15 Buses, One Police Car: New York's Electric-Vehicle Age Starts Slowly

The city has begun converting its fleet and deploying curbside chargers in an effort to meet electrification goals.

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There are just 15 electric public buses on the streets of New York, out of a fleet of more than 5,900 buses. There is just a single electric police patrol car, a Tesla, and only one electric garbage truck.

And in a city with nearly 1.9 million registered passenger vehicles, zero-emission vehicles make up less than one percent.

Despite the urgent need to move away from burning fossil fuels that accelerate climate change, the nation's largest city is embracing electric vehicles at a tortoise-like pace and lagging behind other major American cities, including San Francisco, Los Angeles and Seattle.

As a result, New York will have to work much harder to adopt greener options, including meeting an ambitious goal of electrifying its municipal fleet of nearly 30,000 vehicles, from ambulances to the car that carries the mayor, by 2035.

The push to shift away from gas-burning engines comes at a time when electric vehicles, especially trucks and buses, have become scarce amid ongoing pandemic supply chain snarls, including severe shortages of semiconductors and other critical components.

And few options exist for specialized vehicles that provide crucial municipal and emergency services — no electric fire truck currently meets city standards.

Electric passenger vehicles are not an easy option in a city where most people live in apartments and do not have a home garage to charge cars, and with just 86 public curbside chargers spread out across its hundreds of square miles.

Throughout the city, there are nearly 12,500 fully electric passenger vehicles — including cars, SUVs and trucks — and another roughly 7,300 plug-in hybrid electric vehicles, according to an analysis of state data by Atlas Public Policy, a research group based in Washington.

"The hardest nut to crack for electric vehicles is often dense urban environments like New York," said Nick Nigro, the founder of Atlas.

The city has installed 86 public electric chargers, a relatively small number for New York City's hundreds of square miles. Gabby Jones for The New York Times

Fully electric and plug-in hybrid vehicles made up 3.4 percent of all new passenger vehicle sales in New York City last year, compared with 22 percent in San Francisco, 11.9 percent in Los Angeles and 11.7 percent in Seattle, according to Atlas. The national average was 4.4 percent.

The transition to electric has been propelled not just by concerns that vehicle emissions produce climate-changing greenhouse gases, but also because they lead to elevated levels of particulate matter, which have contributed to health problems, including lung cancer and heart attacks, that disproportionately hurt communities of color.

In New York, transportation contributed 28 percent of the city's overall greenhouse gas emissions in 2019. The biggest culprit was passenger cars, which alone accounted for nearly 23 percent of total emissions, followed by heavy duty trucks, with roughly 3 percent of emissions, according to city data.

New York City's municipal fleet has featured some electric vehicles since 2003, when 300 GEM carts and eight all-electric Toyota RAV4s were rolled out in parks.

Today, there are just over 1,400 all-electric vehicles, about 5 percent of the city's municipal fleet. That is comparable to the 5 percent of the state's vehicle fleet that is fully electric, but trails other cities focused on electric vehicles such as Seattle, where about 7 percent of the municipal fleet is all electric.

The federal government is even further behind, with zero-emission vehicles making up less than 1 percent of the federal fleet of more than 657,000 vehicles. (The Postal Service recently announced a decision to purchase up to 165,000 gasoline-powered vehicles, angering some Democrats).

This year, New York City plans to purchase another 1,084 all-electric vehicles, including 148 Ford Mustang Mach-E police patrol cars and seven more electric Mack garbage trucks.

The city has allocated $442.5 million so far on the effort to electrify the municipal fleet and build chargers, funded mainly from city coffers.

This cost will be partly offset by lower maintenance costs for electric vehicles, which do not have exhaust systems to rust out and do not require oil changes, and by savings on fuel, said Keith Kerman, a deputy commissioner for the Department of Citywide Administrative Services.

In addition, the taxi industry has dispatched 25 all-electric yellow taxis out of a fleet of nearly 13,600 taxis. And the Metropolitan Transportation Authority, which runs the city's buses, plans to spend $1.1 billion to buy another 500 electric buses and retrofit eight bus depots with charging equipment to try to achieve a goal of a zero-emissions bus fleet by 2040.

Less than 1 percent, or nearly 12,500, of New York City's nearly 1.9 million registered passenger cars are zero-emission vehicles. Gabby Jones for The New York Times

While replacing gas-burning cars with electric vehicles might be good for the environment, it will do little to alleviate New York's notorious gridlock, which disappeared at the height of the pandemic but has come roaring back. Officials are promoting public transit as more people who had been working remotely start commuting again.

"If we were to electrify every car one to one, there would still be crippling congestion on the roads," said Paulina Muratore, a transportation campaign manager for the Union of Concerned Scientists, a nonprofit advocacy group. "These complementary efforts to get people out of cars have to be pieces in the same puzzle because there is no silver bullet for tackling transportation pollution."

The Biden administration has set a national goal for half of all new vehicles sold by 2030 to be electric powered, saying that switching to battery power is essential to keep up with other countries and fight climate change. It has also launched a $5 billion program to help cities and states build out networks of charging stations and promoted financial incentives for consumers to buy electric cars.

