



January 23, 2023

Carmen D. Diaz
Acting Secretary of the Board of Public Utilities
State of New Jersey
44 South Clinton Ave., 1st Floor
PO Box 350
Trenton, NJ 08625-0350
Sent via email to: board.secretary@bpu.nj.gov

RE: Medium and Heavy Duty Electric Vehicle Charging Ecosystem, New Jersey Electric Vehicles Infrastructure Ecosystem 2021-Medium and Heavy Duty Revised Straw Proposal.
Docket No. QO21060946

Dear Ms. Diaz:

I write on behalf of the Bus Association of New Jersey (BANJ) to express concerns about the Board of Public Utilities (BPU) Straw Proposal to support the implementation of the California Low Emission Vehicle Program and the electrification of all vehicles operating in NJ. I write also to suggest important considerations for the transition to and funding of electric buses, and the infrastructure to support the operation of such vehicles, should the California Advanced Clean Truck Program (CACTP) proposal and supporting infrastructure proposals be adopted in some format.

We (BANJ) have submitted the bulk of these comments once before, in response to the initial straw proposal. The revised straw proposal fails to take our previously cited concerns into account. Accordingly, we are resubmitting them for the BPU's consideration.

The private bus industry has historically been a key component of New Jersey's transportation sector. We, like NJ Transit, are major providers of public transportation, have union employees and offer a safe, environmentally friendly way to travel. Private bus companies account for about **one-third** of scheduled bus service in the state, based on pre-pandemic passenger miles. While some private carrier routes are operated under contract with NJ Transit, many are operated on an at-risk basis by the private companies under their own authority. Private carriers operate routes in 15 New Jersey counties.

Bus operators are committed to doing their part to combat climate change, and indeed making public transportation affordable and accessible to reduce the use of individual vehicles is a key part of that effort. However, the proposal under consideration imposes operational and budgetary challenges that threaten that affordability and accessibility of bus transportation. Buses are the single most effective and immediate solution to mitigating traffic congestion (a significant contributor to air pollution) and minimizing the carbon footprint per passenger mile of all transportation modes in the US.

Operationally, transitioning to electric (or possibly buses powered by other alternative energy) needs to proceed deliberately, in order to adequately address the many obstacles detailed below and in the attached study done by the *World Resources Institute* in cooperation with several European governments and philanthropic partners. For the balance of these comments, I will refer to it as “the study,” and all page numbers will refer to the study.

Economically, the costs associated with purchasing, operating, garaging and recharging electric buses are enormous. Our members who operate at their own risk commuter bus lines (largely from New Jersey and Pennsylvania into New York) and corner-to-corner transit operations in Newark, Elizabeth, Jersey City and elsewhere, are able to sustain those routes only if the farebox revenues exceed their costs. A rapid move to electrification of buses, without appropriate financial assistance, will make those operations untenable.

A few of the factors to consider and mentioned in the study are:

- “Range and power limitations of e-buses” (page 24). From the study: “Despite e-bus technological advancement, range remains a critical limitation of e-buses for transit operators.” Variable and uncertain battery performance contributes to range limitations. Heating and cooling necessary to keep passengers comfortable also drains batteries, reducing range.
- Power availability and cost (page 35).
 - Not only are charging stations and ports expensive, they require reallocation of existing space used for other essential purposes. Our members report that electric charging stations can cost between \$80,000 and \$150,000 for each station. That does not include the cost to run the power to them which is several thousand dollars provided the facility has enough power to supply the charging stations with the proper voltage and amperage.
 - Grid issues. Significant additional power will need to be drawn from the grid to power electric buses at scale. Will operators need to install electric substations? Will the power be available to supply them? Is there a plan to handle power interruptions? (see “Large capital expenses for grid infrastructure” on page 37)
 - We witnessed a real-life consequence of these proposals in California during the summer of 2022. Power supply was limited which necessitated “charging blackout periods.” If this were to happen in the tri-state area with all electric buses, it is possible that buses would not be able to charge, which we envision could result in countless stranded commuters unable to reach their desired destination.

- Recharging location issues specific to passenger travel: Given the range limitations, commuter buses will likely not be able to run a round trip between New Jersey points and New York City and back again. They would need to recharge when passengers are not on the bus, that is, likely in New York City. Where will that happen? Even as reconfigured, the Port Authority Bus Terminal won't be able to house buses laying over for a charge. (Lack of space and land to install infrastructure, page 38)
- The cost of electric buses themselves. Currently, the cost of an all-electric motor coach is between \$850,000 and \$1.1 million dollars per bus, on the order of twice as much as a diesel bus. Given the range issues, operators will likely need to expand their fleets. So just the cost of purchasing the buses – before infrastructure and other costs -- would very likely more than double. (“High up front capital costs of e-buses,” pages 26-27)
- Garage and training considerations: The infrastructure and maintenance requirements, as well as training to maintain diesel and electric buses are of course divergent. Will an operator need to support both simultaneously? Can that be done in one garage? What is the additional cost? The short-term labor shortage argues for proceeding deliberately over time with this transition, and the additional training costs should be included in incentives offered to private providers of public transportation.

Please note specifically a description of the challenges faced by SEPTA in developing charging infrastructure (see page 36).

We appreciate that fact that the straw proposal recognizes some of these challenges. We also note that members of the Bus Association do not have the technical expertise to answer, on our own, some of the questions raised by the study and the straw proposal. We do, however, have the operational expertise that should be considered as the BPU looks to address each of these questions. Given all of these considerations, and the fact that New Jersey depends to a high degree on private bus operators to complete the public transportation network, the BANJ believes that the implementation of electric buses needs to be staged carefully, and that private operators need to be fully integrated into the planning and funding for this transition.

There is precedent for public funding for the capital expenses of all public transportation providers. On a smaller scale, in 2012 when a requirement to retrofit older buses with diesel particulate filters was adopted, the State of New Jersey funded the filters for all operators. On a larger scale, through the state's Bus Allocation Program, NJ TRANSIT purchases buses for both itself and for private bus companies. That program recognizes the role of private operators in bringing federal transportation funds to our state through a formula that is based on all companies' operating data. If NJ Transit is now purchasing electric buses rather than diesel buses for itself, what does it plan for the Bus Allocation Program? Funding will need to be made available to sustain the program so that private providers of public transportation can continue to operate in whatever new framework is adopted. Monies from the Regional Greenhouse Gas Initiative would be insufficient to fund such a significant purchase of electric buses and the associated infrastructure.

Similarly, the infrastructure to support effective operation of MHD EVs requires a significant investment outside the capabilities of private bus operators that operate on very thin profit margins and face a plethora of challenges including significant regulation, insurance mandates and pandemic losses that public fleets do not experience. Even though private providers of public transportation and especially scheduled service operations in support of NJT operations are considered a critical part of the NJ mass transit infrastructure, we have not been able to share in the operating economies of scale that NJT enjoys as a public agency. We would submit that the private operator partnership should classify private providers of public scheduled service and transit operations as quasi-public operations and receive similar support for EV or other zero emission transition efforts.

Unfortunately the current proposal (as well as the original) does not include enough financial support for the needed infrastructure to assist the private bus industry with the transition to all electric fleets. Private bus operators serve New Jersey commuters just as does NJ Transit and funding decisions should reflect that.

We agree that this undertaking is a shared responsibility; however, there are incentives in place for the various stakeholders in this process. EDCs would have increased power sales to offset the investments in building out the infrastructure. Publicly funded agencies (NJT) are and will be funded by tax dollars both state and federal. Private operators have no such capability or support. