

NEW YORK CITY'S GREENER, GREATER BUILDINGS PLAN BECOMES LAW

By

Kenneth M. Block and Hilary Semel

On December 9, 2009, the New York City Council passed the Greener, Greater Buildings Plan, a group of four bills designed to reduce the city's carbon footprint by 5%. The legislation provides for the creation of a New York City Energy Conservation Code, the benchmarking of water and energy use performance, the upgrading of lighting during major renovations, and the conducting of energy audits and retro-commissioning. This article offers a summary of the legislation.¹

I. The New York City Energy Conservation Code

Intro 564A creates the first New York City Energy Conservation Code (the "NYCECC") to ensure compliance with the New York State Energy Code (the "Code") in New York City. It also requires, with some exceptions, all renovation projects to meet the Code's energy efficiency requirements by closing a loophole in the Code that, essentially, exempted renovations in existing buildings where less than fifty (50%) percent of the building's systems or subsystems were replaced.² The practical effect of the NYCECC is that now all plans for new construction and renovation projects requiring building permits must be analyzed for energy efficiency and certified as in compliance with the NYCECC by the applicants.

A. Applicability

The NYCECC applies to new construction and renovations of residential buildings, mixed-use and commercial buildings, with the exception of the installation of

minor energy efficient measures such as storm windows and minor construction that does not expose the building envelope.³ Some notable exemptions to the NYCECC are buildings that use small amounts of energy or contain no conditioned space, buildings whose energy usage is entirely supplied from renewable energy sources, historic buildings, and non-residential farm buildings.⁴

B. Demonstration of Compliance

In order to demonstrate compliance, the NYCECC requires a professional statement, an energy analysis, and supporting documents to be submitted with all building permit applications or permit applications related to a renovation project.⁵

1. Professional Statement

When submitting a permit application for new construction or a renovation project, the registered design professional or lead energy professional filing such application must provide, sign and seal the following statement: “To the best of my knowledge, belief and professional judgment, these plans and specifications are in compliance with the New York City Energy Conservation Code.”⁶ If the project is exempt from the NYCECC’s requirements, the design professional must indicate on the drawings that the project is exempt and cite the code section allowing exemption. If compliance with the fire code and/or the New York City construction codes conflict with the NYCECC compliance, the fire and construction codes will take precedence over the NYCECC and the applicant must note such precedence in the documents.

2. Energy Analysis

The registered design professional or lead energy professional must submit an energy analysis within the drawing set included with the initial application, which

analysis demonstrates how the project complies with the NYCECC.⁷ For a new building project, the energy analysis compares the proposed project to a “standard” building with similar occupancy, massing, number of floors and area that complies with the NYCECC and determines whether the new project will use less than or equal to the energy used by the “standard” building. The energy analysis must include the envelope, mechanical, service water heating, and lighting and power systems, regardless of how the project is divided into separate jobs for filing or other purposes. For building alterations or additions, the energy analysis compares the values of each work scope element of the alteration project with the prescriptive values of the NYCECC for that element to determine whether the alteration uses less than or equal to the prescriptive elements. The energy analysis should be updated throughout the construction when substitutions are made or plans are revised, and NYCECC compliance must consistently be demonstrated throughout the project. An energy analysis is not required for any work not required to have a permit pursuant to the New York City Building Code.

3. Supporting Documentation

The approved construction documents for any project must demonstrate conformance of such approved drawings with the energy analysis for every element of the energy analysis.⁸ In addition, the documents must also demonstrate conformance with any mandatory requirements of the NYCECC. Supporting documentation is not required for any work not required to have a permit pursuant to the New York City Building Code.

II. Benchmarking

The Benchmarking Law requires owners of all buildings exceeding 50,000 gross square feet to input and submit information to the USEPA Energy Star benchmarking tool and any complementary interface designated by the New York City's Office of Long Term Sustainability regarding the total use of energy and water for buildings for the previous calendar year.⁹ The benchmarking tool tracks and assesses the energy and water use of certain buildings relative to similar buildings.¹⁰ The Benchmarking Law also applies to city owned buildings in excess of 10,000 gross square feet or buildings in which the city is a tenant and pays all or part of the annual energy bills.¹¹ Buildings owned by the city that participate in the tenant interim lease apartment purchase program or that are 50,000 gross square feet or less and participate in a Department of Housing Preservation and Development ("HPD") program are excluded.¹²

A. Annual Benchmarking

The Benchmarking Law requires that managing agencies or entities benchmark city buildings no later than May 1, 2010, and every May 1 thereafter, in coordination with the Department of Citywide Administrative Services ("DCAS") as to energy use and with the Department of Environmental Protection ("DEP") as to water use. Only buildings equipped with DEP automatic meter reading equipment for the entirety of the previous year are required to benchmark water.

