

Mayor's Office of Environmental Coordination Capital Green Building Program

Charter Section 224.1. Green building standards.

Editor's note: this Section 224.1 was substantially amended by L.L. 2016/031 and L.L. 2016/032, both enacted 3/28/2016, to appear as set out below. Section 4 of L.L. 2016/032 provides the following regarding its effectiveness and applicability: "This local law takes effect immediately, except that this local law shall apply only to capital projects which are added to the capital plan on or after July 1, 2017. All other capital projects shall comply with section 224.1 of such charter, as in effect before the effective date of this local law, subject to the provisions of section four of local law 86 for the year 2005.

a. Definitions

- Capital project: The term "capital project" means a capital project as defined in section 210 of this chapter that is paid for in whole or in part from the city treasury.
- City agency: The term "city agency" means a city, county, borough, or other office, position, administration, department, division, bureau, board or commission, or a corporation, institution or agency of government, the expenses of which are paid, in whole or in part, from the city treasury.
- Construction work: The term "construction work" means any work or operations necessary or incidental to the erection, demolition, assembling, alteration, installing, or equipping of any building.
- Green building standards: The term "green building standards" means design guidelines, a rating system or rules for constructing buildings that ensure site planning, water efficiency, energy efficiency and renewable energy, conservation of materials and resources and indoor environmental quality.
- Inflation: The term "inflation" shall mean the annual 12-month average of the consumer price index published by the United States department of labor.
- LEED energy and atmosphere: optimize energy performance credit. The term "LEED energy and atmosphere: optimize energy performance credit" means the credit to achieve points under LEED for New Construction version 4 intended to achieve increased energy performance.
- LEED green building rating system: The term "LEED green building rating system" means a version of the Leadership in Energy and Environmental Design (LEED) building rating system published by the U.S. Green Building Council, not less stringent than the selected green building rating system, including a standard developed by or for the city consisting of practices and technologies derived from the LEED rating system that are reasonable and appropriate for building in New York city.
- LEED water efficiency: indoor water use reduction credit. The term "LEED water efficiency: indoor water use reduction credit" means the credit to achieve points under the LEED for New Construction version 4 intended to achieve water use reduction.
- Not less stringent: The term "not less stringent" means providing no less net environmental and health benefits.
- Occupancy group: The term "occupancy group" means occupancy group as classified in accordance with the New York City construction codes.
- Rehabilitation work: The term "rehabilitation work" means any restoration, replacement or repair of any materials, systems and/or components.
- Selected green building rating system: The term "selected green building rating system" means the U.S. Green Building Council; provided, however, at the mayor's discretion, the term "selected green building rating system" shall mean] Building Design and Construction version 4, Building Operations and Maintenance version 4 or Interior Design and Construction version 4 of the building rating system published by the U.S. Green Building Council, whichever is most appropriate for the project under U.S. Green Building Council guidelines.

- Substantial reconstruction: For buildings other than buildings classified in occupancy group R, the term "substantial reconstruction" means a capital project in which (i) the scope of work includes rehabilitation work in at least two of the following three major systems of the building: electrical, HVAC (heating, ventilating and air conditioning) and plumbing, and (ii) construction work affects at least 50 percent of the building's floor area. For buildings classified in occupancy group R, the term "substantial reconstruction" means a capital project that includes (i) heating system replacement, (ii) work on at least 75 percent of dwelling units contained within such building, including but not limited to fixture replacements in kitchens and bathrooms, and (iii) substantial work on the building envelope, including but not limited to the addition of building wide air sealing measures performed in conjunction with window replacements on at least 50 percent of total glazing, addition of roof insulation on 100 percent of the roof or the addition of at least 50 percent wall insulation.
- b.** (1) Each capital project with an estimated construction cost of \$2,000,000 or more involving (i) the construction of a new building, (ii) an addition to an existing building, or (iii) the substantial reconstruction of an existing building shall be designed and constructed to comply with green building standards not less stringent than the standards prescribed for buildings designed in accordance with the LEED green building rating system to achieve a LEED gold or higher rating.
- Or with respect to buildings classified in groups F or H (Industrial and High Hazard) to achieve a LEED certified or higher rating, or with respect to buildings classified in occupancy group R (Residential), to comply with the version of the New York city overlay of the Enterprise green communities criteria or the version of such criteria designated by the department of housing preservation and development.
 - Provided that capital projects with an estimated construction cost of less than \$10,000,000 and that involve only an addition to or substantial reconstruction of an existing building classified in occupancy groups F or H (Industrial and High Hazard) are exempted from complying with this subdivision; and further provided that capital projects with an estimated construction cost of \$10,000,000 or more involving an addition to or substantial reconstruction of an existing building classified in occupancy groups F or H may be designed and constructed as low energy intensity buildings, as defined in subdivision I of this section, in lieu of complying with this subdivision.
 - If the mayor elects to utilize green building standards other than the LEED green building rating system, the mayor shall publish findings demonstrating that such other green building standards are not less stringent than the LEED standards described above for achievement of a LEED gold or, if applicable, a LEED certified rating. The green building standards utilized by the city in accordance with this section shall be reviewed and updated, as necessary, by the mayor no less often than once every three years.

