner may exclude electricity attributable to unidirectional electric vehicle charging systems used exclusively for charging PEV. Systems that charge other types of storage devices (including but not limited to portable storage batteries and stationary batteries) are not eligible for this deduction.

Where an owner chooses to deduct electricity used for charging vehicles, an owner must be able to document hourly records and total annual electricity consumption for vehicle charging. (…) The EVSE installation must meet at least one of the following in order to deduct the electricity from the building's total annual consumption.

1. must be separately metered by the utility; or,
2. must be separately metered or submetered by the owner in a manner that produces auditable data aligned with the reporting year; or,
3. must be capable of and configured to produce data that records the electricity supplied to vehicles over the course of the reporting year by means of hardware and software integrated with the equipment.

(…)

There will be no change to the calculation methodology for building emissions intensity beyond the deduction of EVSE energy; gross floor area associated with parking facilities and any other areas where EVSE is installed in the covered building will be considered for the purposes of determining building emissions intensity…

1. EV charging – additional information

1. Buildings Bulletin ("BB") 2021-019, which describes the circumstances under which EV charging electricity use can be deducted from total building electricity use, is available here.

2. BC requirements for EV charging stations, including electrical capacity and minimum number, are listed here. NYC zoning allowances for EV charging stations are listed here.

3. Financial incentives, best practices, and other info for EV charging installations are listed on NYSERDA's website here.

2. Cell towers – Code language

n/a

2. Cell towers – additional information

1. For the first compliance period (2024-2029), electricity consumed by cell tower equipment may be excluded from a building's total electricity use where:
    a. Such equipment provides service that is open and utilized by the public;
    b. Such equipment is sub-metered; and
    c. The building owner provides a report (guidance forthcoming) to the Department describing such equipment and its annual energy usage .

2. Lots containing cell towers are generally designated on the DOF Property Information Portal (tax map) with the letter "R". The R stands for Real Estate of Utility Corporation ("REUC"), which covers entities that are owned by utilities.

V. Deductions

Code language

§28-320.3.6 Deductions from reported annual building emissions.

The department may authorize a deduction from the annual building emissions required to be reported…in accordance with this section. For such sections that limit the dates of applicability of such deductions, the department may promulgate rules to extend such deductions for each future compliance date.

§28-320.3.6.1 Deductions from reported annual building emissions for renewable energy credits.

A deduction from the reported annual building emissions resulting from the consumption of electricity may be authorized equal to the number of renewable energy credits purchased by or on behalf of a building owner, provided (i) the renewable energy resource that is the source of the renewable energy credits is considered by the New York independent system operator to be a capacity resource located in, or whose output directly sinks into, the zone J load zone for the reporting calendar year; (ii) the renewable energy credits are solely owned and retired by, or on behalf of, the building owner; (iii) the renewable energy credits are from the same year as the reporting year; and (iv) the building that hosts the system producing the energy does not receive a deduction under section 28-320.3.6.3 for the same energy upon which the renewable credits are based. Covered buildings claiming deductions for renewable energy credits under this section must provide the department with the geographic location of the renewable energy resource that created the renewable energy credits. (…)

§28-320.3.6.1.1 Limitation on the use of renewable energy credits.

The department shall by rule limit the amount of a deduction authorized pursuant to section 28-320.6.1. In determining such limit, the department shall consider items 1 through 3 of this section.

1. The availability or expected availability of renewable energy credits;
2. Environmental justice impacts; and
3. Any other relevant factor determined to be related to the use of or restrictions on the use of such credits.

§28-320.3.6.2 Deductions from reported annual building emissions for purchased greenhouse gas offsets.

For calendar years 2024 through 2029, a deduction shall be authorized for up to 10 percent of the annual building emissions limit. Such a deduction shall be authorized only where within the reporting calendar year, greenhouse gas offsets equivalent to the size of the deduction as measured in metric tons of carbon dioxide equivalent and generated within the reporting calendar

year have been (i) purchased by or on behalf of the owner in accordance with an offset standard referenced by rules of the department, (ii) publicly registered in accordance with such offset standard, and (iii) retired or designated to the department for retirement. Such greenhouse gas offsets must exhibit environmental integrity principles, including additionality, in accordance with rules promulgated by the department in consultation with the office of long-term planning and sustainability. For the purposes of this section, additionality means a requirement that an offset project is not already required by local, national or international regulations. (...)

§28-320.3.6.3 Deductions from reported annual building emissions for clean distributed energy resources.

A deduction from the reported annual building emissions shall be authorized based upon the calculated output of a clean distributed energy resource located at the building subject to the report. The department shall promulgate rules to set forth how such deduction shall be calculated, in accordance with the following:

1. For a clean distributed energy resource that generates electricity, the department shall establish separate calculations for each type of commercially available clean distributed energy resource, which shall not be revised more frequently than once every three years.
2. For a clean distributed energy resource that stores electricity, the deduction shall be based on the size of the resource and its ability to reduce greenhouse gas emissions during designated peak periods.

1 RCNY §103-14

(e) Deductions from reported annual building emissions. (...)

(1) Deductions from reported annual building emissions for Renewable Energy Credits (RECs). (...)

(i) Applicability of renewable energy credits (RECs). Renewable energy credits may only be deducted from the emissions attributed to consumption of utility supplied electricity in a covered building.

(ii) RECs generated by clean distributed energy resources on the premises of the covered building. Notwithstanding any other provision of this section, where an owner elects to register RECs generated by a clean distributed energy resource located on the premises of the covered building, the owner may not take an additional deduction for the energy generated by the clean distributed energy resource pursuant to paragraph (2) of this subdivision.

(2) Deductions from reported annual building emissions for clean distributed energy resources. (...)

(i) Deduction for solar electric generation. For calendar years 2024 to 2029, a deduction from emissions resulting from annual electricity consumption is allowed where electricity is generated by a solar energy system on the premises of the covered building, in accordance with this subparagraph.

a. Where electricity is generated by the solar energy systems, in front of the meter or behind the meter, and exported to the grid, an owner may deduct from the total utility electricity consumed by the covered building in the year being reported, an amount equal to the electricity exported, in kWh.
b. Where the greenhouse gas coefficient used to calculate emissions from electricity is calculated based on the TOU methodology pursuant to subparagraph (iii) of paragraph (3) of subdivision (d) of this section, such owner shall submit a record of hourly generation of on-site solar energy during the calendar year being reported.

(ii) Deduction for on-site energy storage system. For calendar years 2024 to 2029, a deduction from annual building emissions is allowed where energy is stored on the premises of the covered building as electricity, in accordance with this subparagraph. Such deduction may be calculated as follows:

[refer to Rule for Equation 103-14.17]

Deductions – summary

A building's reported emissions can be reduced by mathematically lowering emissions coefficients (see Section IV of this Guide) or by lowering produced emissions (e.g. by implementing ECMs / EEMs, switching to cleaner fuels). Both strategies decrease the building's reported energy use. However, there are times when an individual building's energy use actually has to increase so that regional-scale emissions can be lowered (e.g. the EV charging stations described in the "Special cases" section of this Guide). In such cases of clear public benefit, LL97 allows deductions from reported emissions.

