Turbines Popping Up on New York Roofs, Along With Questions of Efficiency

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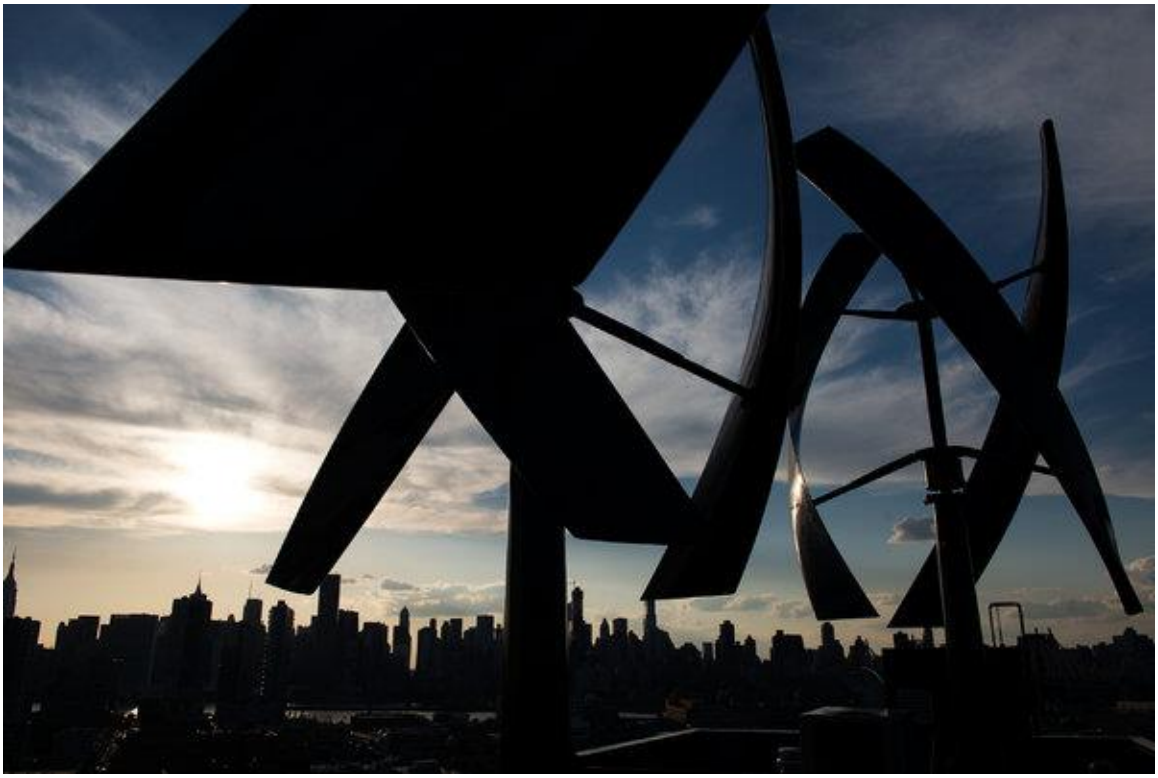


Wind turbines like these on top of the Pearson Court Square, a 197-unit luxury apartment building in Queens, are part of an effort among New York City developers to attract buyers with a building's green credentials.

A dozen construction workers gathered around a flatbed truck in Long Island City, Queens, one recent Tuesday, marveling at the final piece of a new 15-story apartment building they had just finished assembling. As a mobile crane hoisted the 20-foot-long black contraption over Pearson Street, many of the workers used their phones to film its ascent.

What looked like a huge carbon-fiber strand of DNA strung around a 10-foot mast was the last of three wind turbines being installed atop the Pearson Court Square, a 197-unit luxury apartment building.

In an industry, a city and a society obsessed with being green, wind turbines remain scarce — only two apartment buildings in New York City harvest the skies for energy, with limited yields.

But in the past few weeks, two new installations have popped up, the one on Pearson Street and

another atop what is now Brooklyn's tallest building, 388 Bridge Street. At least half a dozen more are on the horizon.

