



NYCPLANNING

text amendment - **Approved!****Update April 30, 2012:**

On April 30, 2012 the City Council adopted the Zone Green Text Amendment. The zoning text changes are now in effect.  [View the adopted text amendment.](#)

In February 2010, the Green Codes Task Force, a group of leading practitioners convened by the Urban Green Council at the request of Mayor Bloomberg and Council Speaker Quinn, released a set of recommendations to amend City regulations to promote green buildings.

Building on the work of the Green Codes Task Force, the Department of City Planning proposes a Citywide zoning text amendment **to remove zoning impediments to the construction and retrofitting of green buildings**. This proposal would give owners more choices for the investments they can make to save energy, save money, and improve environmental performance. This proposal will help bring our buildings into the 21st century while protecting the character and quality of life of our neighborhoods.



Via Verde, the Bronx. Courtesy: Jonathan Rose Companies

This proposal is one of a series of [green initiatives](#) DCP has been undertaking in order to promote sustainable communities throughout New York City. Other recent initiatives have promoted transit-oriented development; alternatives to automobile ownership and use; improved access to healthy, fresh foods; stormwater management and the quality of our streetscape. The Zone Green text amendment complements efforts under PlaNYC to improve the performance of buildings.

FEATURES OF THE PROPOSAL

Energy-efficient building walls: It costs New Yorkers \$15 billion each year to heat and power our buildings, and these buildings are responsible for 80 percent of the city's carbon emissions. In 2030, 85 percent of our buildings will be buildings that exist today – so improving the performance of existing buildings is critical to reducing New York City's energy use and carbon emissions.

Well insulated exterior walls reduce heating and cooling demands, lowering home heating bills and summer air conditioning bills. But zoning today sometimes prohibits adding insulation to the exterior of existing buildings or penalizes thicker walls.



Courtesy: Escape Estates Homebuilders

The proposal: Allow **existing buildings** (constructed prior to adoption of this amendment) to add external insulation within the property line, while exempting it from **floor area** calculations and yard and open space regulations. Installing external insulation typically adds about four inches of wall thickness, but up to eight inches would be allowed to encourage highly efficient retrofits.

For **new buildings** whose walls are substantially more efficient than required by New York City Energy Conservation Code (NYCECC), up to eight inches of additional wall thickness (beyond eight inches) could be exempted from **floor area**, encouraging high-performance buildings without changing the amount of usable space in the building. This provision would be based on a minimum standard for the thermal performance of exterior walls, which would be incorporated into the NYCECC through City legislation.



Courtesy: Chris Benedict, R. A

Sun control devices: These horizontal or vertical projections can help reduce air-conditioning needs and lighting bills by providing glare-free natural light, while adding interest to the building façade. Zoning today often does not allow sun control devices to project over required open areas.



Courtesy: NYC DCP

The proposal: Above the ground floor, allow **sun control devices and awnings** to project 2'-6" over required open areas. Solid portions of the sun control devices, in aggregate, could cover no more than 30 percent of the façade from which they project, as viewed in elevation.



Courtesy: Kaplan Thompson Architects

Solar energy: Solar power can provide pollution-free energy for electricity or hot water, reducing utility bills and carbon emissions. Today, zoning does not allow solar installations above the maximum permitted building height.



Courtesy: NYC DOB

The proposal: Allow **solar panels** on flat roofs anywhere below the parapet, regardless of building height. Portions of taller solar installations that are higher than 4 feet would be subject to limits on roof coverage and height. On sloping roofs, panels would be allowed to be flat-mounted (less than 18" high).



Courtesy: Solar Energy Systems

Other rooftop equipment: In a dense city where space is at a premium, rooftops can serve a wide range of purposes, including managing stormwater, providing recreation space, or generating renewable energy. In addition, systems such as boilers and cogeneration facilities can be safer and more efficient when located on roofs. Key building features such as stair and elevator bulkheads must also be located on roofs. However, zoning districts with contextual height limits restrict the space available for these systems above the maximum building height.



Courtesy: NYC DEP

The proposal: Allow low-lying features such as **green roofs**, recreational **decks**, other **stormwater detention systems** and **skylights** anywhere below the parapet, regardless of building height. A guardrail no more than 30% opaque would be allowed up to 3'6" above the top surface of the roof. Greater volume, similar to what is already allowed in many Special Districts, would be allowed above the maximum building height to accommodate modern **bulkheads**, with requirements for setback and screening of equipment.