Some deductions (GHG offsets, on-site energy storage) are taken against total emissions, and others (RECs, on-site solar) are taken against metered electricity use before it is converted into an emissions amount. Generally, deductions may only be taken against emissions resulting from electricity consumption and not against emissions resulting from the combustion of fossil fuels. This is to encourage overall decarbonization, as utility electricity has a greater ability to decarbonize over time than fossil fuels (see figure at the end of the "Emissions calculations" section of this Guide).

Deductions from on-site clean DERs ("CDERs") are described in 1 RCNY §103-14(e)(2). RECs are addressed in the Rule and in the Department's RECs FAQ and RECs cost-benefit analysis, with possible future revisions as more LL97-eligible RECs become available (see item 1 under "Deductions – additional information" below). Note that on-site CDERs used to generate RECs may not also then have their emissions or electricity deducted from the building's total.

LL97-eligible GHG offsets will be described in more detail in future Rulemaking.

Deductions – additional information

1. LL97-eligible RECs must either be located within or directly serve Zone J, which as managed by the NY Independent System Operator ("NYISO") is the load zone corresponding to the five boroughs of NYC. These characteristics are fulfilled by what NYSERDA's Large-Scale Renewables program calls "Tier 4" RECs, which currently have only two approved sources: Champlain Hudson Power Express ("CHPE"), a project to bring hydroelectric power to NYC from Canada; and Clean Path New York ("CPNY"), a project to bring solar and wind power to NYC from Delaware County. CHPE RECs may become available as early as 2026, and CPNY RECs may become available as early as 2027. Other LL97-eligible Tier 4 RECs will become available as renewable energy infrastructure is built out near NYC.

2. Beneficial electrification, as described in Section V(A) of this Guide, is not listed under the "Deductions" section of the Rule, 1 RCNY §103-14(e), but rather under "Calculations → GHG coefficients of energy consumption", 1 RCNY §103-14(d)(3), and "Calculations → Annual building emissions", 1 RCNY §103-14(d)(4). Nonetheless, it can be considered a type of deduction, as it can lead to regional emissions reductions.

3. For more on offsets and RECs, see this document from the EPA.

V(A). Beneficial electrification

Code language

§28-320.2 Advisory board. There shall be an advisory board convened…to provide advice and recommendations…to effectively reducing greenhouse gas emissions from buildings. Such recommendations shall include, but not be limited to:

1. A report [that] shall include, but not be limited to:

   (…)

   1.2. A methodology that includes…credit for beneficial electrification…

Local Law 97 Advisory Board Report

3.0 Maximizing emissions reductions

3.4 Incentivize Beneficial Electrification

Beneficial electrification - or the use of high efficiency electrical equipment to replace direct fossil fuel use or very low efficiency electric equipment - is a key strategy in the push to decarbonize buildings. The Advisory Board recommends that as early as possible, the City make beneficial electrification a central component of LL97 implementation to reduce overall emissions in the short term, accelerate equipment development and manufacturing, and expand the labor market needed to install and maintain this equipment in the medium to long term. The Board's recommendation supporting electrification and LL97 compliance considers simple and complex installations:

- Deemed credit: credit simple installations with equipment under 100 tons of capacity, based on the capacity of the equipment.
- Measured credit: credit complex installations of equipment over 100 tons of capacity, based on measured energy consumption.

For equipment installed prior to January 1, 2027, the Advisory Board recommends that the beneficial electrification credit could be double either the capacity or actual savings, as applicable. For equipment installed on or after January 1, 2027, credit could equal the deemed or actual savings, as applicable. To qualify, equipment should have a Coefficient of Performance (COP) of 1.5 or higher, at 5 degrees Fahrenheit. As there was much debate on the COP, this value should be carefully monitored and adjusted as the market for heat pumps matures and availability increases.

1 RCNY §103-14

(a) Definitions.

(...)

Beneficial electrification: "Beneficial electrification" means the installation and use of energy efficient 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 less efficient electric-based heating systems. Qualifying equipment shall have a minimum efficiency as determined based on the reference test procedure associated with the equipment as follows:

[refer to Rule for table of qualifying electric equipment]

Note: Equipment and systems not listed in the table that otherwise meet the definition of beneficial electrification shall have a coefficient of performance (COP) for the system equivalent to greater than 1.5 when the outdoor dry bulb temperature is 5°F or lower, where the COP of the system is calculated based on the energy required for all parts of the system to deliver the peak capacity.

(...)

(d) Calculations.

(...)

(3) Greenhouse gas coefficients of energy consumption.

(...)

(vii) GHG Coefficient for beneficial electrification. For each building emissions report required pursuant to section 28-320.3.7 of the Administrative Code, the beneficial electrification coefficient for qualifying electrical equipment and systems meeting the definition of beneficial electrification shall be as established herein. Such coefficient may be modified by the department as necessary.

a. Equipment installed and operating between January 1, 2027, and December 31, 2029, shall be -0.00065 tCO2e/kWh.
b. Equipment installed and operating prior to January 1, 2027, shall be -0.0013 tCO2e/kWh.

(4) Annual building emissions.

(...)

(iii) GHG emissions generated under beneficial electrification. An owner may utilize the beneficial electrification coefficient in calculating GHG emissions resulting from the use of qualifying electric equipment as set forth in subparagraph (vii) of paragraph 3 of this subdivision. The annual electric energy use for beneficial electrification shall be determined based

on either (a) Metered Electric Use or (b) Deemed Electric Use approach as described in this subparagraph. GHG emission savings accrued from beneficial electrification may be banked for future use for the covered building in which the qualifying equipment was installed as described herein.

a. **Metered electric use.** An owner may calculate electricity emissions based on the measured annual electricity use of the qualifying installed electric equipment using the coefficients for beneficial electrification as established in paragraph (3) of this subdivision. Such owner must be able to document hourly records, monthly energy consumption, and total annual electricity consumption for such equipment. Such documentation may be requested by the Department. Records should be retained for a minimum of six years. The installation must meet at least one of the following to qualify for use of a beneficial electrification coefficient for metered electric use:
    i. must be separately metered by the utility; or
    ii. must be separately metered or sub-metered by the owner in a manner that produces auditable data aligned with the reporting year; or
    iii. must be capable of and configured to produce data that records the electricity supplied to the equipment over the course of the reporting year by means of hardware and software integrated with the equipment.

b. **Deemed Electric Use.** For installed electric equipment, qualifying as beneficial electrification, with a rated heating capacity of less than 1,200,000 btu/h, an owner may calculate electricity emissions based on the installed capacity of the equipment and using the coefficients for beneficial electrification as established in paragraph (3) of this subdivision. Only equipment that meets the requirements of the test procedures listed in the definition of beneficial electrification are eligible to calculate using deemed electric use; other equipment or systems whose test procedures are not listed in the definition of beneficial electrification shall determine beneficial electric use based on the requirements for Metered Electric Use. The deemed electric use shall be calculated based on the following:

[refer to Rule for Equations 103-14.14 to 103-14.16 and Peak Service Hot Water Load table]

c. **Applying and reserving beneficial electrification GHG savings.** Owners who have qualifying equipment that is installed and remains in operation in the covered building, may apply GHG emissions savings or accrue savings for future use in reporting emissions for such building, provided that in any reporting year between 2024 and 2036 in which such covered building's emissions are not below the emissions limit set forth in section 28-320.3 of the Administrative Code, any such savings must be applied. Beneficial electrification savings from a calendar

year may be applied in whole to reporting for that calendar year or in whole to another future calendar year but may not be combined with accrued savings from other years. Such savings may be accrued as follows:

[refer to Rule for table of how to apply yearly BE deduction]

d. When submitting a building emissions report in which an owner applies the beneficial electrification coefficient to a portion of their annual energy consumption, such owner must document installation of the equipment with the letter of completion for such equipment along with the DOB job number.