Whether turbines become as common as doorknobs, or even solar panels — a recent cover of The New Yorker had both devices dotting the skyline — remains to be seen. But with each passing project, New York resembles a new New Amsterdam just a little bit more.

Typical turbines require a steady breeze of 10 miles per hour or more, whereas winds in New York can easily jerk from 3 to 30 miles per hour and come from all directions. Credit: Bryan Thomas for The New York Times

"I don't know if it's Generation X or Generation Y, but we anticipated a lot of our tenants would be drawn to something different," said Ron Moelis, principal of L&M Development, which is developing the Pearson Court Square.

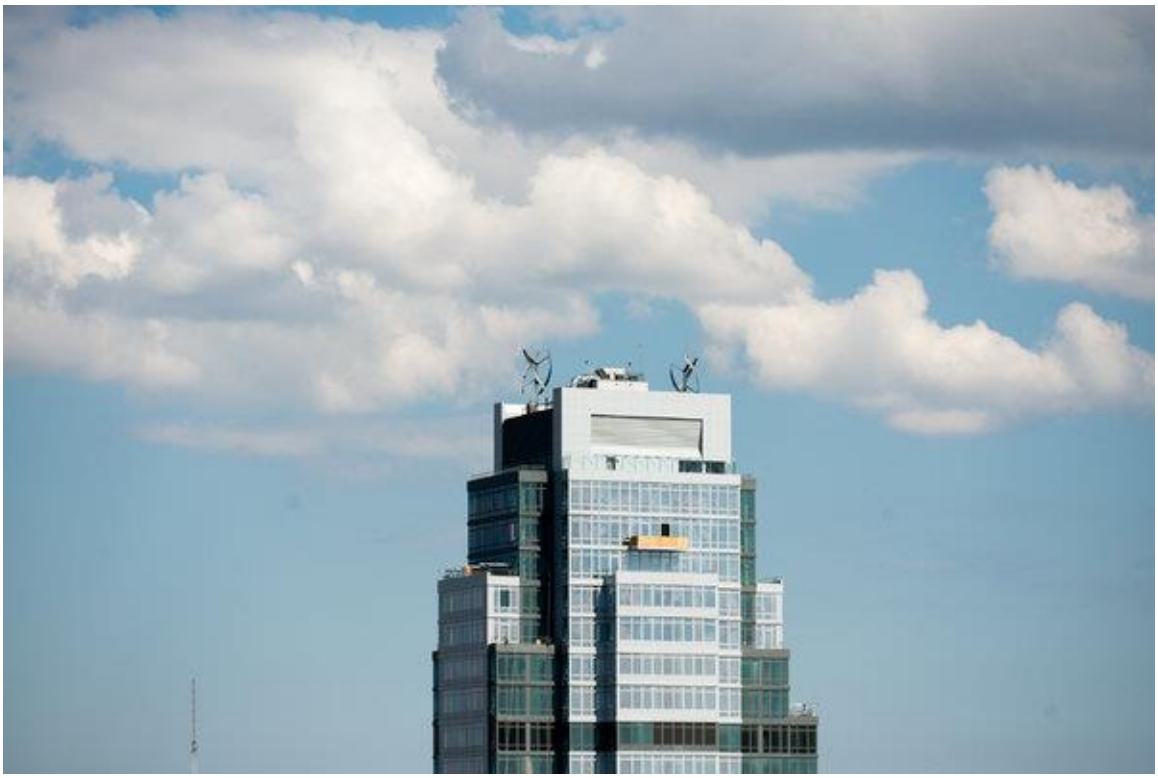
Windmills have always been at the heart of the city's identity, including the earliest recorded image, a 1626 engraving by Joost Hartgers, and one appeared at the center of the city's official seal when the five boroughs incorporated in 1898.

L&M is picking up where the city founders left off. The developer has had a longstanding commitment to sustainable design, using solar panels, insulated glass, super-efficient boilers and the like. But it has never found the right place to install wind turbines until now.