The Benchmarking Law requires that owners of covered buildings benchmark their buildings no later than May 1, 2011, and every May 1 thereafter. Like city

buildings, only buildings equipped with DEP automatic meter reading equipment for the entirety of the previous year are required to benchmark water.

1. Tenant Spaces

No later earlier than January 1 and no later than January 31 of each year that an owner is required to benchmark a building, the owner must request from tenants occupying spaces separately metered by a utility company, information relating to the tenant's energy use for the previous year.¹³ The tenant must report the information to the owner no later than February 15 of that year. The Office of Long Term Planning and Sustainability shall determine the form by which to report such information.

Where the owner receives a notice that the tenant intends to vacate the separately metered unit before reporting the information, the owner must request information relating to the tenant's energy use for the period of occupancy relevant to the owner's obligation to benchmark.¹⁴ Regardless of whether the owner has requested the tenant's energy use, the tenant must report such information to the owner prior to vacating the unit or, if the information is not available, as soon as practicable thereafter. The failure of any tenant to provide the required information does not relieve the owner of the obligation to benchmark. However, the owner is not required to benchmark information not provided by a tenant unless the information is otherwise available to the owner.

2. Information Management

Owners of buildings must maintain the necessary compliance records, including but not limited to energy and water bills and reports or forms received by tenants, for a period of three years.¹⁵ At the request of the Department of Buildings ("DOB"), the records must be made available for inspection and audit by the DOB at the place of

business of the owner or at the DOB's offices. If an owner fails to benchmark in compliance with the Benchmarking Law, the owner will be issued a violation.

The Office of Long Term Planning and Sustainability will encourage and facilitate utility companies or other authorized sources to upload directly to the benchmarking tool information necessary to benchmark a building. When the information is uploaded directly to the benchmarking tool, owners and tenants are relieved of their obligations to request and report such information. The DEP will directly upload information on water use at all buildings that were equipped with automatic meter reading equipment that are subject to the Benchmarking Law. If there is a technical deficiency in the benchmarking tool, the Office of Long Term Planning and Sustainability may suspend all or part of the requirements until the deficiency is corrected.

The Department of Finance will annually notify owners of buildings of their obligations to benchmark under the Benchmarking Law. However, the failure to notify an owner will not relieve the owner of the obligation to benchmark. The Department of Finance will also provide information to the DOB regarding owners of buildings for which no benchmarking information was generated by the benchmarking tool.

B. Disclosure

The Department of Finance will make the information generated by the benchmarking tool available to the public on the internet no later than September 1, 2011 and no later than every September 1 thereafter for city buildings, and no later than September 1, 2012 and no later than every September 1 thereafter for privately-owned buildings subject to the Benchmarking law.¹⁶ Such information will include, but will not

be limited to: (1) the energy utilization index; (2) the water use per gross square foot; (3) where available, a rating that compares energy and water use of the building to that of similar buildings; and (4) a comparison of data across calendar years for the benchmarked building. Buildings that contain a data center, television studio and/or trading floor that exceed ten percent (10%) of the gross square footage of any such building are excluded from the disclosure requirement until the Office of Long Term Planning and Sustainability determines that the benchmarking tool can make adjustments for such facilities.