(2) In addition, if the estimated construction cost of a capital project required to comply with green building standards in accordance with paragraph (1) of this subdivision is \$12,000,000 or more, such project shall be designed and constructed to reduce energy cost as follows; provided that this paragraph shall not apply to capital projects involving city-owned buildings or buildings classified in occupancy groups E (Schools) or R (Residential):

- i. Capital projects with an estimated construction cost of \$12,000,000 or more but less than \$30,000,000 shall be designed and constructed to reduce energy cost by a minimum of 20 percent, as determined by the methodology prescribed in LEED energy and atmosphere: optimize energy performance credit or the New York state energy conservation code, whichever is more stringent. In addition to such 20 percent reduction in energy cost, the design agency shall make investments in energy efficiency that reduce energy cost by an additional five percent if it finds that the payback on such investment through savings in energy cost would not exceed 7 years.
- ii. Capital projects with an estimated construction cost of \$30,000,000 or more shall be designed and constructed to reduce energy cost by a minimum of 25 percent, as determined by the methodology

prescribed in LEED energy and atmosphere: optimize energy performance credit or the New York state energy conservation code, whichever is more stringent. In addition to such 25 percent reduction in energy cost, the design agency shall make investments in energy efficiency that reduce energy cost by an additional five percent if it finds that the payback on such investment through savings in energy cost would not exceed 7 years.

(3) For capital projects required to comply with paragraph (1) of this subdivision which are buildings classified in occupancy groups E (Education), I-2 (Medical) or in any occupancy group that, before the enactment of the local law adding this paragraph, was not required to comply with paragraph (1) of this subdivision, the mayor or an office or agency designated by the mayor may, in conjunction with the New York city economic development corporation, the New York city school construction authority and any other relevant offices or agencies, establish alternative design and construction standards. Such alternative standards may be as stringent as or more stringent than the standards described by paragraph (1) of this subdivision. For buildings that are not classified in occupancy group E (Education), such alternative standards may be less stringent than the standards described by paragraph (1) of this subdivision if the mayor or such designated office or agency determines that compliance with the standards described by such paragraph would be impracticable or unduly burdensome for a particular occupancy group; provided that such alternative standards may be less stringent than the standards described by such paragraph only to the minimum extent necessary and, except in the case of alternative standards prescribed for buildings classified in occupancy group R (Residential), shall be not less stringent than standards prescribed for buildings designed to achieve a LEED certified rating under version 4 of the LEED green building rating system. For buildings that are classified in occupancy group E (Education), such alternative standards may be the New York city green schools guide, or the version of such guide designated by rule by the mayor or such designated office or agency; provided that such alternative standards are not less stringent than standards prescribed for buildings designed to achieve a LEED certified rating under version 4 of the LEED green building rating system. If the mayor or such designated office or agency establishes alternative standards under this paragraph, the mayor or such designated office or agency shall:

- i. Within 60 days after adopting such alternative standards, submit to the council and make publicly available online a report that, at a minimum:
 - A. Describes such standards and the occupancy groups to which they will apply;
 - B. Identifies any provisions in such standards that are less stringent than the standards described in paragraph (1) of this subdivision and, for each such provision, sets forth the reasons why compliance with the standards described in such paragraph would be impracticable or unduly burdensome for buildings classified in such occupancy groups;
 - C. Except in the case of alternative standards prescribed for buildings classified in occupancy group R, describes how such alternative standards are not less stringent than the standards prescribed for buildings designed to achieve a LEED certified rating under version 4 of the LEED green building rating system; and
 - ii. If such alternative standards are less stringent than the standards described in paragraph (1) of this subdivision, in every third fiscal year thereafter, submit to the council and make publicly available online a report that, at a minimum, states whether the mayor or such designated office or agency has determined that such less stringent standards continue to be necessary and, if so, a description of the reasons therefor and whether such standards can reasonably be made more stringent.
- c. Capital projects, other than those required to comply with green building standards in accordance with subdivision b (2) of this section, shall be subject to the following:
- (1) Each capital project that includes the installation or replacement of a boiler at an estimated construction cost for such installation or replacement of \$2,000,000 or more, or that involves the installation or replacement of lighting systems in a building at an estimated construction cost for such installation or replacement of \$1,000,000 or more, shall be designed and constructed to reduce energy cost by a minimum of ten percent, as determined by the methodology prescribed in LEED energy and atmosphere: optimize energy performance credit or the New York state energy

conservation code, whichever is more stringent; provided that compliance with this paragraph shall not be required for capital projects that would be subject to this paragraph solely because such project involves replacement of a boiler, unless the cost of such project equals or exceeds 50 percent of the cost of replacing the heating distribution system of such building.

- (2) Each capital project, other than a project required to comply with paragraph (1) of this subdivision, that involves the installation or replacement of HVAC systems at an estimated construction cost for such installation or replacement of \$2,000,000 or more, shall be designed and constructed to reduce energy cost by a minimum of five percent as determined by the methodology prescribed in LEED energy and atmosphere: optimize energy performance credit or the New York state energy conservation code, whichever is more stringent.
- d.** In addition to complying with any other applicable subdivision in this section, each capital project involving the installation or replacement of plumbing systems that includes the installation or replacement of plumbing fixtures at an estimated construction cost for such installation or replacement of plumbing systems of \$500,000 or more shall be designed and constructed to reduce potable water consumption in the aggregate by a minimum of 30 percent, as determined by a methodology not less stringent than that prescribed in LEED water efficiency: indoor water use reduction credit; provided, however, that such percentage shall be reduced to a minimum of 20 percent if the department of buildings rejects an application for the use of waterless urinals for the project.
- e.** This section shall not apply to capital projects that only involve buildings classified in occupancy groups A-5 or U.
- f.** The mayor may exempt from each provision of this section capital projects accounting for up to 20 percent of the capital dollars in each fiscal year subject to such provision if in such mayor's sole judgment such exemption is necessary in the public interest. At the conclusion of each fiscal year the mayor shall report to the council the exemptions granted pursuant to this section.
- g.** This section shall not apply to capital projects of entities that are not city agencies unless 50 percent or more of the estimated cost of such project is to be paid for out of the city treasury. This exemption shall not apply to any capital project that receives \$10,000,000 or more out of the city treasury.
- h.** This section shall not apply to capital projects that have received capital dollars from the city treasury before January 1, 2007.
- i.** The mayor shall promulgate rules to carry out the provisions of this section.
- j.** The costs listed in subdivisions b, c, d and g of this section are denominated in January 2007 dollars and shall be indexed to inflation annually.
- k.** Capital projects that are subject to paragraph (1) of subdivision b of this section that utilize a version of the LEED green building rating system for which the U.S. Green Building Council will accept applications for certification, shall apply to the U.S. Green Building Council for certification that such projects have achieved a gold or higher rating under the LEED green building rating system. The mayor or an office or agency designated by the mayor shall by rule establish an alternative certification process for capital projects that are complying with alternative standards promulgated by the mayor or such designated office or agency under paragraph (3) of subdivision b of this section.
- l.** (1) As used in this subdivision:
- ASHRAE 90.1-2013. The term "ASHRAE 90.1-2013" means the 2013 edition of the energy standard for buildings except low-rise residential buildings, standard reference number 90.1-2013, published by the American society of heating, refrigerating and air conditioning engineers (ASHRAE).