Rooftop greenhouses: Greenhouses on industrial, commercial and school buildings can enable year-round local food production and provide valuable educational opportunities within a dense urban environment. Unfortunately, limitations on floor area or building height have constrained opportunities for these facilities.

The proposal: By certification of the Chair of the City Planning Commission, allow a **greenhouse** to be exempt from floor area and height limits, provided that it is located on top of a building that does not contain residences or sleeping accommodations. These greenhouses must not exceed 25 feet in height, must set back six feet from the roof edge, and must include practical measures to limit water consumption.



Photo by Ari Burling.
Courtesy: NY Sun Works

Wind energy: Wind energy generation in New York City makes the most sense where winds are consistent – on taller buildings and near the waterfront. Today, small wind turbines are allowed as accessory structures if they do not exceed a building height limit.



Courtesy: Zimmer Gunsul Frasca
Architects

The proposal: On buildings taller than 100 feet, a **wind turbine** assembly may rise up to 55' above the rooftop (including the pole and rotor), provided it is set back at least 10 feet from any property line. On waterfront blocks in medium- or higher-density residential districts, commercial or manufacturing districts, all buildings could install rooftop turbines up to half the height of the building or 55 feet, whichever is less. Free-standing turbines would be allowed in commercial and manufacturing areas on waterfront blocks. All wind installations must comply with requirements set forth by the Department of Buildings.

Other provisions: Air conditioners installed in a window or through-wall sleeve can waste large amounts of energy. Central air or ductless mini-split systems are significantly more efficient. The proposal would allow greater flexibility for the location of **air conditioning condenser units** for these more efficient systems for one- and two-family residences.

The proposal would also clarify rules for **electric vehicle charging** or battery swapping facilities and **solar energy generation**, which are cleaner than traditional fueling or energy generation facilities. It would specify that electric vehicle charging is allowed in all parking facilities, and charging or battery swapping facilities would be allowed as Use Group 7 uses in Commercial Districts. The proposal would also specify that solar energy generation is allowed as accessory to any use or as a Use Group 6 free-standing use, permitted in Commercial Districts subject to height and setback limits.

For schools in lower-density districts where sidewalk planting strips are required, the proposal would allow **permeable**

pavement as an alternative where required to accommodate the high levels of foot traffic generated by schools.



December 12, 2011

[View the slide show presentation](#)

[View the final text amendment](#)

[Zone Green Handout](#)

[More Information on Saving Energy](#)

[More information on Saving Energy \(Spanish\)](#)

PUBLIC REVIEW

The proposed text amendment was referred out on December 12, 2011 for 60 days to all community boards, borough boards and borough presidents for review and comment.

<i>Milestone</i>	<i>Date</i>
Department of City Planning Certification/ Referral	December 12, 2011
Comment deadline for Community Boards, Borough Boards and Borough Presidents	February 21, 2012
City Planning Commission Public Hearing	February 28, 2012
City Planning Commission Approval (with modifications*). Read the CPC Report.	March 28, 2012
City Council Approval	April 30, 2012

*CPC Modifications

The Commission approved the zoning text as proposed, with the following modifications and clarifications:

1. Require that applications for certification for a rooftop greenhouse be delivered to the affected Community Board when filed.
2. Clarify that the maximum height for a rooftop greenhouse receiving floor area or height waivers is 25 feet, measured from the level of the roof to the highest point of the greenhouse.
3. Clarify that where portions of a rooftop greenhouse used for accessory office or storage are exempted from transparency requirements, these spaces must be accessory to the greenhouse, rather than to other uses in the building.
4. Where the text sets forth the energy efficiency standards that would entitle new buildings to deduct up to eight inches of exterior wall thickness from floor area, modify references to the NYC Energy Conservation Code (NYCECC) to reflect the potential for future modifications to the NYCECC.
5. When a new building deducts up to eight inches of wall thickness from floor area, require this to be noted on the Certificate of Occupancy.
6. To allow sufficient flexibility for safety rails above accessible roof surface, increase the permitted height of guardrail above the parapet from 3'6" to 4'. Clarify difference between a guardrail, restricted in height and located within two feet of the parapet, and a transparent fence, located beyond two feet of the parapet and already allowed without restriction on height.
7. Add skylights to the list of permitted obstructions on a rooftop within a court.
8. Clarify that sun control devices may project into a required yard by up to 2'6", as measured from the exterior building wall.
9. Clarify that sun control devices, if not accessible, do not count toward floor area.
10. Clarify that wind turbines are allowed to exceed a height limit as set forth in this proposal on top of portions of a building that are at least 100 feet in height, but not on lower portions of a building, where a different portion of the building is at least 100 feet in height.