III. Lighting Upgrades

Subject to some exceptions, the Lighting Upgrade Law requires owners of all buildings exceeding 50,000 gross square feet to upgrade their building's lighting systems to energy efficient systems by January 1, 2025.¹⁷ The required upgrades are accomplished by installing or modifying the lighting system to comply with standards for new systems for the following elements: lighting controls (interior lighting controls, light reduction controls and automatic lighting shutoff), tandem wiring, exit signs, interior lighting power requirements and exterior lighting. No upgrades are required for: (1) elements of lighting systems that are in compliance with the standards of the NYCECC; (2) lighting power densities in any space bounded by permanent floor-to-ceiling partitions and/or closable doors that are in compliance with standards of the NYCECC; (3) lighting systems within residential dwelling units, including but not limited to hallways, laundry rooms or boiler rooms; and (4) lighting systems within a house of worship.¹⁸

The Lighting Upgrade Law also requires owners or lessors of commercial tenant spaces in all buildings exceeding 50,000 gross square feet to install sub-meters in each

tenant space larger than 10,000 square gross feet, on or before January 1, 2025.¹⁹ The owner must file a report prepared by a registered design professional or a licensed master or special electrician that the submeters have been installed in tenant spaces subject to the Lighting Upgrade Law.²⁰ Each tenant with a submetered space will receive a monthly statement showing the amount of electricity consumed by the tenant in the previous month and the amount charged to the tenant for the electricity.²¹

IV. Energy Audits and Retro-Commissioning

Subject to exceptions and exclusions, the Energy Audits and Retro-commissioning Law (the “Energy Audit Law”) requires owners of all buildings exceeding 50,000 gross square feet to conduct an energy audit of, and perform adjustments and corrections (retro-commissioning) to, base building systems (building envelope, HVAC, elevators, water and lighting) once every 10 years.²² While city owned buildings are included, certain housing accommodations, hospitals, colleges and cultural institutions are excluded.²³ Private buildings subject to financial hardship, such as those receiving financial assistance from HPD or those listed for tax lien sales, are also excluded.²⁴

A. The Energy Efficiency Report

The Energy Audit Law requires the submission of an Energy Efficiency Report to the DOB in the calendar year which coincides with the final digit of the building’s block number, starting in 2013, with the effect that certain buildings will not be required to submit the report until 2022. Buildings less than ten years old on their assigned calendar year may defer submission for ten years from the assigned date. A building owner may apply for an extension to file the report if, despite good faith efforts, it could not complete

the required energy audit and retro-commissioning.²⁵ The Energy Efficiency Report includes the Energy Audit, the Retro-commissioning Report and other information relating to energy consumption required by the DOB, or substantiation that exceptions to the requirements of an Energy Audit or Retro-commissioning Report apply.²⁶

1. The Energy Audit

The Energy Audit is designed to identify and develop modifications and improvements of base building systems, including the installation of new equipment or energy efficiency technologies, and must be performed in accordance with Level II requirements of the American Society of Heating, Refrigeration and Engineers (ASHRAE) by a DOB approved agency or, until qualification standards are adapted by the DOB, a registered design professional.²⁷

The Energy Audit shall provide, at a minimum: measures designed to reduce energy use and operating costs; associated annual energy savings and paybacks; the buildings' benchmarking output; a break-down of energy usage by system; and an assessment of energy used outside the base building systems that impacts the energy consumption of base building systems. No Energy Audit is required for buildings for which (1) an EPA Energy Star label has been received for at least two of the three years preceding the filing of the report; (2) a registered design professional certifies that, for a building type for which there is no EPA Energy Star rating, the building's energy performance exceeds standards of accepted rating systems, such as LEED; or (3) a LEED Existing Buildings certification was received within four years prior to the filing of the Energy Efficiency Report.²⁸

2. The Retro-commissioning Report

The Retro-commissioning Report must be filed together with the Energy Audit as part of Energy Efficiency Report, unless certain exceptions apply.²⁹ Retro-commissioning must be performed by an authorized agent to ensure sufficient analysis, corrections and testing have been done so that base building systems are efficiently run, with the goal of maximizing energy and cost savings. Included within retro-commissioning is the calibration and sequencing of HVAC sensors and controls, the adjustment of load distribution, ventilation rates, and reset functions; the adjustment of lighting and water systems; the cleaning and repair of equipment; and provisions for training and documentation. Retro-commissioning is not required if the building has received a LEED 2009 Existing Buildings certification within two years prior to the filing of the Energy Efficiency Report and has earned the LEED point for Existing Building Commissioning investigation and for Existing Building Commissioning implementation.³⁰