- Base building systems. The term "base building systems" has the same meaning as set forth in section 28-308.1 of the administrative code.
- Design energy use intensity. The term "design energy use intensity" means, for a building, the source energy use intensity projected for such building based on its design at the time of filing with the department of buildings.
- Energy use intensity baseline. The term "energy use intensity baseline" means, for a building either (i) the median source energy use intensity for buildings designed and constructed for similar uses according to benchmarking data obtained under article 309 of title 28 of the administrative code within the year preceding the effective date of the local law that added this paragraph or (ii) the design energy use intensity of such building if designed and constructed according to the prescriptive and mandatory requirements of ASHRAE 90.1-2013.
- Low energy intensity building. The term "low energy intensity building" means (i) a building that is not classified in occupancy groups F or H and that has been designed and constructed such that its design energy use intensity is equal to or less than (A) the low energy intensity target for such building or (B) if the mayor, or an office or agency designated by the mayor, has adopted an alternative low energy intensity target pursuant to paragraph (3) of this subdivision, such alternative target or (ii) a building that is classified in occupancy groups F or H and that has been designed and constructed such that (A) the energy usage of its base building systems, exclusive of process loads, is equal to or less than the low energy intensity target for such building or, if the mayor, or an office or agency designated by the mayor, has adopted an alternative low energy intensity target pursuant to paragraph (3) of this subdivision, such alternative target for such building or (B) its design energy use intensity is at least 50 percent below the median source energy use intensity for buildings designed and constructed for similar uses according to benchmarking data obtained under article 309 of title 28 of the administrative code within the year preceding the effective date of the local law that added this paragraph.
- Low energy intensity target. The term "low energy intensity target" means, (i) for a building that is not classified in occupancy groups F or H, the less stringent of (A) 50 percent below the energy use intensity baseline or (B) for new buildings, a source energy use intensity of 38 kBTU/yr per square foot of floor area and for additions to, or substantial reconstructions of, existing buildings, a source energy use intensity of 42 kBTU/yr per square foot of floor area and (ii) for a building classified in occupancy groups F or H, energy usage of the base building systems, exclusive of process loads, which is at least 50 percent less than such energy usage would be if such building were designed and constructed according to ASHRAE 90.1-2013.
- Net zero energy building. The term "net zero energy building" means a building that has been designed and constructed to produce energy onsite from renewable energy sources in an amount equal to or greater than such building's total energy needs.
- Onsite energy generating building. The term "onsite energy generating building" means a building that has been designed and constructed to produce energy onsite from renewable energy sources in an amount equal to or greater than ten percent of such building's total energy needs.
- Renewable energy sources. The term "renewable energy sources" means qualified energy resources, as such term is defined in section 45 of title 26 of the United States code. Source energy use intensity. The term "source energy use intensity" means, for a building, the total energy used by such building in a year, including losses that take place during generation, transmission and distribution of such energy, divided by the building's gross floor area.

(2) (i) Each capital project that involves the construction of a new city-owned building and each capital project that involves an addition to an existing city-owned building or the substantial reconstruction of an existing city-owned building, where such substantial reconstruction involves substantial work on the building envelope, shall be designed and constructed as a low energy intensity building. (ii) For each capital project subject to subparagraph (i) of this paragraph the design agency shall consider the feasibility of designing and constructing such project as an onsite energy generating building. (iii) For each capital project subject to subparagraph (i) of this paragraph with an estimated height of no more than three stories above grade, the design agency shall consider the feasibility of designing and

constructing such project as a net zero energy building. (iv) For each capital project subject to subparagraph (i) of this paragraph the design agency shall consider the feasibility of designing and constructing such project to incorporate green infrastructure. (v) This paragraph shall apply only to capital projects which are added to the capital plan on or after July 1, 2017.

