



## **Design/Build Question of the Month: How do NYC LL 92 & LL 94 benefit the planet and your wallet? - by Angus McDougald**

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NYC Local Laws 92 and 94, adopted in April 2019, require any existing roof (or new construction) undergoing major construction be covered in either solar panels or a 'green' roof. These local laws play a role in achieving the central goal of the Climate Mobilization Act: Moving New York City away from carbon-focused energy towards renewable energy sources.

Over the last decade, solar installations have moved from the cutting edge of sustainability to a standard feature on buildings across the city as a result of extremely beneficial financial incentives. When properly planned, a solar array can have an internal rate of return of 15-20% with a three-to-six-year payback. Incentives are so lucrative that many options exist for third-party financing with day one savings and no capital investment!

Green roofs hold rainwater, slow the heat island effect, and help moderate the building temperature. Capturing rainwater helps minimize flooding and sewage runoff, improving stormwater management. Due to the high percentage of concrete and asphalt, cities generally have higher temperatures than other regions known as the heat island effect, plants help to mitigate this effect.

Certain situations are not suitable for either solar or green roofs. The city has developed a set of guidelines to account for this:

Setbacks or access by the New York City Fire Code, New York City Construction Codes, or the Zoning Resolution of the City of New York.

Areas occupied by rooftop structures or pathways. Areas occupied by obstructions related to stormwater management.

Building setbacks, however each setback must not exceed 25% of the area of the building's largest floor plate.

Recreational spaces that are essential to the building's principal use.

Pitched roofs (roof slopes of more than 17%) that would not accommodate solar photovoltaic electricity generating systems of at least 4kW.

Areas where DOB determines the site conditions unfavorable to either a solar photovoltaic electricity generating system or a green roof system.

## Local Law 92 & 94 Compliance

LL 92 & 94 applies to all buildings in New York City, however, city-owned housing and/or affordable housing compliance date is 2024. These rules only apply if permitted roof deck work is included and not if you only replace the roof membrane. Contiguous sustainable roofing zone equal to or greater than 200 s/f (100 s/f for buildings five stories or less) requires installation of either a solar photovoltaic system, a green roof system, or a combination of the two. A green roof system must be installed if a solar photovoltaic system would not meet a minimum capacity of 4kW due to site conditions.

Historic buildings are not exempt and prior to DOB permitting must get Landmarks Preservation Commission (LPC) approval.

In cases where a solar photovoltaic system cannot meet the 4kW minimum capacity, building owners must provide supporting documentation. Such documentation must be prepared by a qualified contractor or NYS registered design professional and include calculations and a shading report. Qualified professionals will have one of the following credentials: NABCEP Certification, IBEW-NECA, Electrical Journeyman & Apprentice Training, or UL Credential.

## Financing the Future

Determining the best individual economic strategy is beyond the scope of this article, but if you

takeaway one idea from this article, it should be that property owners need to choose a solar professional that will spend the time to find the best economic path for your unique situation. Hiring a good professional solar consultant is key in order to maximize your return on investment. The city, state, and federal governments offer several incentives; tax abatements and/or incentives property owners may qualify for include the Green Roof Tax Abatement from NYSERDA. Currently there is a 26% federal tax credit and accelerated depreciation which together account for over a third of the costs of solar. Green roofs have a \$5-15 s/f tax credit depending on location. Many buildings are controlled by a non-profit entity that cannot utilize their tax credits/depreciation. In these cases, the best option is generally third-party financing through a lease or power purchase agreement. Many owners will see a 10-25% reduction in electric utility cost for the life of the system with no out-of-pocket costs.

A new funding option for 2021 are PACE financing programs, offering up to 100% financing for property owners to fund energy efficiency and renewable energy projects on existing structures. PACE provides financing for these types of improvements over time without requiring the property owner to make a large upfront investment.

KOW has been a trusted provider of construction and sustainability consulting services to lenders, owners, and developers for over 40 years. Our sustainability team is happy to speak with you about Local Law compliance and how can we help on your next project. We feel strongly that assembling the right team means everything.

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