The Retro-commissioning Report must provide: building information; testing protocol; meeting minutes and interviews; a master list of findings; and the deficiencies corrected. The report shall be completed no earlier than four years prior to the date on which the building's Energy Efficiency Report is filed with the DOB, and a copy of the Retro-Commissioning Report shall be maintained at the building. Retro-commissioning may be performed as a combined process with the Energy Audit.³¹

B. Early Compliance

The Energy Efficiency Report may be submitted in 2013 and be deemed to satisfy the first required submission, provided the Energy Audit was completed after January 1, 2006 and includes, among other things, the credentials of the person performing the audit; the measures, if implemented, that would reduce energy use and operating costs; the annual savings and payback of the energy saving measures; the building's benchmarking output; a break-down of energy usage by system; and an assessment of energy use outside the base building system that impacts the energy consumption of the base building systems.³²

For Energy Audit Reports completed after January 1, 2006 and prior to the effective date of the law to be sufficient for early compliance, the audit must have met ASHRAE Level II requirements or the audit was performed under a New York Power Authority or New York State Energy Research and Development Authority (NYSERDA) contract, or by a NYSERDA Flex Tech contractor, and a registered design professional certifies that the audit satisfies the criteria of the Energy Audit Law. An early compliance audit completed after the effective date of the law must be performed (1) under the supervision of a registered design professional and shall comply with ASHRAE Level II requirements; (2) by a team including individuals qualified by NYSERDA, DOB or other certifying agencies; (3) by an individual with at least three years of professional experience with covered buildings; (4) in consultation with the building's operations and maintenance staff; and certified by a registered design professional.³³

Retro-commissioning will be acceptable for early compliance if completed after the effective date of the law and is performed by certain DOB qualified and experienced professionals and contractors.³⁴

C. Retrofitting of City Buildings

While the Audit Law does not require capital improvements to private buildings, such improvements are required for city buildings by virtue of an amendment to the New York City Charter.³⁵ Within one year after the submission of an energy Efficiency Report for a city building, “reasonable” capital improvements to the building’s base building system identified in the Energy Audit must be completed, provided the improvements have a payback of not more than seven years.

**KENNETH M. BLOCK is a partner of Tannenbaum Helpert Syracuse & Hirschtritt LLP and is general counsel to Urban Green Council, the New York Chapter of the U.S. Green Building Council. HILARY SEMEL is a senior associate of the firm and is a LEED accredited professional.*

¹ The bills are amendments to the administrative code of the City of New York (the “Building Code”) and the New York City charter, and will become effective on the earlier of the Mayor’s signing or January 9, 2010.

² §1.

³ §101.4.4.

⁴ §101.5.2.

⁵ §101.5.1.

⁶ §101.5.1.1.

⁷ §101.5.1.2.

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- ⁸ §101.5.1.3.
- ⁹ See §28-309.4.
- ¹⁰ See §28-309.2 (“Benchmarking Tool”).
- ¹¹ See §28-309.5 and §28-309.2 (“City Building”).
- ¹² See §28-309.2 (“City Building”).
- ¹³ See §28-309.4.1 and See §28-309.4.1.1.
- ¹⁴ See §28-309.4.1.3.
- ¹⁵ See §28-309.
- ¹⁶ §28-309.8.
- ¹⁷ See §28-310.1 and §28-310.3.
- ¹⁸ §28-310.3.
- ¹⁹ §28-311.2.
- ²⁰ §28-311.4.
- ²¹ §28-311.4.
- ²² See §§ 28-308.2 and 28-308.3. As an amendment to the Building Code, a violation of the Energy Audit Law will constitute a non-immediately hazardous violation.
- ²³ § 28-308.1 (“City Building”).
- ²⁴ § 28-308.1 (“Financial Hardship”).
- ²⁵ § 28-308.4.1.
- ²⁶ § 28-308.5.
- ²⁷ § 28-308.2.
- ²⁸ Id.
- ²⁹ § 28-308.3.
- ³⁰ Id.
- ³¹ §§ 28-308.3.2 and 28-308.3.3.
- ³² § 28-308.7.
- ³³ § 28-308.7.1.
- ³⁴ § 28-308.7.2.
- ³⁵ Intro 967-A Section 2.