Beneficial electrification – summary

Beneficial electrification ("BE") is a term with a specific popular meaning. It refers to the replacement of combustion-based equipment with high-efficiency, electricity-using equipment in such a way that at least one of the following four goals is attained and none are made less attainable: reducing costs over time; reducing emissions; improving quality of life; and fostering a more robust grid. LL97's definition of BE goes even further in that it also encourages the replacement of inefficient electricity-using equipment (such as certain electric resistance heaters) with more efficient heat pumps. Basically, electrification can be considered beneficial when it decreases emissions, even if it increases energy use.

Within the context of LL97, BE helps owners to reduce/avoid penalties by lowering reported emissions. Within the context of Citywide carbon initiatives, BE and electrification in general are designed to decarbonize existing buildings and advance the clean energy transition. Because there are many reasons why a building may need to phase their electrification (cost, occupant displacement, contractor/utility availability, older equipment having useful life of equipment, etc.) BE is designed to reward any degree of equipment upgrade, no matter how incremental. For example, individual dwelling units within a multifamily building can electrify while the combustion-based central boiler plant continues to operate.

In LL97's version of BE, electricity-using equipment (for heating, cooling, and service hot water) that meets minimum efficiencies and displaces existing fossil fuel or district steam equipment is allowed to multiply its energy use by a **negative emissions coefficient** to generate a deduction against total emissions. Early action is encouraged since the BE deduction

(called a "savings" in the Rule) can only be generated during the first reporting period (2024-29); even earlier action is further encouraged by making the negative emissions coefficient twice as large for equipment installed prior to 2027. The BE deduction is taken against a building's total energy use, not just its electricity use.

For buildings that are already under their emissions limits, one year's BE deduction can be reserved for future years extending out to 2036. Reserved deductions must be used within the chosen reporting year even if the entire deduction is not necessary to meet emissions limits – in other words, excess deduction may not be carried over to another reporting year. Only one reserved year may be used per reporting year; reserved deductions from multiple years may not be combined.

Minimum equipment efficiencies required to qualify as BE are listed under the definition in 1 RCNY §103-14(a), along with corresponding test procedures. Equipment not explicitly listed can still qualify as BE if such equipment has better than a 1.5 Coefficient of Performance ("COP") at an outdoor dry bulb temperature of 5°F or below. Heat pumps are generally tested at a range of temperatures that may not include 5°F exactly, so any test result at ≤ 5°F showing at least a 1.5 COP (as reported by the manufacturer) is acceptable.

As noted in 1 RCNY §103-14(d)(4)(iii)(d), documentation must be submitted to the Department showing the installation date of any equipment used to calculate the BE deduction. For installations requiring a work permit, such documentation can consist of the Letter of Completion ("LOC") for the associated job filing and the Certificate of Compliance ("CoC") for each piece of equipment. For installations not requiring a work permit, such documentation can consist of paid itemized invoices, time-stamped photographs, etc.

Beneficial electrification – additional information

1. Buildings meeting LL154's requirements for electrification (effective dates varying from January 1st, 2024 to December 31st, 2027 depending on building configuration) may not take the BE deduction, as equipment in new buildings is not replacing existing fossil fuel based equipment.

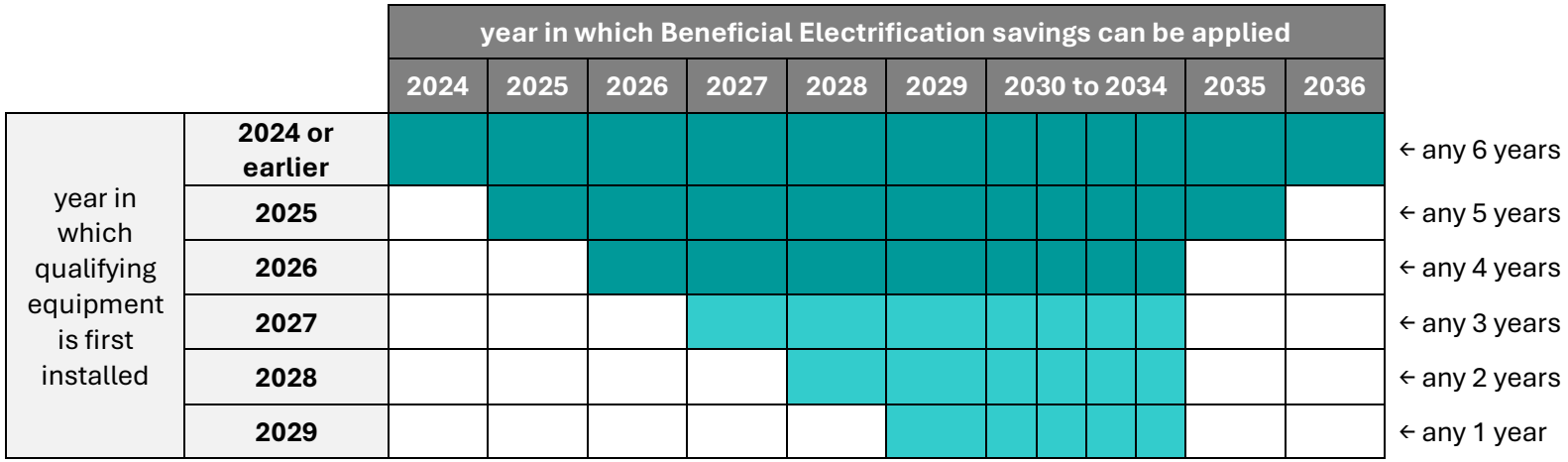
2. COP describes the useful heat added to (or removed from) a system divided by the work required to do so. When only one COP is listed, it usually refers to heating.

3. Representative lists of available heat pumps that can function effectively in a climate like NYC are at Energy Star Cold Climate Heat Pumps and Northeast Energy Efficiency Partnerships (NEEP) Cold Climate Heat Pumps.

4. CoCs – formerly called and still colloquially referred to as Equipment Use Permits ("EUPs") – are certified before a filing is signed off. The process for doing so is described here, and instructions for printing a CoC are here.

5. As required by LL154, MOCEJ's PowerUp NYC report (2023) studies the holistic effects of building electrification, including heat pump technology; impact on residents' energy bills; and ramifications for the NYC electrical grid. The section titled "Beneficial Electrification & Building Upgrades" starts here.

6. The chart below illustrates when a reserved BE deduction can be used based on the year that the deduction was generated. Darker hatch indicates the 2x negative coefficient:



Because emissions limits become more stringent starting in CY2030 with the second reporting period (2030-34), it may be most effective to wait until the second reporting period to deploy reserved deductions. This is especially true for deductions accrued before 2027, which are twice as large as deductions accrued from 2027-29.

