

READ AND LANIADO, LLP

ATTORNEYS AT LAW
25 EAGLE STREET
ALBANY, NEW YORK 12207-1901

(518) 465-9313 MAIN
(518) 465-9315 FAX
www.readlaniado.com

DAVID B. JOHNSON
SAM M. LANIADO
KONSTANTIN PODOLNY

ZACHARY W. PERDEK
MICHELLE C. ZALUDEK

KEVIN R. BROCKS
HOWARD J. READ
Of Counsel

Via Electronic Delivery

June 5, 2023

Hon. Michelle L. Phillips
Secretary to the Commission
New York State Public Service Commission
Empire State Plaza
Agency Building 3
Albany, New York 12223

RE: Case 23-E-0070 – Proceeding on Motion of the Commission to Address Barriers to Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure.

Dear Secretary Phillips:

Pursuant to the New York State Public Service Commission’s (“Commission”) April 20, 2023, Order Instituting Proceeding and Soliciting Comments (“Order”) in the above-captioned proceeding,¹ the Metropolitan Transportation Authority (“MTA”) hereby submits the following comments regarding potential barriers to medium- and heavy-duty (“MHD”) electric vehicle (“EV”) charging infrastructure.

Background

The MTA, including its subsidiary and affiliate agencies, operate North America’s largest public transportation network, serving a population of approximately 15.3 million people in the 5,000 square-mile area fanning out from New York City through Long Island, southeastern New York State, and Connecticut.² The MTA is a high-volume electric consumer in the Consolidated

¹ Case 23-E-0070, *Proceeding on Motion of the Commission to Address Barriers to Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure*, Order Instituting Proceeding and Soliciting Comments (Apr. 20, 2023).

² *About the MTA*, MTA (2022), <https://new.mta.info/about> (last visited May 26, 2023).

Edison Company of New York, Inc. (“Con Edison”) service territory and relies upon electricity for many of its operations to transport the public.

The MTA is in a unique position to answer the questions posed in the Order on fleet electrification. The MTA operates a fleet of approximately 5,780 buses in New York City.³ It has the highest bus ridership in the country, with approximately 557 million annual riders—more than double the next most active bus network.⁴ The MTA’s fleet currently has 1,300 hybrid buses,⁵ as well as 15 all-electric buses,⁶ and it has plans to entirely electrify its fleet by 2040.⁷ Converting the MTA’s fleet to all-electric buses would eliminate tailpipe greenhouse gas (“GHG”) emissions from compressed natural gas and diesel buses, estimated in 2019 to be approximately 906,000 tons. The electrification of MHD fleets, such as the MTA’s, is essential to achieve the goals set forth in the Climate Leadership and Community Protection Act (“CLCPA”).⁸

1. What are the specific challenges to developing charging infrastructure for medium- and heavy-duty (MHD) vehicles?

Electrifying MHD transit fleets is currently uneconomic due to the sizable incremental capital and operating cost the MTA would be required to incur. Because transit fleets, such as the MTA’s, operate on full-day schedules, bus depots and garages will need to be outfitted with expensive EV supply equipment and infrastructure (“EVSE&I”) that allow the entire fleet to be charged overnight.

Another issue the MTA is experiencing concerns the excessively long interconnection process to install and electrify the equipment necessary for the MTA to charge its EV fleet. As shown in the Joint Proposal currently under consideration in Con Edison’s most recent rate case, requests for the installation of new vault service and new high-tension service—the categories of work necessary to meet the new load required by fleet electrification at MTA bus depots—take approximately three and six years, respectively, for the work to be completed.⁹ Without sufficient capacity to charge MHD EV fleets, the accompanying environmental benefits of MHD fleet electrification will be significantly delayed.

³ *Subway and Bus Ridership for 2021*, MTA (2021), <https://new.mta.info/agency/new-york-city-transit/subway-bus-ridership-2021> (last visited May 26, 2023).

⁴ *Id.* Note that this figure represents the number of annual riders at pre-pandemic levels.

⁵ *MTA to Add 60 Electric Buses by Year’s End (That’s 1% of the Entire Fleet)*, Streets Blog NYC, (Apr. 22, 2022), <https://nyc.streetsblog.org/2022/04/22/mta-to-add-60-electric-buses-by-years-end/>.