For more information about the proposed zoning text amendment, contact the Zoning Division at 212-720-3325 or [email](#) the project team.



NYCPLANNING



text amendment

Frequently Asked Questions

General Questions

Q: How does this proposal relate to the Greener, Greater Buildings Plan and other City efforts to improve building performance?

A: This proposal complements many other efforts underway as part of PlaNYC to promote energy efficiency and environmental performance in new and existing buildings. The Greener, Greater Buildings Plan includes four bills adopted in 2009 that remove a loophole in the City's energy code, require annual energy efficiency benchmarking that will be disclosed to the public, and mandate a set of cost-effective energy efficiency upgrades and evaluations of the city's largest buildings, both public and private.

The Green Buildings zoning proposal does not include new requirements, but rather focuses on removing zoning impediments to green building practices, in order to provide more choices for building owners to make improvements and upgrades that can save energy and money, and improve the environment.

Q: Who will be enforcing these new regulations?

A: All zoning regulations would be enforced by Department of Buildings, as other zoning regulations are.

ENERGY EFFICIENT BUILDING WALLS

Q: What is "thermal bridging," and how does external insulation stop it?

A: Thermal bridging is the transfer of heat between the interior and exterior of a building. It occurs when certain parts of a building that conduct heat well, such as metal parts, cross through the wall between the inside and the outside. For instance, in some traditional construction types, a concrete floor slab passes straight through to the outside of the wall. Even if the rest of the wall is well insulated, a great deal of heat can leak out through that slab, increasing energy costs to keep the inside of the building warm. External insulation would wrap the outside of that beam and cover it up, forming a continuous barrier around the entire building, reducing heat loss as well as stopping drafts.

Q: How does current zoning penalize buildings with efficient envelopes and thicker walls?

A: Zoning limits the total amount of floor area allowed on a lot. Floor area is measured to the outside edge of the building's exterior wall, so the space within a wall assembly itself is counted as floor area. Thicker, better insulated walls save energy but they also take up more floor area, reducing the amount of actual usable space inside a building. This requires a property owner to make a choice between energy efficiency and usable space. The proposal would remove this conflict by exempting floor area for the additional thickness required to make a high-performing wall.

Q: Would the proposal allow a building that is built to the property line to add external insulation on a neighbor's property, or over the sidewalk?

A: No. This zoning amendment would allow existing buildings to add insulation that extends a few inches into required yards or setback areas on their own property. For an owner to build on a neighboring owner's property, it requires a property easement from one owner to the other. This proposal would not enable any new encroachments into the right of way (over the sidewalk). Such encroachments are regulated by building code.

Q: Why are existing and new buildings being treated differently when it comes to encouraging energy efficiency?

A: Existing buildings were often not designed with energy efficiency in mind, and their exterior walls cannot reasonably be relocated. Therefore, the proposal would allow them to add external insulation that projects into yards, setbacks, or other required open areas. New buildings must meet the energy efficiency standards of the NYC Energy Conservation Code (Energy Code), and can be designed to do so within zoning height and setback requirements. Therefore, the proposal does not allow insulation on new buildings to project into yards or open areas. Instead, it would remove penalties based on the way floor area is measured to encourage the construction of new buildings that significantly exceed Energy Code standards.

Q: Would the proposed provisions allowing external insulation enable buildings to encroach onto narrow open areas and driveways located in side yards?

A: Driveways could not be reduced to a width of less than 8 feet under the proposal, with this minimum clear width required to a height of 8 feet above grade. To limit the effect on yards or open areas that are 8 feet or less, the proposal would allow a limited projection based on the width of the open area – one inch of external insulation would be allowed for every foot of existing open area.

SUN CONTROL DEVICES

Q: The proposal would allow a sun control device to cover no more than 30% of the building's façade. How would this 30% limit be measured?

A: The total solid area, as viewed in elevation, of the shading device that projects from a building wall would be divided by the area of the building wall from which it projects. For instance, for a shading device consisting of slats, only the solid portion of the slats viewed in elevation would count toward the 30% limitation.