For example, if a building installed its BE equipment in 2023, one way to optimize deployment of the reserved deductions might be to use its 2024 2x deduction in 2030, its 2025 2x deduction in 2031, its 2026 2x deduction in 2032, its 2027 1x deduction in 2033, and its 2028 1x deduction in 2034. The 2029 deduction is not allowed to be taken in 2035, but at that point a deduction may be superfluous if the building has implemented enough ECMs/EEMs by then.

7. There are two approved methods of separating out electricity use attributable to qualified BE equipment, as noted in 1 RCNY §103-14(d)(4)(iii): deemed and metered.

    a. Deemed is a term that comes from energy contracts, where it describes an estimated rate that is used in the absence of fixed rate agreements. For LL97 BE purposes, the deemed electric use methodology produces a rigorous estimate of energy use, based on equipment capacity and average user demand, that precludes the need for separately metering equipment. **Deemed electric use** is only allowed for smaller equipment with an individual heating capacity of less than 1,200,000 BTU/h (100 tons). Additionally, only certain system types may follow the deemed approach, and such equipment must have test results following the procedures listed in the Rule.

    b. **Metered electric use** is for individual equipment whose capacity is over 100 tons as well as for equipment whose test procedures are not listed in the Rule (e.g. water-source heat pumps). The metered electric use methodology, as the name implies, requires the equipment to have its energy supply separately measured on an hourly basis using revenue-grade meters or energy tracking software.

Deemed electric use – calculations

1 RCNY §103-14(d)(4)(iii)(b) explains how to derive deemed annual electricity use for **air-source heat pumps ("ASHPs")** and **heat pump water heaters ("HPWHs")**. Certain terms in the equations point to guidance outside the Rule, as outlined below:

- **ASHPs** are addressed in Equation 103-14.14.
  - **EFLH**, or **Equivalent full-load hours** for the year, may be taken from tables in the NYS Department of Public Service ("DPS") Technical Resource Manual ("TRM"), Appendix G.
    - The TRM is updated every January 1st; a link to Appendix G in the 2023 edition is here.
    - **Heating EFLH** should be used for BE calculations, as it is heating equipment that is under consideration.
    - Definitions for occupancy groups, including the thresholds between Large/Small and High-rise/Low-rise, are in TRM Appendix A (link to 2023 Appendix A here).
  - **SF**, or **Service factor**, is the fraction of the year that the equipment is operational. EFLH is calculated per year, so must be multiplied by a SF when the equipment is not operational for a full 12 months.
    - Equipment that was operational before January 1st would have a SF of 1 for the ensuing year.
    - If brought online mid-year, SF would be a fraction. For example, equipment that is operational on April 1st would have a SF of 0.75 (9 months / 12 months).
    - Equipment is considered to be operational on its installation date, as verified via the process described under "Beneficial electrification – summary" above.
- **HPWHs** are addressed in Equations 103-14.15 and 103-14.16.
  - **GPD**, or **Gallons per day**, is taken from the TRM section on HPWHs (link to 2023 section here).
    - The TRM says that GPD shall be "as defined in the… Commercial Storage Tank Water Heater [section]", where there is a table listing GPDs for various occupancies/building types (link to 2023 table here).
    - Combining the TRM GPD table with the Peak Service Hot Water Load table under Equation 103-14.16 gives:

Occupancy / Building Type	GPD Rate	Peak Load Factor	Occupancy Metric
Assembly	7.02	0.31	per 1,000 square feet
Auto Repair	4.89	0.216	per 1,000 sf
Big Box Retail	3.43	0.151	per 1,000 sf
Community College	1.9	0.084	per person
Dormitory	17.2	0.759	per resident
Elementary School	0.5	0.022	per student
Fast Food Restaurant	500	22.07	per restaurant
Full-Service Restaurant	2500	110.4	per restaurant
Grocery	3.43	0.151	per 1,000 sf
High School, Middle School	1.9	0.084	per person
Hospital	54.42	2.403	per 1,000 sf
Hotel / Motel	45.52	2.01	per 1,000 sf
Office, Large / Small	1.1	0.049	per person
Light Industrial	4.89	0.216	per 1,000 sf
Multifamily High-Rise, Low-Rise	46	2.031	per dwelling unit
Refrigerated Warehouse	0.93	0.041	per 1,000 sf
Religious	7.02	0.31	per 1,000 sf
Retail, Large / Small	3.43	0.151	per 1,000 sf
University	0.5	0.022	per student
Warehouse	0.93	0.041	per 1,000 sf
Other	4.89	0.216	per 1,000 sf

- Equipment whose test procedures are not explicitly cited in the table under the definition of BE in 1 RCNY §103-14(a) may not use the deemed approach and must instead use the **metered electric use** approach.

  Listed below are some examples of such equipment; such equipment must be separately metered (or tracked) to be eligible for the BE deduction.

Test procedure reference in BE table	Exclusions	Test procedure for excluded equipment
10 CFR Part 430, Subpart B, Appendix E	n/a	n/a
AHRI 1300-2013	"...heat pumps or water heaters covered in...ISO Standard 13256-1 & 2...AHRI Standard 1160 or...AHRI Standard 870 [or] Air-Cooled or Water-Cooled Heat Reclaim Condensers covered in...AHRI Standard 550/590..."	ISO 13256-1 & 13256-2 *(to be replaced by AHRI 600)* AHRI 1160 AHRI 870 AHRI 550/590
ASHRAE 118.1-2012	[only certain gas-fired equipment]	n/a
10 CFR Part 431.106, Subpart G, Appendix E	n/a	n/a
AHRI 210/240-2023	"Heat operated air-conditioning/heat pump equipment... Room air-conditioners/heat pumps... Water-source Heat Pumps, Ground Water-source Heat Pumps, or ground-source closed-loop Heat Pumps as defined in ISO...Standards 13256-1 and 13256-2... Units equipped with desuperheater/water heating devices in operation..."	ISO 13256-1 & 13256-2 *(to be replaced by AHRI 600)*

AHRI 340/360-2022	"...individual assemblies, such as condensing units or coils, for separate use... Water-Source Heat Pumps as defined in...ISO Standard 13256-1... units equipped with desuperheater/water heating devices (as defined in...AHRI Standard 470) in operation... Commercial and industrial unitary air-conditioning condensing units with a capacity greater than 135,000 Btu/h as defined in...AHRI Standard 365..."	ISO 13256-1 *(to be replaced by AHRI 600)* AHRI 470 AHRI 365
AHRI 1230-2021	"Individual assemblies, such as separate condensing units or indoor units... Water-source Heat Pumps (with the exception of Multi-split Systems) as defined in...ISO Standard 13256-1... Units equipped with desuperheater/water heating devices as defined in AHRI Standard 470; Commercial and Industrial Condensing units with a capacity greater than 135,000 Btu/h as defined in AHRI Standard 365..."	ISO 13256-1 *(to be replaced by AHRI 600)* AHRI 470 AHRI 365
AHRI 310/380-2017	"heat-operated air-conditioning/heat pump equipment or room air-conditioners/heat pumps, as defined in...CSA-C368.1... water-to-air and brine-to-air heat pumps, as defined in...[ISO] 13256-1...	CSA C368.1 ISO 13256-1 *(to be replaced by AHRI 600)*
AHRI 390-2021	"...Unit Ventilators as defined in AHRI Standard 840... Computer and Data Processing Room Air-conditioners as defined in AHRI Standard 1360..."	AHRI 840 AHRI 1360