⁶ *Transitioning to a Zero-Emissions Bus Fleet*, MTA, (July 25, 2022) <https://new.mta.info/project/zero-emission-bus-fleet>.

⁷ *MTA Capital Program 2020–2024: Rebuilding New York’s Transportation System*, MTA (Jan. 1, 2020), at 57, <https://new.mta.info/document/10511>.

⁸ Climate Leadership and Community Protection Act, 2019 N.Y. Sess. Laws. Ch. 106 (McKinney) (“CLCPA”).

⁹ Cases 22-E-0064 et al., *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*, Joint Proposal (Feb. 16, 2023), App’x 22 at 17.

The MTA appreciates the proposal made by Department of Public Service Staff, Con Edison, and other signatory parties to address the interconnection issue through providing a shareholder incentive in the form of an Earnings Adjustment Mechanism (“EAM”).¹⁰ The EAM incentivizes Con Edison to reduce the average timeline for transportation electrification projects from application to energization.¹¹ Notably, the Climate Action Council concluded in its Scoping Plan that to achieve the goals set in the CLCPA, the transportation sector will “need to shift nearly completely to [zero-emission vehicles (“ZEVs”)]” and that a large majority of MHD must be ZEVs by 2050.¹² The lengthy interconnection timeline issue will likely be exacerbated as the pace of requests to upgrade capacity increases. Accordingly, the MTA recommends that the Commission monitor utilities’ load request interconnection processes, so that backlogs are not developed.

Other MTA medium- and heavy-duty non-revenue fleet vehicles challenges include:

- Limited available medium and heavy-duty electric vehicle models on the market, and existing models have limited track records to establish reliable range, consumption levels, and maintenance needs.
- The MTA operates many unique, customized heavy-duty vehicles that are not available in electric models. Many vehicles include significant auxiliary functions that currently operate using gas- or diesel-powered sources. To be fully zero-emissions, these functions need to be converted to electric operation, adding to the power and charging needs of the vehicles and to the complexity of developing and testing vehicle models
- A significant number of MTA medium- and heavy-duty vehicles park regularly on public streets. Identifying reliable, accessible charging sources for these vehicles is a challenge.

2. How do charging needs differ for school buses, transit buses, delivery trucks, garbage trucks, box trucks, stake trucks, transport refrigeration units, and other specialized equipment?

EV transit fleets have unique charging needs compared to some other types of MHD fleets due to the operational/scheduling requirements to serve public transit routes. A typical MTA bus operates 10–12 hours per day. The most recent EV transit bus models require at least 6–7 hours to fully charge at conventional charging scenarios. MTA transit bus charging needs are driven by the need to meet existing service schedules, which operate the most service during peak commuting hours. Meeting schedules with the currently limited range of electric vehicles often means limited flexibility in charging times and the need for highly predictable access to charging infrastructure. Thus, EV transit fleets, like the MTA’s, will have to charge throughout the day to continue serving its routes. While the MTA will endeavour to charge during off-peak periods as much as practicable, it will also have to charge during peak periods, thereby potentially neutralizing any benefits it could obtain through participation in managed charging programs or time-of-use rates.

¹⁰ *Id.* at 14–18.

¹¹ *Id.* at 14.

¹² *New York State Climate Action Council Scoping Plan*, N.Y.S. Climate Action Council (Dec. 2022) at 148, <https://climate.ny.gov/-/media/Project/Climate/Files/NYS-Climate-Action-Council-Final-Scoping-Plan-2022.pdf> (“Scoping Plan”).

This barrier likely also applies to all MHD fleets that operate throughout the day, such as waste disposal and post office fleets.

Accordingly, the MTA recommends that any program developed in this proceeding account for the operational constraints of MHD fleets that must operate throughout the day.

5. What considerations should Staff take regarding incentivizing infrastructure siting and MHD charging to mitigate impacts in Disadvantaged Communities overburdened by truck and bus traffic and pollution?

Staff should develop a program that prioritizes infrastructure incentives that most effectively mitigate MHD emission impacts to Disadvantaged Communities (“DACs”). According to 2021 report by M.J. Bradley & Associates, MHD vehicles in New York are responsible for an estimated 24% of GHG, 52% of nitrogen oxides (“NO_x”) and 45% of particulate matter emissions from the on-road vehicle fleet.¹³ The report also recognized that the resulting negative health impacts occur in many urban areas, including DACs. Staff’s Make-Ready Whitepaper observed that DACs are disproportionately impacted by heavy truck traffic and may experience over 50% more traffic-related pollution than more affluent communities.¹⁴ Thus, decreasing GHG emissions from both bus fleets, and other MHD fleets through electrification will provide positive health outcomes in DACs.

Staff recommended in the Make-Ready Whitepaper that locations that provide additional benefits to DACs to be considered Strategic Locations, which trigger a utility to conduct a Benefits Cost Analysis to determine if the project is worthy of ratepayer support.¹⁵ For example, the MTA’s bus routes provide service to DACs and operate in at least six of the State’s eleven Clean Air Act non-attainment areas.¹⁶ Riders in these areas have low vehicle ownership rates, and a higher rate of MTA bus use.¹⁷ The MTA recommends locations like the MTA’s depots located in or serving routes in DACs be prioritized, and if a program is developed like the one in the Make-Ready Order, include a Strategic Location suitability criteria for program eligibility evaluation.

Similarly, if an “accessibility” suitability criterion is developed, locations that charge public transit fleets should be exempt from any requirement or preference that the location be accessible to the public. While, for security reasons, the public cannot use the MTA’s charging infrastructure for other purposes, the public benefits from low-cost, zero-emissions public transit and the benefits associated with replacing fossil-fueled buses with EV buses. Accordingly, the

¹³ *New York Clean Trucks Program*, M.J. Bradley & Associates (2021), <https://www.ucsusa.org/sites/default/files/2021-09/ny-clean-trucks-report.pdf> (May 26, 2023).

¹⁴ Case 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure*, EVSE Whitepaper (Jan. 13, 2020) (“Make-Ready Whitepaper”) at 9; Iyad Kheirbek et. al., *The Contribution of Motor Vehicle Emissions to Ambient Fine Particulate Matter Public Health Impacts in New York City: A Health Burden Assessment*, 15 *Envtl. Health* 89, (2016) <https://ehjournal.biomedcentral.com/articles/10.1186/s12940-016-0172-6#citeas>.

¹⁵ Make-Ready Whitepaper at 47.

¹⁶ Order at 6.

¹⁷ Make-Ready Whitepaper at 56.

recognition of MTA’s bus depots as Strategic Locations that provide a public benefit is crucial because the sizable load that will be required at each bus depot every day will likely require utility analysis and additional power supply at all depots.

7. Identify barriers that exist in the current MHD Make-Ready Pilot Program that could be modified in a successor to the pilot.

b. Provide comments on how to address the barriers to building private or limited access charging that serves MHD vehicles (e.g., depots, warehouses, and distribution centers).

As discussed in the MTA’s response to Question 1, a significant barrier that the MTA has experienced in trying to obtain the benefits of the MHD Make-Ready Program is the lengthy timeline from load increase request to electrification.

Con Edison’s tariff and its energy services Blue Book explain both the customer’s and Con Edison’s responsibilities for low-tension service installations. First, Con Edison’s tariff leaf no. 56 notes that “[w]here such suitable space for transformers and associated equipment is provided [by the customer], the Company, at its expense, will construct the transformer enclosures abutting the property line and will assume any compensation payable by the Company to the municipal authorities for any necessary sub-sidewalk transformer vaults and structures, and the Company will furnish, install and maintain the transformers and associated equipment therein.”¹⁸ Con Edison’s responsibility is detailed in its Blue Book, which provides that:

Where space for transformer and associated equipment is at or immediately below street grade and adjacent to the property line, the Company, at its expense, will construct the transformer enclosures abutting the property line and will assume any compensation payable by the Company to the municipal authorities for any necessary sub-sidewalk transformer vaults and splicing chambers, and the Company will furnish, install and maintain the transformer and associated equipment therein.¹⁹

However, despite this allocation of responsibility in the Blue Book, Con Edison has also been recommending that “[t]o facilitate your building’s construction activities and provide you with full control of your service installation, we encourage you to install the transformer vaults and associated facilities under a developer’s agreement. This agreement will allow you to maintain control of the site and all construction logistics, thereby eliminating the utility vaults from your critical path. Con Edison will reimburse you at standard company prices to perform this work.”²⁰

¹⁸ Consol. Edison Co. of N.Y., Electric Tariff, PSC No. 10, Leaf 56.