(3) The mayor, or an office or agency designated by the mayor, may establish an alternative low energy intensity target for buildings designed and constructed for a particular use, or for additions to, or substantial reconstructions of, existing buildings. Such alternative target may be equivalent to or more stringent than the low energy intensity target or, if the mayor or such designated office or agency determines that compliance with subparagraph (i) of paragraph (2) of this subdivision would be impracticable or unduly burdensome for such buildings or such work using the low energy intensity target, less stringent than such target. Where the mayor or such designated office or agency adopts such an alternative target, the mayor or such designated office or agency shall, no later than 60 days after such adoption, submit to the council and make publicly available online a report describing such alternative target and the types of buildings or work to which it will apply. If such alternative target is less stringent than the corresponding low energy intensity target, such report shall set forth the reasons that compliance with subparagraph (i) of paragraph (2) of this subdivision using such low energy intensity target would be impracticable or unduly burdensome for such types of buildings or work and, in each fiscal year thereafter, the mayor or such designated office or agency shall submit to the council and make publicly available online a report stating whether the mayor or such designated office or agency has determined that such alternative targets continue to be necessary and, if so, a description of the reasons therefor and whether such targets can reasonably be made more stringent.

(4) No later than January 1, 2017, the mayor shall submit to the speaker of the council and make publicly available online a plan for ensuring that by 2030 capital projects subject to paragraph (2) of this subdivision will be designed and constructed so that new buildings have a source energy use intensity no greater than 38 kBtu/yr per square foot of floor area and that additions to, or substantial reconstructions of, existing buildings have a source energy use intensity of no greater than 42 kBtu/yr per square foot of floor area. Such plan shall include a list of policies, programs and actions that the city will seek to undertake to achieve such targets.

(5) In 2019 and every third year thereafter, the mayor shall, by June 30 of such year, submit to the speaker of the council and make publicly available online a report containing, at a minimum, recommended practices for designing and constructing low energy intensity buildings.

m. By no later than December 1 of each year, the mayor shall submit to the speaker of the council a report, in accordance with the procedure and format established by the department of design and construction, containing, at a minimum, the following information:

(1) For each capital project subject to this section completed during the preceding fiscal year:

(i) A brief description of such project, including the total cost of the project;

(ii) The street address of such project and the community district and council district in which such project is located;

(iii) The estimated level of LEED certification such project has achieved as determined by the city agency that designed such project in accordance with the LEED green building rating system or, if applicable, the level achieved, as certified by the U.S. Green Building Council;

(iv) Additional costs attributed to complying with the LEED green building rating system or any other green building standard;

(v) A statement as to whether such project has been designed and constructed as a low energy intensity building, onsite energy generating building or a net zero energy building and, for each project designed and constructed as a low energy intensity building, the low energy intensity target for such building or if the mayor, or an office or agency designated by the mayor, has adopted an

alternative low energy intensity target pursuant to paragraph (3) of this subdivision, such alternative target;

(vi) if such capital project was not designed and constructed as an onsite energy generating building, a description of the reasons therefor, a statement as to whether such building has been designed and constructed to produce any energy onsite from renewable energy sources and, if so, the amount of such onsite energy production expressed as a percentage of the building's total energy needs;

(vii) additional costs attributable to complying with the low energy intensity building requirements, the onsite energy generating requirements and the net zero energy building requirements of paragraph (2) of subdivision 1 of this section; and

(viii) an assessment of the health, environmental and energy-related benefits achieved in comparison with a base-case code compliant project, including projected energy savings and reductions in peak load, reductions in emissions and potable water use;

(2) For each capital project subject to paragraph (2) of subdivision l that was commissioned before the preceding fiscal year and that is not a low energy intensity building, a summary of remedial actions taken and to be taken and the anticipated or actual start and completion dates of such actions;

(3) A summary of agency findings related to additional investment in energy efficiency pursuant to subparagraphs (i) and (ii) of paragraph 2 of subdivision b of this section, including any additional investment in energy efficiency considered and the estimated payback time for such investment through savings in energy cost; and

(4) The total value of capital allocations in the preceding calendar year to projects exempted from the requirements of this section by the mayor pursuant to subdivision f of this section, and a list and brief description of each such project, including but not limited to square footage, project cost and the reason for such exemption, disaggregated by city agency.