VI. Mediated resolution

Code language

1 RCNY §103-14

(j) Enforcement. (…)

(3) Mediated resolution.

i. The Department may offer a mediated resolution to an owner not in compliance with the annual building emissions limits, provided that the Department shall offer such resolution only where (i) such owner has filed a report pursuant to section 28-320.3.7 of the Administrative Code; (ii) such owner has demonstrated good faith efforts…and (iii) such resolution would facilitate the building meeting such building's annual emissions limit.

ii. A mediated resolution is an agreement between the owner and the Department not to bring an enforcement proceeding and may provide for terms and conditions determined by the Department, including but not limited to a plan to achieve compliance with the building emissions limit set forth in section 28-320.3.1 of the Administrative Code. The terms of such agreement may contain such provisions as may be agreed upon by the Department and the owner. The Department shall provide guidance with respect to such plan, including examples of appropriate compliance plans.

iii. Such agreement shall provide that an enforcement proceeding will be commenced and civil penalties may be imposed for the violation of Article 320 of Title 28 of the Administrative Code where the owner fails to comply with the terms of such mediated resolution. Where such agreement covers more than one year, the owner may be subject to an enforcement proceeding and civil penalty pursuant to subdivision (h) of this section for each calendar year that such owner is not in compliance with the annual building emissions limit during that time period.

iv. A mediated resolution entered into between the department and the owner of a building may be transferred to a subsequent owner of such building who consents to such transfer. Failure to comply with the terms of such mediated resolution by a subsequent owner who consents to such transfer will result in an enforcement proceeding as set forth in subparagraph (iii) of this paragraph.

Mediated resolution – summary

If a building exceeds its emissions limits but is taking concrete steps towards compliance and submits appropriate supporting documentation, the Department may offer a mediated resolution in lieu of levying a penalty. This process includes an agreement that requires robust commitments and future action on the part of the building owner to reduce emissions. If the building fails to meet the terms of the agreement, it will be subject to retroactive penalties.

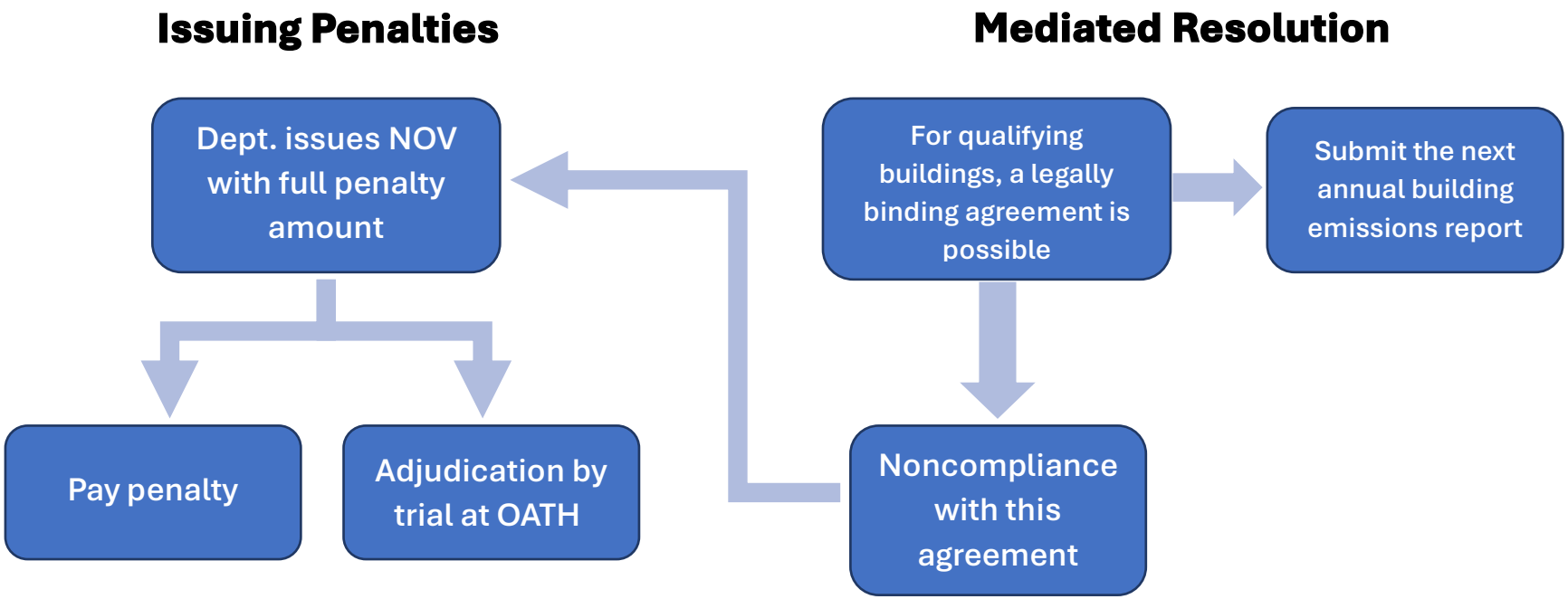
An owner can request a mediated resolution when submitting the annual emissions report by providing documentation showing their good faith efforts (see Section VI(A) of this Guide) towards achieving compliance, and the Department will consider such request.

Mediated resolution – additional information

1. The schedule of full and mitigated amounts for most other Department-levied penalties – including those pertaining to LL97's Article 321 – are contained within 1 RCNY §102-01, based on the enforcement provisions outlined in Articles 201 through 219 of Title 28 of the Admin Code. However, Article 320 penalties are not included in 1 RCNY §102-01 because they have a unique set of calculations and processes.

2. The mediated resolution process takes place before penalties are issued and before any possible adjudication at the Office of Administrative Trials and Hearings ("OATH"). Any LL97 penalty mitigation at this point is decided by the Department itself, not by OATH. It is only after a building violates the terms of a mediated resolution that penalties are issued and OATH adjudication becomes an option.

If a building is over their emissions limit, the Department has one of two responses:



I. Background
   A. Covered buildings
   B. Definitions
II. Article 320 compliance pathways
III. Reporting and extension requests
   A. BBLs and BINs
   B. Multiple buildings on one lot
   C. Shared energy service
IV. Emissions calculations
   A. Selecting ESPM categories
   B. Gross floor area
   C. Special cases
V. Deductions
   A. Beneficial electrification
VI. Mediated resolution
   A. Good faith efforts
   B. Decarbonization plan

VI(A). Good faith efforts

This section is about GFE related to penalty mitigation. GFE related to deadline extensions are outlined in §28-320.3.7.1 and 1 RCNY §103-14(g)(2) and are not covered in this Guide.