¹⁹ *A Customer Guide to Electrical Service Installation*, Consol. Edison Co. of N.Y. (Nov. 2022) (“Blue Book”) at 35, <https://cdne-dcxprod-sitecore.azureedge.net/-/media/files/coned/documents/small-medium-large-businesses/electricbluebook.pdf?rev=3ef8933cf80740c5b475f55bab705de6&hash=02F1BCB03B60D0B0284B2C06D74EA851> (last visited May 31, 2023).

²⁰ *Id.* at 35.

This recommendation creates several issues for completion of low-tension service installations at the MTA’s depots. It appears that the recommendation found in Con Edison’s Blue Book is tailored for new building construction—not for load increase extensions at already constructed buildings. MTA believes that if fleet owners are compelled to install transformer vaults and associated facilities independently from the company, the costs would far exceed the cost of the work if Con Edison performed the work. MHD fleet owners do not have the technical or construction expertise to efficiently perform this work. Notably, the utilities’ obligation to cover the cost of this work is the very justification for the higher cost of low-tension service as compared to high-tension service.

Furthermore, due to how the MTA’s budget is structured, approved, and funded, these costs, that are allocated to the utility pursuant to its tariff, are not included in the MTA’s capital or operating budget. Approximately 45% of the operating budget consists of a dedicated portion of various taxes and surcharges such as the Petroleum Business tax, Mortgage Recording tax, Real Property Transfer tax, and For-Hire Vehicle surcharge.²¹ Finding additional, unanticipated resources in the MTA’s budget to finance construction of utility-side infrastructure presents a huge obstacle.

One of the reasons utilities are recommending that customers construct utility-side electric infrastructure may be that the customer may be able to do it faster. However, as discussed above, MHD fleet owners do not have the technical expertise to undertake the construction, and a developer’s agreement is not feasible because no new building is being constructed. Accordingly, in addition to monitoring the utilities’ interconnection timeline to ensure a backlog does not develop, the MTA recommends that the Commission clarify that the State’s utilities are responsible for funding and performing low-tension make-ready work for public transit entities and recommend that for work at pre-existing public transit bus depots and garages, the presumption is that the utility will perform the work as expeditiously as possible, not the customer. In summary, ensuring that the cost of all utility-side infrastructure impacts, including expanding peak capacity at hub locations, does not fall on the fleet operator would add predictability in estimating costs and help speed up project development and implementation.

8. Through the Make-Ready program, utilities offer fleet assessment services to help prepare for the transition to electric vehicles. What additional technical assistance is needed to support the transition to mass MHD electrification?

In the MTA’s experience, Con Edison’s fleet assessment services have been an invaluable tool in its effort to electrify its transit fleet. In the EVSE&I proceeding, the MTA advocated for utility-led site planning and preparation and appreciated its inclusion in the 2021 EVSE&I make-ready order. In addition to the services already provided through the fleet assessment services, the MTA believes fleet operators would benefit from additional technical assistance for making economic decisions.

²¹ See *MTA 2020 Adopted Budget – February Financial Plan 2020- 2023*, MTA <https://new.mta.info/transparency/financial-information/financial-and-budget-statements> (last visited May 26, 2023).

The current format of utility load letter requests is such that the burden is placed on the fleet owner to determine how much additional load is needed at a given site. For fleet owners, the answer to this question is not straightforward and has significant implications. On one hand, an MTA depot could be outfitted with fewer EV chargers, thereby reducing the upfront infrastructure upgrade costs, but with fewer chargers, would not have the flexibility to avoid peak period charging. On the other hand, the same depot could be outfitted with more EV chargers, thereby increasing the upfront upgrade costs, but the depot would be able to charge more of its fleet during off-peak periods. The decision is further complicated by the fluctuating nature of supply charges.

