

## Planning Repairs? Tighter Energy Codes in Effect this Month Apply to ALL Renovations in New York City

In a bill enacted on December 8, 2010, the New York City Council made key changes to the city's Energy Conservation Code (NYC ECC), in the form of Introduction 0343-2010, "Amending the New York City energy conservation code." A year ago, Hoffmann Architects released a bulletin discussing the landmark "Greener, Greater Buildings Plan," which established the NYC ECC with Local Law 85 of 2009. More stringent than the state code, the NYC ECC requires all renovations to comply with basic energy efficiency regulations.

As of December 28th, a new version of the state energy code based on the 2009 International Energy Conservation Code (IECC) takes effect. To prevent the updated state code from superseding that of the city, the Council has amended the NYC ECC with tighter energy provisions.

What does this mean for building owners and managers? First and foremost: think fast. The Council intends to enact the bill to coincide with the revised state regulations, which means changes will take effect at the end of this month.

### NYC ECC: A Crash Course

Why does New York City have an energy code if the state already has one? Of all the states that base their energy codes on the IECC, only New York State exempts minor renovations from compliance. New York City, where renovations are often a small percentage of building area, adopted its own energy code to cover the minor repairs and alterations that would be exempt under state law.

### What's staying the same?

New York City will continue to require compliance with the ECC for **all** renovations, regardless of scale. Unaltered portions of the building remain unaffected. A "lead energy professional" (not to be confused with a "LEED accredited professional"), that is, a registered architect or professional engineer, is still required to sign and seal the statement of compliance, as well as to provide relevant documentation. An energy analysis, along with proof of compliance for every element and value of that energy analysis, continues to form the core documentation.

### What will change?

**Landmarks are no longer exempt.** Only buildings listed on the State or National Registers of Historic Places, or those eligible for listing, will be exempt from compliance. Designation by the NYC Landmarks Preservation Commission (LPC) as a landmark or as contributing to a landmark district will no longer be grounds for



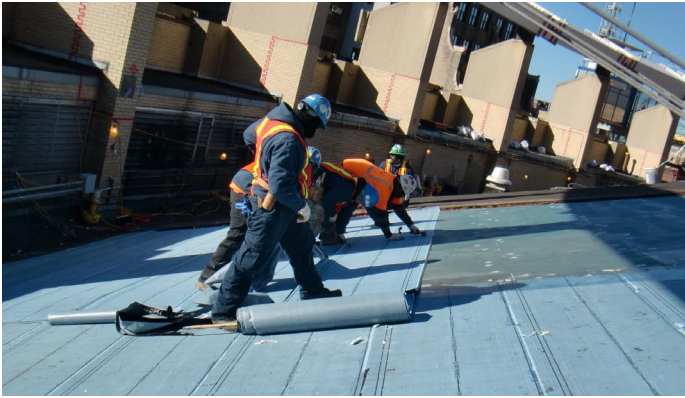
exemption. Concern about this change has prompted the LPC to investigate eligibility of all city-recognized landmarks for listing on the Register, according to Deborah Taylor, Chief Sustainability Officer with the Department of Buildings (DOB).

**Exempt repairs are more clearly defined.** The NYC ECC had divided exemptions into four broad categories: (1) storm windows, (2) glass-only replacements, (3) existing wall or floor cavities already filled with insulation, and (4) construction where existing cavities aren't exposed. To align with the state code, the new bill modifies exemptions, offering:

- specific guidelines for U-factor and solar heat gain coefficient (SHGC) of replacement glass;
- minimum R-values for insulation;
- exemptions for lighting replacements of less than 50% of a space, as well as bulb and ballast-only lighting alterations, so long as these don't result in increased power consumption; and
- requirements for door and roof replacements, as to when additional insulation is mandated, and when it is not.

Unconditioned space and low-energy use buildings (under one watt/sf) will not need to comply with the NYC ECC thermal envelope regulations; however, areas being converted to conditioned space do.