Code language

§28-320.6 Penalties. (…)

§28-320.6.1 Determination of penalty. In considering the amount of the civil penalty to be imposed pursuant to this article, a court or administrative tribunal shall give due regard to aggravating or mitigating factors including:

1. The respondent's good faith efforts to comply with the requirements of this article…

1 RCNY §103-14

(i) Mitigating factors during the 2024-2029 compliance period. (…)

(2) Good faith efforts. An owner may demonstrate they made good faith efforts to comply with Article 320 of Chapter 3 of Title 28 of the Administrative Code and rules promulgated thereunder. Demonstration of good faith efforts may result in a mitigated penalty for the calendar year for which such demonstration is claimed. An owner may demonstrate good faith efforts by meeting all of the following criteria:

i. Such owner submits the annual building emissions report for the previous calendar year pursuant to Article 320 of Chapter 3 of Title 28 of the Administrative Code and rules promulgated thereunder, and is in compliance with any adjustment granted…and

ii. Such owner uploads benchmarking information for the previous calendar year…and

iii. Such owner submits an attestation in a form and manner determined by the Department that upgrades have been made to lighting systems as required by Article 310 of Chapter 3 of Title 28 of the Administrative Code and rules promulgated thereunder, and electrical sub-meters in tenant spaces have been installed as required by Article 311 of Chapter 3 of Title 28 of the Administrative Code and rules promulgated thereunder; and

iv. In addition to the information required by subparagraphs (i) through (iii) of this paragraph, a demonstration of good faith efforts includes one or more of the following:

(a) No later than May 1, 2025, an owner submits a copy of a decarbonization plan… [covered in the next section of this Guide]

(b) An owner provides evidence that a complete application has been approved by the Department for the work necessary to comply with the 2024-2029 emissions limit, along with a timeline for completion of the project and the corresponding emissions reductions estimated to result from the alteration; or

(c) An owner provides evidence that the covered building is undergoing work to achieve electric readiness by submitting:

(1) An approved electrical alteration application to make upgrades to the building's electric service for the purposes of future replacement of fossil fuel-based equipment with electric equipment; and

(2) Certification that the electric utility has received the contractor work request and/or has approved a load letter for service increase; and

(3) An anticipated timeline for completion of the work; or

(d) An owner submitted an annual building emissions report during the 2024-2029 compliance period [for a year preceding the year in which they received a penalty] that demonstrated such building was under the established emissions limits for the calendar year that such report was submitted; or

(e) An owner of a critical facility provides a description with documentation in a form and manner determined by the Department of how payment of a penalty would impact the operations of such facility; or

(f) An owner attests in a form and manner determined by the Department that such owner has applied for or been granted an adjustment by the Department in accordance with section 28-320.7 of the Administrative Code and rules promulgated thereunder.

(j) Enforcement. (…)

(3) Mediated resolution.

i. The Department may offer a mediated resolution…only where…(ii) such owner has demonstrated good faith efforts to meet such emissions limits, including but not limited to the criteria set forth in paragraph 2 of subdivision i of this section or other demonstrated effort to meet such limits…

Good faith efforts – summary

In supporting documentation requesting GFE consideration for a mediated resolution, a building owner should demonstrate that they have actively planned for and taken concrete steps towards achieving emissions reductions. Evidence of such planning and action indicates that the owner is acting in "good faith" to meet the intent of LL97.

GFE require a building to submit three prerequisites in a timely manner:

i) A **LL97 emissions report** for the calendar year just-concluded, taking into account any Department-granted adjustments;
ii) a **LL84 benchmarking report** for the calendar year just-concluded; and
iii) the one-time **LL88 lighting upgrades and submetering report** (LL88 of 2009, aka Article 310 and Article 311 in conjunction with 1 RCNY §103-18, with commentary in the Department's LL88 FAQ).

NOTE: It is possible for a building to be "covered" under LL97 but not under LL84 and/or LL88; see item #1 under "Good faith efforts – additional information" below.

In addition to the three prerequisites, owners must choose one of six electives:

a) A **decarbonization plan**,
   - as described in Section VI(B) of this Guide. Or,

b) **Evidence of general alteration work underway to reduce emissions**, including a project completion timeline and calculations of projected reductions based on such work.
   - For work not requiring a Department-issued permit (such as work listed in 1 RCNY §101-14 or §28-105.4), this can be comprised of signed contracts and paid invoices with service providers; for work requiring a Department-issued permit, this can be comprised of Department-approved plans and PW1s. All forms of evidence must show an appropriate project scope. Or,

c) **Evidence of specific alterations underway for electric readiness**, including a project completion timeline, a Department-approved electrical filing showing an appropriate project scope, and certification from the electrical utility that they have accepted the increased load request.
   - Step-by-step instructions for placing a work request with Con Ed may be found here. Or,

d) A **LL97 emissions report from an older calendar year showing compliance** for that year.
   - The earliest that this option could be used would be on or after January 1, 2026, since it requires at least one compliant LL97 report (in this case CY2024) to precede a non-compliant LL97 report (in this case CY2025). Or,

e) **Documentation of how payment of a LL97 penalty would negatively impact a critical facility's ability to provide services**.
   - "Critical facility" is defined in 1 RCNY §101-14(a) as "a facility the operation of which is critical to human life or safety, such as a hospital, dialysis clinic, or a facility that manufactures vaccines."
   - For example, a medical center that is struggling with increasing costs and decreasing attendance needs a certain amount of cash on hand to be able to pay its workers in order to provide services. Or,

f) **A submitted** (does not have to be approved) **emissions limit adjustment application based on external legal and structural constraints or financial constraints, including hardship**.
   - This type of adjustment is outlined in §28-320.7; associated guidance is forthcoming.
   - This is different from the two kinds of adjustments that the Department has previously issued guidance on, which are outlined in §28-320.8 (excessive emissions due to a special circumstance) and §28-320.9 (not-for-profit hospitals & healthcare facilities).

Currently, GFE have only been defined for the 2024-2029 compliance period.

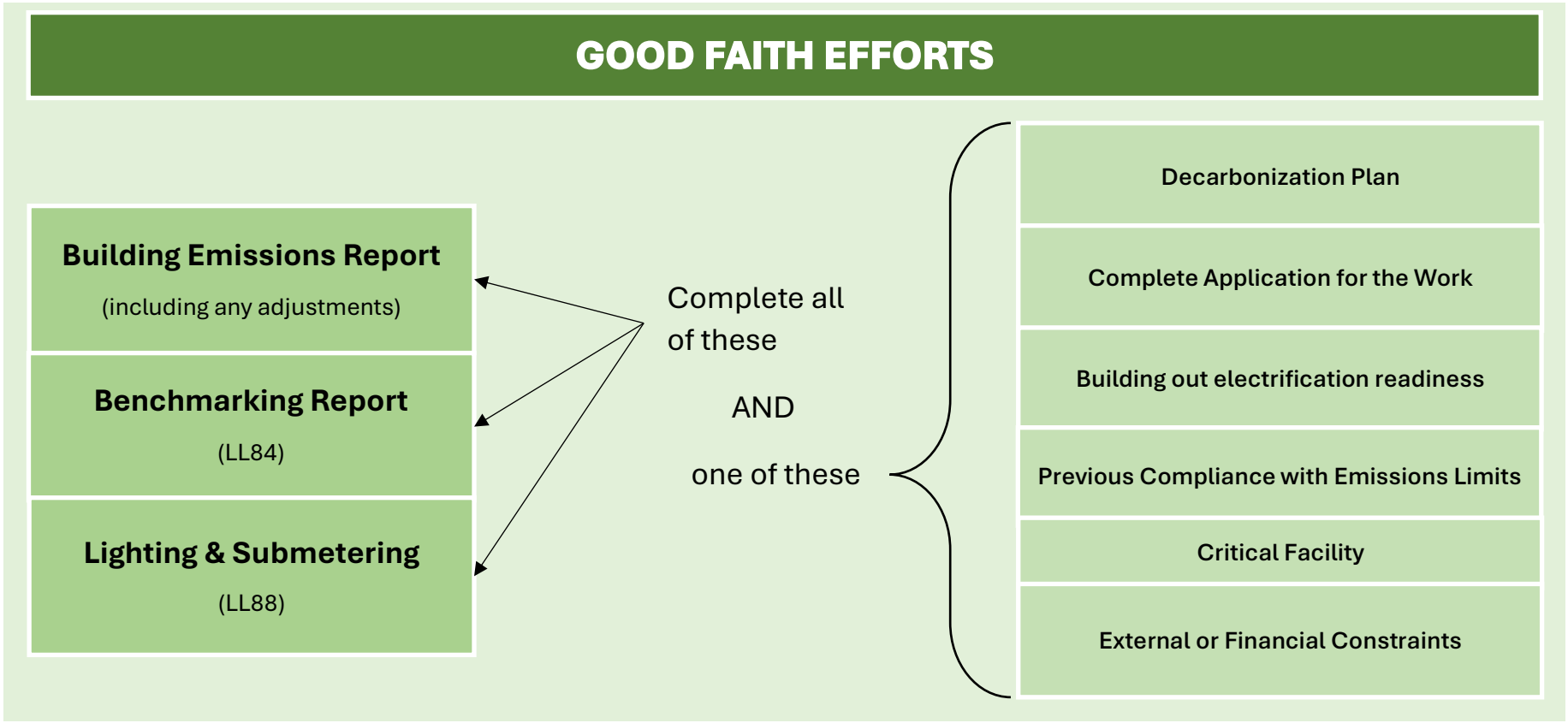
Good faith efforts – additional information

