

**NYC Department of Transportation Testimony Before the
City Council Committee on Transportation and Infrastructure
June 23, 2023**

Good morning, Chair Brooks-Powers and members of the Committee on Transportation and Infrastructure. I am Will Carry, Assistant Commissioner for Policy at the New York City Department of Transportation. With me today are Charles Ukegbu, Assistant Commissioner for Regional and Strategic Planning, Luis Gonzalez, Policy Advisor, and Miranda Alquist, Director of Legislative Affairs. We are also joined by our colleagues at the Department of Citywide Administrative Services (DCAS) and the Taxi and Limousine Commission (TLC). Thank you for the opportunity to testify on electric vehicle infrastructure on behalf of Commissioner Ydanis Rodriguez and Mayor Eric Adams.

Climate change is the defining environmental challenge of our time and New York City is particularly vulnerable to its impacts, including rising sea levels, more severe storms, and more frequent heat waves. After buildings, the transportation sector is the second leading source of the City's greenhouse gas emissions (GHG), making up 28 percent of all emissions. Eighty-four percent of these transportation-related emissions come from light-duty vehicles, such as personal cars and SUVs, while 13 percent come from medium and heavy-duty vehicles, such as box trucks and tractor-trailers. Medium and heavy-duty vehicles disproportionately contribute to air pollution, including particulate matter and nitrogen oxides, that are harmful to human health.

To do our fair share to address climate change, New York City is committed to achieving carbon neutrality in the transportation sector by 2050, with an interim goal of cutting emissions 50 percent by 2030. This transition to a greener transportation system will also help improve air quality, especially in environmental justice communities with high volumes of highway and truck traffic.

To achieve these ambitious goals, we are simultaneously advancing two strategies. First, we are doubling down on our efforts to encourage New Yorkers to walk, bike, and take transit instead of traveling by car. We are implementing street improvement projects to make it safer and more convenient to walk and bike. We are working with communities across the five boroughs to expand our public spaces and make them more inviting. And we are partnering with the Metropolitan Transportation Authority (MTA) to make bus service faster and more reliable.

But DOT recognizes that some New Yorkers will continue to drive because they lack access to transit, have family or work obligations that require it, or simply prefer it to other options. Our second strategy is to transition as many of these remaining car trips as possible to electric vehicles (EVs). We are placing a particular focus on electrifying

taxis and for-hire vehicles (FHVs), as these vehicles drive many more miles than private cars and contribute more GHG emissions. To that end, in January of this year, Mayor Adams announced the City's goal of transitioning all Uber and Lyft trips to EV by 2030.

My testimony today focuses on the steps we are taking to advance the adoption of EVs by New Yorkers and our work to support TLC's effort to electrify the taxi and FHV fleets. I will speak primarily about light-duty vehicles—i.e. cars, SUVs, and pick-ups—while touching more briefly on the medium and heavy-duty sector, as the transition to zero emission trucks is in a more nascent stage and involves its own unique challenges. Deputy Commissioner Keith Kerman from DCAS will then speak to the City's progress in electrifying its own fleet.

So what progress has been made on the adoption of EVs in New York City? According to state records, there are 1.9 million passenger vehicles registered in the city, of which nearly 2 percent are currently electric. Overall, EV adoption has been steadily increasing, with EV registrations increasing 44 percent between 2021 and 2022. In the last six months, EVs made up 7 percent of new vehicle registrations. There are many factors leading to faster EV adoption in New York City: new EVs have much longer ranges than the first generation EVs, EV prices are decreasing and there are more electric models available, the state and federal government are providing generous purchase incentives, and government and the private sector are making historic investments in EV charging infrastructure.

This is very real progress and New York City is now slightly ahead of New York State as a whole, where 6 percent of new vehicle registrations are EV. However, the city still lags the states leading the EV transition, including California, where EVs now comprise 21 percent of new vehicle registrations. Much of this disparity is due to the unique challenges of owning an EV in the five boroughs. Unlike in most American cities, about 50 percent of car owners in New York City park their vehicles at the curb and lack access to home charging—the most convenient way to power up. In addition, private investment in EV charging has not been equitably distributed—most publicly-accessible chargers are in Manhattan south of 96th Street and in inner Brooklyn and Queens. Many are within garages with high parking fees.