Q: Would solar shades be allowed to project over the property line into the public right-of-way (over the sidewalk)?

A: Only the portion of the solar shade within the property line is governed by zoning regulations. Sun control devices projecting into the right-of-way are subject to building code regulations. Legislation has been introduced at the City Council to modify these regulations to better accommodate sun control devices. The Department and other agencies will seek to coordinate with the City Council on this proposed legislation.

SOLAR ENERGY

Q: What does it mean to allow solar energy generation as accessory to any use?

A: Solar energy generation is clean and does not create emissions or land-use conflicts regardless of whether the power generated is used on site or fed back into the grid. Under the proposal, zoning regulations would make it clear that solar energy generation is allowed whether the panels are owned by the property owner or by a commercial entity that sells the power back to the grid. Under the proposal, zoning would not prohibit electricity generated on one lot from being used on an adjacent lot. However, utility company requirements and other regulations may limit the ability to do so.

Q: How can I learn more about installing solar panels on my roof?

A: A first step is to evaluate how much solar energy you can capture on your property. A look at the [NYC Solar Map](#) can give you an estimate of this value. This website also gives guidance for City, State, and Federal tax breaks and other incentives and how to find professional installers.

OTHER ROOFTOP EQUIPMENT

VEGETATIVE ROOFS

Q: What is a “vegetative roof”? What is the text amendment allowing for vegetative roofs?

A: Vegetative roofs are roofs on top of which plants are grown. They can take a variety of forms, from trays containing shallow soil and drought-tolerant plants, to rooftop farms. Vegetative roofs often include additional roofing or drainage layers necessary for waterproofing. Generally, lightweight soils are used to reduce the load the building must support.

Because the structure of a vegetative roof might exceed the maximum height limit, this text amendment would allow vegetative roofs to extend up to 3’6” above the maximum permitted height limit of the building.

Q: Do the plants on a vegetative roof need to comply with zoning limitations? What if a plant grows taller than 3’6” high?

A: No, only the building, structures and soil depth need to comply with these limitations.

Q: Would someone be allowed to grow vegetables on a rooftop and then sell them?

A: Growing vegetables on a rooftop is permitted, provided that the building complies with all applicable regulations (e.g., building code, fire code). On-site sale of items grown on-site may be permitted for a facility operating as a Use Group 4B agricultural use. Items can also be sold at another site where grocery stores are permitted.

BLUE ROOFS

Q: What are blue roofs?

A: A “blue roof” is essentially a specialized stormwater detention basin that sits on top of the roof structure. Fin dams and rooftop detention barriers or drains with weirs (to regulate the rate of water flow) are low-lying devices used to detain water on rooftops.

Rooftop storage design should be done by registered professional engineers.

Q: Would the ponding of rainwater on blue roofs cause problems with mosquitoes?

A: Blue roof systems are designed not to leave standing water on rooftops, but rather to allow stormwater to drain from a roof over a period of a few hours, to reduce the burden on the local sewer system. Additionally, the New York City Construction Codes limit stormwater storage on a roof to a maximum of 24 hours.

ROOFTOP BULKHEADS

Q: Why does the proposal refer to the parapet height of a building? Are parapets allowed to exceed a height limit?

A: Parapets are (and have always been) allowed up to 4 feet above the height limit for a building. Items located within this four-foot-tall area are therefore generally concealed from view.

Q: How would changes to regulations for bulkheads promote green buildings?

A: In a dense city where space is at a premium, rooftops can serve a wide range of purposes, including managing stormwater, providing recreation space, and generating renewable energy. In addition, systems such as boilers and cogeneration facilities can sometimes be safer and more energy efficient when located on roofs. Key building systems such as stair and elevator bulkheads must also be located on roofs. Each system has its own locational needs – solar panels must have good sun exposure, recreational areas may stair and elevator bulkheads must be located directly above the stairwells and elevators, skylights and recreational areas have their own requirements, and rooftops also meet fire code requirements for emergency access. However, zoning districts with contextual height limits restrict the space available for these systems above the maximum building height, which often makes it difficult to fit multiple features on rooftops.

The proposal would allow greater volume and location flexibility, similar to what is already allowed in many Special Districts, to accommodate modern bulkheads, with requirements that equipment be set back from the streetwall and screened from view.

ROOFTOP GREENHOUSES

Q: Why does the proposal not allow greenhouses on top of residential buildings?