1. Most buildings that are on the CBL for LL97 are also on the CBLs for LL84 and LL88; the only buildings not covered under all the CBLs are multiple buildings, either on the same tax lot or governed by the same condo board, whose floor area is in aggregate more than 50,000 GSF but less than 100,000 GSF. Such midsize clusters are covered under LL97 but not currently covered under LL84 and LL88.

2. The work required to demonstrate GFE could potentially require a significant lead time since the subject buildings may need to apply for permits, request utility letters, and/or generate LL84 and LL88 reports from scratch. Building owners should budget at least 6-8 months to assemble their GFE applications.

3. Besides Electrical, other *DOB Now: Build* work types relevant to emissions reduction include but are not limited to: General Construction, Mechanical Systems, Plumbing, Limited Alteration Application, Boiler Equipment, and related Energy filings.

4. The term "good faith" is a translation of the Latin phrase *bona fides*. It is an implied agreement that all parties to a contract are presumed to be acting fairly and honestly so as not to infringe upon the contractual rights of the other parties.


GOOD FAITH EFFORTS
Building Emissions Report
(including any adjustments)
Benchmarking Report
(LL84)
Lighting & Submetering
(LL88)
Complete all of these
AND
one of these
Decarbonization Plan
Complete Application for the Work
Building out electrification readiness
Previous Compliance with Emissions Limits
Critical Facility
External or Financial Constraints

I. Background
   A. Covered buildings
   B. Definitions
II. Article 320 compliance pathways
III. Reporting and extension requests
   A. BBLs and BINs
   B. Multiple buildings on one lot
   C. Shared energy service
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VI. Mediated resolution
   A. Good faith efforts
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VI(B). Decarbonization plan

Code language

1 RCNY §103-14

(i) Mitigating factors during the 2024-2029 compliance period. (...)

(2) Good faith efforts. (...)

iv. In addition to the information required by subparagraphs (i) through (iii) of this paragraph, a demonstration of good faith efforts includes one or more of the following:

(a) No later than May 1, 2025, an owner submits a copy of a decarbonization plan to the Department that is being implemented at such covered building. Such plan must include:

(1) An energy audit prepared by a qualified energy auditor; and

(2) An inventory of all HVAC equipment, domestic hot water equipment, electrical equipment, lighting, and conveyance equipment serving the building, including the date of installation of such equipment and, where applicable, whether such equipment serves multiple buildings; and

(3) A description of any work that received a certificate of completion or temporary certification of occupancy on January 1, 2013 or later, that resulted in no less than a 10% emissions reduction for the building as compared to the emissions measured the year prior to the completion of such work; and

(4) A list of alterations and changes to operations and maintenance that will result in the building achieving emissions reductions required by Article 320 of Chapter 3 of Title 28 of the Administrative Code and rules promulgated thereunder and resulting in net zero carbon emissions in 2050, including energy conservation measures to be undertaken during the current and future compliance periods, and the complete schedule for retrofit strategies necessary to reach net zero carbon emissions. Compliance strategies may not include the removal of a tenant. Each item on the list of alterations and changes must include:

i. A timeline for each alteration or change to operations that demonstrates when the work will be completed in order to meet required emissions reductions during each compliance period;

ii. A capital plan for such work, including financing and incentives; and

iii. The corresponding emissions reductions estimated to result from each alteration or change to operations; and

(5) An owner who files a decarbonization plan in accordance with this clause must additionally demonstrate all of the following:

i. Within 24 months of the submission of such plan, demonstrate that the work necessary to bring the building into compliance with such building's emissions limit for calendar year 2024 is completed; and

ii. By May 1, 2028, provide evidence that a complete application has been approved by the Department for the work necessary to comply with such building's 2030 emissions limit;

(6) An owner who files a decarbonization plan in accordance with this clause may not claim emissions deductions associated with the purchase of renewable energy credits (RECs) for the 2024-2029 compliance period.

Decarbonization plan – summary

A decarbonization ("decarb") plan is what its name implies: an actionable roadmap to reduce or even eliminate net carbon emissions. When it applies to buildings, a decarb plan typically encompasses strategies for energy efficiency, energy generation and/or storage, fugitive emissions reduction, and electrification. Certain strategies are explicitly disallowed under a LL97 decarb plan: removal of tenants; purchase of RECs; relocation of data centers.

LL97 decarb plans are similar to the Energy Efficiency Reports ("EERs") required by LL87 of 2009 and its associated Rule (1 RCNY §103-07) in that decarb plans include energy audits, inventories of equipment, and recommendations for Operations and Maintenance ("O&M") and capital expenditures ("CapEx"). Decarb plans go beyond EERs in that they require owner input to compile realistic timelines for implementation. Details such as phasing, critical paths, strategies for incremental fundraising, and consideration of supply chain issues can all be essential components of a decarb plan. Pending further Department guidance, the final format of a LL97 decarb plan is up to the building owner; this section of the Guide is mainly a list of required deliverables and suggestions for organization.

Per 1 RCNY §103-14(i)(2)(iv)(a), a decarb plan must include the following components:

1. An *ANSI/ASHRAE/ACCA Standard 211* **energy audit**, as defined in 1 RCNY §103-14(a) based on building size, that is four years old or less on the date of decarb plan submission;
2. A **detailed inventory of base building energy-using equipment** – as per ASHRAE 211 Section 5.1, excerpted under "additional information" below – showing date of equipment installation;
3. **Evidence of any energy efficiency measures ("EEMs") that resulted in at least a 10% reduction in building emissions** and completed on or after January 1, 2013; and
4. **A list of proposed alterations and O&M changes to achieve timely LL97 compliance**, with each item showing its completion timeline, projected emissions reduction, and details on how it will be paid for.