To support the widespread adoption of EVs, the city will need hundreds of thousands of public and private EV chargers—with a greater proportion of publicly-accessible chargers than any other U.S. city. Ultimately, most of these chargers will be installed by private companies and individuals, but the City has an important role in jumpstarting the market and ensuring equitable access. Our EV charging program focuses on expanding access to charging in three areas:

1. Communities where the private sector has been slow to invest in charging, especially low and moderate-income neighborhoods in the outer boroughs;
2. High density communities where a large proportion of vehicle owners park at the curb and where there is limited off-street parking; and
3. Communities where a high number of taxi and FHV drivers live and park their vehicles between shifts.

To support these efforts, we are looking to leverage funding from a broad array of sources, including federal and state programs and grants, utility incentives, and from private sector partners.

Before I dive into the details of our charging program, here is a quick summary of the three categories of EV charging:

- Level 1 charging uses a standard 120-volt outlet and can provide about five miles of range for each hour of charging. Level 1 is suitable for at-home use.
- Level 2 charging requires a 208- or 240-volt power source, similar to what is needed for a dryer, and can provide a full charge for most EVs in six to eight hours. Level 2 is suitable anywhere an EV is parked for a few hours or more, such as at home, work, or while out shopping.
- Level 3 or fast charging can provide an 80 percent charge in 15-45 minutes, depending on the vehicle model and the charger's power level. Level 3 requires a connection to a 480-volt direct current electrical connection and provides more of a gas station experience.

The fast chargers operated by Tesla use a proprietary plug standard—the North American Charging Standard (NACS)—that currently can only connect to Teslas. Non-Tesla fast chargers, such as those that DOT has installed, use the Combined Charging System (CCS) plug type, which is the federal standard and can be used by the majority of EVs. Which plug standard will become the dominant standard is in flux, as Tesla recently announced that it is allowing other auto makers to adopt the NACS plug. Ford and General Motors recently announced that their future EV models will switch to the Tesla standard.

First, an overview of our fast charging initiatives. Given that so many vehicle owners in New York City park at the curb, fast charging will play a bigger role in supporting EV adoption here than in other cities. Better access to fast charging will also address range anxiety, or the fear that an EV driver may have that they will run out of power while on the road and have no place to charge. In *PlaNYC: Getting Sustainability Done*, the Adams Administration committed that every New York City resident would live within 2.5

miles of a fast charger by 2035. Currently, only 65 percent of New Yorkers have this level of access.

DOT is leveraging its network of municipal parking garages and lots to dramatically expand fast charging. We have two fast charging stations in operation at the Delancey Essex and Court Square garages, each with three 50 kilowatt (kW) chargers and one 150 kW charger. A third station at the new Queens Borough Hall garage will be in operation next week. And we are in the process of procuring five additional stations throughout New York City. We expect the first two, at White Plains Road in the Bronx and Bensonhurst in Brooklyn, to be in operation by the end of summer 2024. We also recently announced a partnership with the New York Power Authority (NYPA), which will fund and install 13 additional fast charging stations at DOT parking facilities through New York State's EVolve program. Each station will have four to six state-of-the-art 150 kW fast chargers.

Through these investments, investments by DCAS at dual-use fast charging sites, and investments by private charging companies, we project 93 percent of New Yorkers will live within 2.5 miles of a fast charger once these projects are complete. These stations will particularly benefit taxi and FHV drivers by providing fast charging in neighborhoods where these drivers live, including the west Bronx, eastern Queens, and Southern Brooklyn. NYCDOT provides a 15 percent discount to taxi and FHV drivers who charge at City locations. These drivers already make up 10 percent of the charging sessions at our Delancey and Court Square stations.

Moving to level 2 (L2) charging efforts. One of the conveniences of owning an EV is the ability to refuel while your car is parked. With access to convenient, affordable L2 charging at home, work, or neighborhood destinations, EV owners can stop making separate trips to refuel. And since the average New York City driver covers only eight miles per day, many EV owners would only need to plug in for one charging session every few weeks. Another advantage of L2 chargers in comparison to fast chargers is that they are less expensive to install, reduce strain on the electrical grid, and are cheaper for EV drivers to use.

