

# Frequently Asked Questions

**1. How do Local Laws 92 and 94, requiring green roofs or solar photovoltaic (PV) arrays on new construction and major roof renovations, compare to similar requirements in other cities?**

These new laws will result in New York City having among the most sustainable skylines in the world. While other cities have issued solar and/or green roof requirements, these only apply to a subset of buildings. Under New York City's new laws, new construction and major roof renovations will trigger the installation of either solar PV systems or green roofs. We anticipate that these bills will result in:

- An additional 20–35 MW of solar deployed each year
- An additional 1 million gallons of stormwater managed each year
- 1 million tons of greenhouse gas reductions by 2030
- Hundreds of green economy jobs for New Yorkers

**2. What kinds of projects will trigger the sustainable roof requirement in existing buildings?**

Any new building or construction project that requires replacement of the entire roof assembly or decking. For specific definitions of roof assembly and decking, please refer to the [roof chapter](#) in NYC's building code. Examples include brand new construction, vertical or horizontal building extensions, and replacement of the entire roof deck. Standard roof membrane replacements will not be required to comply but building decision makers are encouraged to consider the benefits of sustainable roof systems.

**3. What do I do if my roof is shaded?**

Buildings can choose whether to install a green roof or solar. If you start exploring solar potential and determine that your roof is too shaded, that would count as an unfavorable site condition and solar would not be required. You would still

need to determine if the roof can support a green roof system. Often, green roofs can thrive in environments that are shaded for much of the day.

**4. Would an incomplete solar array or green roof delay my certificate of occupancy?**

A temporary certificate of occupancy can be issued if the Department of Buildings deems the building, or spaces within a building, safe to occupy. Given that solar or green roofs are not required for the basic safety or habitability of buildings, these projects should not delay the issuance of temporary certificates of occupancy.

**5. How do you define a green roof?**

A green roof is defined in the building code as "a system constructed in-situ consisting of either a roof assembly and additional landscape material components, including growing media, engineered soils, filter fabric, integral drainage systems and roof surface to facilitate the growth of vegetation or a pre-vegetated tray or trays no more than 6 inches (152 mm) high and assembled on top of a roof covering." In other words, a green roof is composed of plants, soil or other growing medium, and other layers required for the plants to flourish and for the roof to be protected from leaks and damage.

**6. Do solar PV installations and green roof systems provide benefits during the winter?**

Yes! Solar panels still produce energy in the winter, helping to reduce your energy bills. Green roof systems provide higher insulation values than standard roof systems, reducing heating costs and improving occupant comfort.

**7. How do Local Laws 92 and 94 interact with Local Law 97's carbon limit for buildings?**

Solar energy systems can provide building owners a credit towards compliance with Local Law 97's carbon limits. Similarly, green roofs provide

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beneficial insulation during the winter and a cooling effect during the summer, allowing rooftop equipment to operate more efficiently and limiting energy demands. The cool roof requirements in Local Law 94 will also increase efficiency of rooftop equipment and reduce energy needed for cooling. Paired with efficient building design, sustainable roof systems will help buildings comply with Local Law 97.

**8. How did Local Law 94 update “cool roof” requirements mandated by Local Law 21 of 2011?**

Cool roofs got cooler through Local Law 94. Emittance and reflectance requirements became more stringent for flat roofs, and for the first time, pitched roofs and roof areas under solar panels will need to be cool as well. Since green roofs are also cool roofs, all new roofs in NYC will now be cool!

**9. How can pitched roofs comply with cool roof requirements?**

A variety of roofing materials meet the minimum SRI, solar reflectance, and thermal emittance requirements set forth in this law. Materials typically used on sloped (pitched) roofs such as shingles and tiles, can also have cooling properties, even if they are not white. A helpful resource is The Cool Roof Rating Council, which uses independent testing methods to describe the radiative performance of many products on the market.

**10. What if I want a roof deck instead of a green roof or solar array?**

Any recreation space that is determined to be principal to the use of the building would be allowed as long as it is recorded on the Certificate of Occupancy. For example, schools can install playgrounds, residential buildings can build roof decks, and hotels can build rooftop bars, as long as they are in the plans and comply with accessibility, egress, and other requirements associated with rooftop recreation. Any areas outside of the recreation space would need to comply with sustainable roofing requirements.

**11. What if my building includes affordable housing?**

The Department of Housing Preservation and Development (HPD) will determine a separate compliance pathway for certain types of affordable housing from Nov 2019 through Nov 2024 while it studies the impacts on affordability. They will mostly exempt buildings with City or State subsidies (HPD/DHCR loans, HDFCs, Mitchell Lamas, and 420-c tax incentive recipients), buildings in HPD’s AEP program; and buildings under HPD’s jurisdiction. Eligible properties will need to comply with the New York City Overlay of the Enterprise Green Communities Criteria, which may require solar installation in certain cases.

Not all affordable housing is exempt. For example, 421-a or J-51 incentive recipients are required to comply fully with the sustainable roofing requirements. There are no affordability exemptions for cool roofs.

**12. Can I use Property Assessed Clean Energy loans (PACE) to finance these required installations?**

Property Assessed Clean Energy (PACE) Loans, powered by NYCEEC, will be available starting in early 2020. PACE is not available in any form for 1-2 family properties. For all other building types, PACE is available for solar photovoltaics in new construction as well as retrofits. Green roof retrofits may be eligible for PACE financing as long as the applicant demonstrates the energy savings that will result from the green roof. For more information visit: [nyceec.com/pace](http://nyceec.com/pace).