New York is indeed a windy city, often too much so. Typical turbines require a steady breeze of 10 miles per hour or more, whereas winds in New York can jerk from 3 to 30 miles per hour and come from all directions. Developers have taken to helix-shaped turbines, which can capture winds from any direction and at lower speeds than the propeller style, in addition to being quieter

and safer for birds.

The city's thicket of buildings further complicates things, dissipating winds. But in Long Island City, L&M discovered a unique environment. "When we found this site right next to the Sunnyside yards, we figured we'd study things and give it a shot," said David Dishy, director of development for the company. The 192-acre train yard is as close as New York gets to windswept plains.



Because of the city's wind sporadic wind patterns, New York developers favor helix-shaped turbines, like these on a new apartment building at 388 Bridge Street in Brooklyn.

As with most green innovations, L&M also had the government on its side. The New York State Energy Research and Development Authority helped pay about half the $100,000 installation cost and will study the turbines' efficacy.

For many sustainability advocates, that is precisely the issue. "A tiny windmill on a big building is just silly — it might as well be a pinwheel," said Russell Unger, executive director of the Urban Green Council. "It's a lovely idea, if people want to pay for it and test it out, but as far as return on investment goes, it's a waste compared to more insulation and efficient building systems."

L&M actually agrees. "We're doing all we can to green the building, but it's kind of hard to sell an apartment by showing people your high-tech boiler," Mr. Dishy said. The three turbines should provide enough power, 12 kilowatts, to keep the lights on in all common areas, including the lobby, the hallways, the gym and a roof lounge from which the whirligigs can be seen.

What they do outside the building is even more important than what they do inside — the turbines are visible from the No. 7 train platform and the Long Island Expressway and surrounding streets. With dozens of towers on the rise in Long Island City, anything to help a project stand out is good.

At 388 Bridge Street in Downtown Brooklyn, two turbines capping the 590-foot tower are almost entirely for show. They power a two-story LED light display.

Two turbines capping the 590-foot tower at 388 Bridge Street power a two-story LED light show that plays a rainbow of colors each night.

“We wanted to create a beacon for Brooklyn, and we just thought the turbines would help make the building shine,” said Roger Fortune, vice president for the Stahl Organization, which developed the tower. It has 234 rentals and 144 condos, including two penthouses priced at $5 million and $6 million.

While the turbines are visible from their terraces, the noise of traffic all the way down on Flatbush Avenue is far louder.

Les Bluestone, a second-generation builder who works in the boroughs outside Manhattan, spent plenty of time up on noisy roofs growing up. “Whenever you walk up to the edge, there’s always this huge gust of wind,” he said. This inspired him to install a row of 10 1-kilowatt turbines on a six-story affordable housing project he built in the Morrisania section of the Bronx in 2009. It was the first installation of its kind in New York.

He was hardly impressed by the results. “On a good day, there’s maybe enough energy to power the common areas,” Mr. Bluestone said, “but we don’t get a lot of good days.”
Mark Mayhew, director of the small turbine program at the state energy research agency, admits turbines are probably more popular than they should be. “Our installers spend more time convincing people not to build turbines than to build them,” he said. “The conditions really have to be ideal.”

Still, interest is spreading. Urban Green Energy, the manufacturer of the helix turbines for Pearson and 388 Bridge, is talking with five other developers — none in Manhattan — and recently completed a solar and wind installation at the Whole Foods in Gowanus, Brooklyn, to power the lights in the store’s parking lot. Half a dozen schools have installed them, albeit mostly for educational purposes. And a new Sims recycling center in Sunset Park, Brooklyn, is planning a 150-foot prop turbine, the largest ever in the five boroughs.

Even if they do not prove ideal at energy generation, turbines could still come in handy.
“If tenants don’t pay the rent,” Mr. Moelis, of L&M Development, joked, “we can always take them up there and tie them up.”

http://www.nytimes.com/2014/05/27/nyregion/turbines-pop-up-on-new-york-roofs-along-with-questions-of-efficiency.html