In most of the country, an EV owner can install a personal L2 charger in their own garage or driveway and do most of their charging at home. But as mentioned earlier, New York City is unique among American cities in that half of vehicle owners rely on curbside parking. This means the city needs a robust network of publicly accessible L2 options. DOT currently has 47 L2 chargers spread across seven parking facilities and is in the process of installing 1,100 more across all 37 of our lots and garages. Once completed, the project will bring L2 charging to 20 percent of our total parking spaces. We expect the first phase of 154 chargers to be operational by the end of summer 2024.

We are also expanding curbside EV charging access. In 2021, we began a pilot program in partnership with Con Edison to install 100 curbside L2 chargers at 35 sites citywide. We recently released an 18-month evaluation report on this pilot, the first report of its kind in the country. We found that the chargers were remarkably resilient and remained in operation 99.9 percent of the time. And New Yorkers are using them. In May, the chargers were in use 37 percent of the time—with some sites exceeding 70 percent utilization. As expected, use varies across neighborhoods based on EV adoption, but it is critical that the City continue to install chargers in neighborhoods where people have not yet felt comfortable going electric to encourage further shift to EV adoption.

The Adams Administration is also exploring curbside charging designs that take up less space and that are faster and cheaper to install. In partnership with the New York City Economic Development Corporation (EDC) and NewLab, a technology incubator in the Brooklyn Navy Yard, in 2022 DOT invited startups to test more compact curbside EV charging equipment, including chargers with a user-supplied cord and those that can be mounted on City streetlights. We are also exploring ways to leverage the utility work required for EV chargers to power micromobility charging options, providing a safe charging option to the city's 65,000 delivery workers.

To make the public aware of these new charging resources, DOT has created PlugNYC, the City's brand for its EV charging programs, and has regularly posted on its social media accounts about our EV charging projects, including when new sites are activated. Moving forward, all City chargers will include the PlugNYC branding, and DOT will continue to leverage the brand to increase awareness. We urge the Council to help us spread the word about the increasing availability of chargers and welcome suggestions for how we can better reach New Yorkers and encourage them to make the switch to electric.

Turning now to medium and heavy vehicles. The City is committed to greening the movement of freight, and zero emission trucks will be a key part of that effort. While the technology necessary for this transition is at an earlier stage, DOT and EDC are undertaking a truck electrification study, with the goal of identifying potential sites for truck charging stations. The City also continues its Clean Trucks Program, through which DOT offers incentives to truck owners to replace their older diesel trucks with alternative fuel or zero-emission models. The program, which started in Hunts Point, is focused on trucks in Industrial Business Zones citywide located near Environmental Justice communities that have been subject to a disproportionate amount of diesel exhaust emissions historically. The City is also exploring ways to incentivize the use of low-and zero-emission trucks through low-emission freight zones in areas with the highest concentration of truck traffic and the worst public health outcomes.

Finally, on the federal funding front, last week, DOT and our partners EDC and DCAS applied to the federal Charging and Fueling Infrastructure grant, jointly administered by the U.S. Departments of Transportation and Energy. EDC requested \$15 million for the “Recharge Hub,” a first-of-its-kind electric vehicle charging depot designed to accommodate freight and passenger vehicles located in Hunts Point in the Bronx. DOT requested \$15 million to expand our curbside charging program to a total of 700 plugs, which would make this program the largest in the country. This effort would focus on historically disadvantaged neighborhoods and areas where large concentrations of FHV drivers live. The project would also include infrastructure to support the electrification of bikeshare and public micromobility charging, as well as solar-powered L2 charging stations at eight parks across the five boroughs, operated by DCAS. We are also closely tracking other funding opportunities and welcome Council Member letters of support for this and future grant applications.

As I mentioned earlier, these efforts will only provide for a fraction of the chargers the city will ultimately need in order to support over one million EVs. Charging on private sites will be essential. To create more chargers and expand access to EV charging across the city, we look forward to working with the Council on Introduction 150 sponsored by Council Member Brannan. This bill would require L2 EV chargers in new, renovated, and existing parking lots and make chargers accessible for even more New Yorkers.

I now turn it over to my colleagues at DCAS who will speak about the City’s efforts to electrify the City fleet. I will be happy to answer any questions once their testimony is concluded. Thank you.