A: Greenhouses are allowed in residential buildings but they count toward floor area and must fall within building height limits. By allowing waiver of floor area and height regulations, this proposal seeks to encourage greenhouses for educational purposes as well as commercial greenhouses used to produce food. These are compatible with a range of non-residential uses within the same building. In addition, allowing this only for buildings without sleeping accommodations avoids the temptation to improperly convert rooftop greenhouses to residential use.

WIND ENERGY

Q: Can a wind turbine be located in a building's back yard rather than on top of the building?

A: Accessory wind turbines are allowed, within limitations and parameters established by DOB, in locations where they do not exceed a height limit, are outside a required yard or open space, and comply with any other relevant provisions of zoning. However, in order to generate energy reliably, wind turbines generally need to be located at a height higher than that of nearby structures and trees.

Q: If accessory wind turbines are allowed in all districts, what is the wind turbine proposal seeking to allow?

A: Today, accessory wind turbines may be located within the height limits for a building or other structure. Generation of wind energy, however, typically requires the turbine to be taller than nearby structures. This proposal seeks to allow wind turbines up to 55' tall beyond the zoning height limit in those situations where potential for wind energy generation is more likely due to consistent wind speeds – on taller buildings and waterfront locations.

Q: If waterfront locations are better for generating wind energy, would wind turbines be allowed in waterfront public access areas?

A: Wind turbines would not be allowed in waterfront public access areas because their safety and maintenance requirements may encroach on the public's ability to use and enjoy these areas.

Q: Are wind turbines safe? I have heard that blades can fall off, they can throw ice, and they can kill birds.

A: All turbines would be subject to safety and engineering standards set by DOB. This text amendment is only considering smaller wind turbines – not the large, utility-scale turbines that are seen in off-shore or more remote locations – and they would be allowed on taller buildings, set back from property lines. These turbines would not pose a substantial hazard to birds.

OTHER PROVISIONS

ELECTRIC VEHICLE CHARGING AND BATTERY SWAPPING FACILITIES

Q: What is a battery swapping facility?

A: Battery-swapping facilities are one model of refueling for electric vehicles. These facilities are currently considered by interpretation as a Use Group 7D automobile service establishment, similar to automobile glass and mirror shops or tire sale establishments. The proposal would clarify this within the zoning text.

Q: Who would be allowed to charge a vehicle in an accessory or public parking facility that installs an electric vehicle charger?

A: Any vehicle allowed to use the facility would be allowed to charge there.

AIR CONDITIONING

Q: Why are you making it easier to use central AC? What is the environmental benefit of central air conditioning over window units?

A: While air conditioning uses electricity, the need for air conditioning is a fact of life in our climate. The purpose of this proposal is to encourage more efficient ways of providing air conditioning. Window or sleeve AC units require a large hole in the wall, which creates a leaky building envelope. According to a study by the Urban Green Council and Steven Winter Associates, even professionally installed through-wall AC units allow air to pass through because the unit may not fit exactly right, and because of air flow through the unit itself. For each unit, these holes add up to about 6 square inches, roughly the size of your fist. The study estimates the total cost of this leakage throughout the city at between \$130 and \$180 million per year. Central AC and ductless mini-split units do not have this kind of leakage, and still allow zoned control so the temperature of different rooms can be controlled separately.

The proposal does not directly affect window or sleeve AC units, but rather seeks to provide sufficient flexibility to encourage other more efficient options.

Q: What is a ductless mini-split air conditioner?

A: Ductless mini-split air conditioners are units that can provide some of the benefits of central air conditioning without ventilation ducts or large outdoor condensing units. Mini-splits are comprised of two units – a small outdoor condensing unit and an indoor air handling unit. Mini-splits are more efficient than window or through-wall AC units because they require only a small connection through the exterior building wall – the conduits from the outdoor unit to indoor units are only 1.5 to three inches in diameter. One condenser unit can be used to cool multiple rooms, and indoor units can be switched on and off independently to provide zoned cooling. These units are easier to install than central air and often used in retrofits.

Related Notes

-  Items accompanied by this symbol require the [free Adobe Acrobat Reader](#).
- Brief explanations of terms in *green italics* can be viewed by [visiting glossary page](#). Words and phrases followed by an asterisk (*) are defined terms in the Zoning Resolution, primarily in Section 12-10. Consult the Zoning Resolution for the official and legally binding definitions of these words and phrases.