For other uses, there are established, simpler procedures for determining the max load a site may need, but due to the unique nature and overlapping economic considerations of MHD fleet charging operations, determining the max load is significantly more complex. Independently, the MTA does not have the expertise or data to make a fully informed decision of how much load would be most economically efficient at its depots. Accordingly, the MTA recommends that, in addition to retaining the existing fleet assessment services, utilities also provide additional economic planning assistance so that fleet operators can make decisions that are most economically efficient and beneficial to ratepayers.

10. How should proactive planning consider concurrent policy goals to reduce personal vehicle usage and increase the use of shared modes (including public transit)?

Proactive planning that prioritizes transit fleet electrification would have the concurrent benefit of preserving the State's nation-leading vehicle miles traveled ("VMT") rates. By ensuring that public transportation is as affordable as possible, commuters and travelers will continue to be incented to use those services as opposed to higher-emission alternatives.

The Scoping Plan lists reducing VMT as a key strategy that is fundamental to achieving GHG emission limits.²² To that end, the Scoping Plan recommends significantly increasing ease of access to public transportation in a smart, equitable fashion, and states that doing so will allow New York to substantially reduce VMT.²³ With the expectation that there will be an increase in demand for public transportation as it becomes more accessible, the MTA strongly recommends a focus on fleet electrification now.²⁴

Further, the New York State Energy Research and Development Authority's ("NYSERDA") New York State Clean Transportation Roadmap emphasizes that smart growth and expanding public transportation are key to managing VMT growth.²⁵ Merely increasing the cost of high-carbon or high-VMT transportation "may disproportionately impact households that lack access to alternative travel modes, such as rural and lower income households, and as a result are least likely to be able to reduce VMT going forward and are most likely to continue to be impacted

²² Scoping Plan at 55.

²³ *Id.* at 123, 148.

²⁴ *Id.* at 162.

²⁵ *New York State Clean Transportation Roadmap*, NYSERDA (December 2021), at 54.

by these higher costs.”²⁶ By contrast, incentivizing MHD fleets to reduce VMT through electrification will help the State meet its GHG emissions reductions goals while also creating a public benefit.

12. How can managed charging programs reduce upfront infrastructure needs?

According to Rocky Mountain Institute’s February 2020 DCFC Rate Design Study for the Colorado Energy Office, the load profiles for private, electrified vehicle charges reflect the fact that “the public use the charging stations opportunistically and randomly, mostly during daytime and evening hours,”²⁷ likely because owners of electrified vehicles would access chargers throughout the day as the need arises. Regarding MHD fleets, the Rocky Mountain Institute’s DCFC Rate Design Study concludes, “[f]or the bus depot modeling, unlike for the public DCFC sites, we expect the load to be very consistent over time.”²⁸ Currently, the load profile for electrified fleets in New York is unknown, as the ratio of electrified MHD vehicles in the State to all MHD vehicles in the State is negligible. However, with flexible incentives that encourage off-peak charging, without penalizing fleet operators for charging during peak periods, the load shape MHD fleets would be: (a) stable and (b) different from light-duty EV charging.

Accordingly, if a managed charging design can be developed that accommodates the operational constraints discussed in the MTA’s response to Question 2 while simultaneously encouraging the reduction of demand during peak hours, utility transmission and distribution costs can be reduced, but as explained in the response to Question 8, would require higher upfront infrastructure costs to facilitate charging flexibility at depots.

The MTA thanks the Commission in advance for its consideration of the MTA’s recommendations to address barriers to MHD vehicle charging infrastructure.

Respectfully submitted,

READ AND LANIADO, LLP
Attorneys for the Metropolitan
Transportation Authority

By: /s/ Zachary W. Perdek
Zachary W. Perdek
zwp@readlaniado.com

²⁶ *Id.* at 65.

²⁷ Garrett Fitzgerald & Chris Neldler, *DCFC Rate Design Study: For the Colorado Energy Office, Rocky Mountain Institute* (2020), at 12. DCFC stands for “direct current fast chargers”).

²⁸ *Id.* at 17.