To elaborate on the timeline(s), they may need to be broken up into several components. One timeline component would be a graph illustrating carbon emissions reduction over time – starting at present-day, stepping down through each LL97 reporting period, and finally reaching net zero by 2050. The graph should show the emissions reduction effect of individual EEMs; for example, in a bar chart, each bar would be subdivided into sections that each correspond to an EEM. A good example of how to visualize such information is the online *LL97 Carbon Emissions Calculator* tool by Building Energy Exchange.

Another component of the timeline would show financing over time, i.e. funding available at any given moment minus the net implementation cost (i.e. utility incentives and government tax breaks are deducted) of the EEMs underway at that moment. This could be two separate charts: one showing EEMs that are paid for out of a constantly modulating CapEx budget; the other showing EEMs that are paid for out of a fixed annual O&M, or operating expenses ("OpEx"), budget. Cost savings associated with the EEMs would be factored in, along with other relevant factors such as inflation, interest rates, compliance penalties, etc. And to illustrate why certain EEMs are practically feasible but not recommended for implementation in this particular building, alternate financing timelines can be shown – for example, a timeline showing that the payback period for window replacement is excessive.

One suggestion for organizing the decarb plan is to use the following chapter headings:

- Executive Summary
- Facility Description
- Historical Energy Use and Emissions
- Interim Targets (2024-29 reporting period, 2030-34 reporting period, net zero by 2050)
- Timeline
- Financing Plan
- Project Summary Spreadsheet

Progress checks on decarb plans are due by **May 1, 2027** and **May 1, 2028** – the first check to substantiate that the building has completed work to bring its emissions in line with its 2024-29 emissions limit, and the second check to verify that there exist Department-approved work filings whose scope will bring the building in line with its 2030-34 emissions limit. If a building does not achieve results that are in line with its submitted decarb plan, it may become subject to retroactive penalties.

Decarbonization plan – additional information

1. Fugitive emissions reduction is not yet explicitly addressed by LL97 but can be part of a decarb plan. It includes such actions as: eliminating the use of refrigerant with positive global warming potential ("GWP"); fixing leaks in fuel gas, fire suppression, and/or refrigerant piping; capturing produced aerosols such as smoke, dust, sulfates and nitrates (SOx and NOx); eliminating production of aerosols; and calibrating industrial equipment/processes to mitigate the release of GHG.

2. The LL97 decarb plan requires an ASHRAE 211 Level 2 energy audit for buildings 50,000 sf or larger because that is the area threshold for a covered building under LL87 (as outlined in §28-308.1), where a Level 2 energy audit is standard. Buildings not covered under LL87, i.e. those smaller than 50,000 sf, only require a Level 1 energy audit for the LL97 decarb plan. Either level of energy audit may be recorded via the same online tool used for LL87 reporting – the US Department of Energy ("DOE")'s Asset Score / Audit Template.

3. Sections of ASHRAE 211 applicable to both Level 1 and Level 2 include:
    a. *5.1, Scope of Systems* (envelope, lighting, HVAC, building automation systems, water systems and pumps, steam systems, non-food refrigeration, onsite power generation, uninterruptible/critical power, data centers and IT infrastructure, conveyance systems, plug loads, laundry, food prep, pools/spas. EXCLUDED are industrial and agricultural processes, irrigation)
    b. *5.2.2, Role of the Qualified Energy Auditor* (conduct site visit, identify EEMs, conduct quality assurance, conduct risk assessment, present results to building owner, sign form)
    c. *5.2.3, Benchmarking* (minimum twelve consecutive months, maximum three consecutive years)
        - *5.2.3.1, Calculate the Energy Use Intensity* ("EUI"; total annual site or building energy use divided by GFA)
        - *5.2.3.2, Calculate the Energy Cost Index* ("ECI"; total annual building energy cost divided by GFA)
        - *5.2.3.3, Compare EUI to a Peer Sample* (ESPM)
    d. *5.3.1, Review Historical Utility and Onsite Generation Data* (monthly and annual breakdown, actual vs. billed data, description of metering and submetering, peak energy demand, bulk fuel use, building load factor)
    e. *5.3.2, Review Rate Structure* (utility rate/tariffs, consideration of opportunities for lowering utility costs)
    f. *5.3.3 Facility Site Survey* (review of building characteristics, as-built drawings and equipment schedules, and historical utility bills; site visit accompanied by O&M staff, review of previous audit reports; identification of O&M procedures and problems, including categorization as either CapEx or OpEx; review of equipment nameplates, sequences of operation, set points, etc.; interviews with O&M staff and occupants; review of past commissioning reports)
    g. *5.3.4, Space Function Analysis* (building GFA broken down by function, # of occupants, weekly/hourly occupancy, typical plug loads, % conditioned, HVAC types, lighting types, and suitability for current use)
    h. *5.3.5, Identify Low-Cost and No-Cost EEM Recommendations* (i.e. OpEx; prioritized by ease of implementation, potential cost and energy savings, other impacts/benefits; must be site-specific)
    i. *5.3.6, Identify Potential EEM Capital Recommendations* (i.e. CapEx; prioritized as in the previous item, but also including projected return on investment, or "ROI")
    j. *5.3.7, Review EEMs with Owner's Representative*

4. Sections of ASHRAE 211 applicable only to Level 2 include:
    - *5.4.1, Energy Cost Component Breakdown* (with differentiation between use cost and demand cost, i.e. average vs. instantaneous)
    - *5.4.2, Facility Site Survey* (in-depth review of all building systems, including testing)
    - *5.4.3, Review of Current O&M Procedures* (solicitation of suggestions from staff, review of O&M records and budgets, review of building automation and control systems, discussion of what has worked or not in the past)
    - *5.4.4, Determine Key Operating Parameters* (i.e. temperature set points, lighting levels, ventilation and humidity levels, operating schedules including warm-up and cool-down, equipment efficiencies, and losses through inefficient/malfunctioning equipment and components)
    - *5.4.5, Conduct End-Use Breakdown* (end-use categories as defined in the Standard, with analysis based on calculations, modeling, or submetering; normalized for ten-year average weather)
        - *5.4.5.4, Distributed and Renewable Energy Resource Opportunity* (including at least one site-specific suggestion for each)
    - *5.4.6, Initial Measures List* (including calculations of savings and costs, differentiation between recommended and practical measures)
    - *5.4.7, Calculate Energy Savings* (including impact per energy source type, calculation methodology, grouping of interactive improvements, seasonal efficiencies, marginal energy prices)
    - *5.4.8, Estimate EEM Costs* (fully loaded costs of design, permitting, procurement, installation, commissioning, project management, and other line items as listed in the Standard; may use RSMeans)
    - *5.4.9, Conduct Economic Analysis* (including applicable government/utility incentives and tax credits, simple payback, simple ROI, ancillary benefits, benefit-cost analysis)
    - *5.4.10, Quality Assurance Review*
    - *5.4.11, Review EEMs with Owner's Representative* (soliciting comments and making revisions as needed)

5. To expand the energy audit described in ASHRAE 211 into a decarb audit, DOE has published a GHG Emissions Reduction Audit checklist and scope of work template that are available through the DOE Better Buildings website here.