New York Governor Kathy Hochul signed legislation last year requiring that all new passenger cars and trucks sold in the state be zero-emission by 2035, and has also pushed to electrify the state's fleet for executive agencies. "We're at a pivotal point in our fight to tackle the climate crisis and transition to a clean energy future," she said in a statement.

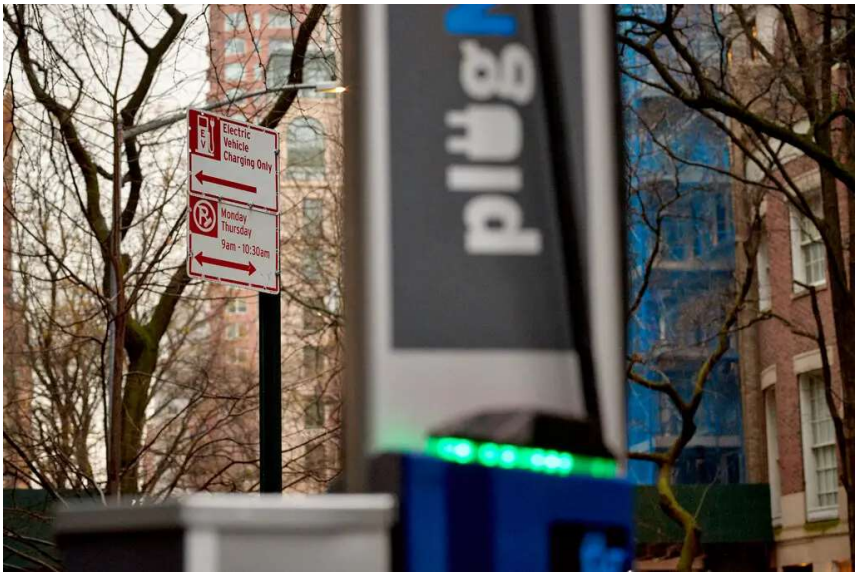
But as more cities and states have turned to electric vehicles, the industry has scrambled to keep up. Many manufacturers have had limited inventory during the pandemic, and large truck and bus makers are just beginning to sell electric vehicles.

Electric vehicles can also cost much more than gas vehicles, with an electric school bus priced up to three times more than a diesel one. Though it is usually cheaper to run vehicles on electricity than gas or diesel, electricity rates designed for large industrial users like private factories often cancel out savings for municipalities, said Kevin Miller, the director of public policy for ChargePoint, a company that helps cities and other customers set up charging stations.

To power electric vehicles, New York City has built a network of 1,091 chargers on curbs and in garages and parking lots, of which about 100 chargers, including the 86 on curbs, are intended for public use.

Robust networks of chargers have been essential in global cities like Beijing that are leading the switch to electric vehicles, said Zhongjie Lin, an associate professor of urban planning at the University of Pennsylvania. Still, he added, New York could learn from Beijing's missteps by thinking through where to deploy the chargers.

Beijing concentrated chargers in the city center, Mr. Lin said, when it would have made more sense based on usage patterns to put them in residential areas where demand outstrips supply or near public transit stations where people park their electric cars. Charging stations "are a huge investment," he said, "so we should get them right."



City officials say they plan to have 1,000 public electric chargers in place by 2025, with a goal of 10,000 by 2030. Gabby Jones for The New York Times

New York officials plan to have 1,000 public curbside chargers in place around the city by 2025, with a goal of 10,000 chargers by 2030.

Laura Wooley, 33, a public defender, and her wife, Isabel Alcántara, 32, bought a Nissan Leaf last fall after a curbside charger turned up in their Sunset Park neighborhood in Brooklyn. “We never owned cars in New York, but it suddenly seemed like, ‘oh wait, we can,’” Ms. Wooley said. “We could actually charge a car.”

But in a city where street space is a precious commodity, many chargers are squeezed onto crowded curbs alongside truck loading zones, bike lanes and bike racks, newsstands and outdoor dining, where they are routinely blocked.

“These competing uses do exist in other cities,” said Dale Hall, a senior electric vehicle researcher at the International Council on Clean Transportation, a nonprofit environmental research group. “But I think it’s perhaps even more politicized and competitive in New York.”

Max Hardy, 32, a product manager in Astoria, Queens, who owns a Tesla Model 3, said that he and other electric car owners have been thwarted so often by nonelectric cars parked in curbside charging spots that they refer to it as being “ICE-ed” by an internal combustion engine vehicle.

“I think it’s a step in the right direction,” Mr. Hardy said of public chargers and city’s efforts to push for more electric vehicles. “But I think it needs to be part of a broader strategy about traffic and how we manage personal vehicles.”

A handful of private initiatives have added more public charging options. Revel, an electric mobility company, opened a charging site with 25 fast chargers last June in Brooklyn’s Bedford-Stuyvesant neighborhood. Another company, Gravity, is converting an indoor parking garage in Midtown Manhattan into a dedicated fast charging hub this spring.

Uchendu Nwachuku, 42, a software engineer, said he was closer to trading in his Jeep Wrangler now that there is a curbside charger near his apartment in Sunset Park, Brooklyn.

“It showed up and I live two blocks away from it,” he said. “So since then I’ve been looking at getting an electric vehicle, especially with the gas prices as they are right now.”

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