**Changing occupancy could mean changing energy code requirements.** If usage of a space changes such that fossil fuel or electrical energy demands go up, as when converting a warehouse into offices, the renovation will need to comply with the NYC ECC. Where building area types change from one IECC category to another, new lighting power allowances may also apply.



**Energy analysis mandates will change.** Energy analysis has always been a core requirement of the NYC ECC, but the new version of the law parses this information in a new way. Be sure your design professional is familiar with the compliance pathways, as it will no longer be sufficient to include individual envelope, mechanical, and electrical analyses in the previously accepted format. Use of US Department of Energy software, such as COMcheck and DOE2, or other NY State-approved energy modeling software, may now be necessary for determining compliance.

**Change orders will mean bigger delays than usual.** Before submitting that first set of drawings to the DOB for approval, make sure it's right. Any changes made during construction that deviate from the approved documents will now mean resubmitting for the DOB go-ahead.

**Demonstrating compliance demands more specific documentation.** A new, detailed section on construction documents aims to bolster requirements with specific references to popular green building lingo. R-values, fenestration U-factors, SHGCs, and economizers are now invoked as reference points when demonstrating conformance of the building envelope, insulation, and mechanical and lighting devices to approved drawings.

**Inspection protocols become part of the law.** A new section on inspection and testing requires progress inspections and a final inspection, as well as testing of building envelope, mechanical, and electrical systems. Where work fails to pass muster, it must be corrected and re-inspected or retested until it achieves compliance.

**Other, more stringent code programs are now acceptable alternatives.** With the passage of the new version of the NYC ECC, buildings can be approved to follow a different energy efficiency program—as long as it exceeds the standards of the NYC ECC.

**The NYC ECC can't be used to require removal or renovation.** For those concerned that the new code will force energy retrofits on unwilling owners, rest assured that the city won't act until you do. The bill includes a clause explicitly forbidding use of the ECC to compel owners to add to, demolish, or vacate buildings. The intent of the law is to provide an energy conservation baseline for elective alterations, not to prevent the continued use of existing buildings.

**Flexibility in methods and systems is now made explicit.** Despite more proscriptive language throughout, the bill does acknowledge the possibility of alternative materials and design approaches, and as such provides some opportunity for innovation.

## ***My project is underway. Which version of the code applies?***

The new code applies only to projects submitted to the DOB for construction document approval on or after December 28, 2010. Building and Alteration applications filed July 1 - December 28, 2010 may comply with the earlier version of the NYC ECC; work approved before July is not subject to the code. Note, though, that for applications filed on or after September 7, 2010, an as-built energy analysis demonstrating NYC ECC compliance is also required for construction sign-off.

## **What Owners and Managers Can Do Now**

Those applying for building permits this month will need to keep a close eye on the newly enacted Local Law to find out when and if the changes will impact their projects. Backlogs may slow the permitting process as DOB officials juggle new forms and requirements, so plan ahead. Be sure that your architect or engineer is familiar with the amended code, so construction isn't delayed due to insufficient or non-compliant documentation.

With its lofty aim to decrease the contribution of buildings to carbon emissions and climate change, the NYC ECC has the support of the Building Owners and Managers Association of New York (BOMA NY) and of the American Institute of Architects (AIA) New York Chapter, both of which have come out in support of the amendment. Because the NYC ECC requires periodic review of model codes, such as the IECC, updates to the regulations will be an ongoing process. Prudent building owners and managers would do well to think proactively as code changes continue to unfold.



***For more information, please contact Senior Vice President and Director of Architecture Craig A. Hargrove, AIA LEED AP, at 212.789.9915 or [c.hargrove@hoffarch.com](mailto:c.hargrove@hoffarch.com).***

*Founded in 1977, Hoffmann Architects specializes in the rehabilitation of the building envelope. The firm's work focuses on the exteriors of existing structures, diagnosing and resolving deterioration within facades, roofing systems, windows, waterproofing materials, plazas/terraces, parking garages, and historic and landmark structures. Our technical professionals investigate and correct damage resulting from time and weather, substandard or improper construction, design defects, material failures, poor workmanship, structural movement, and stress.*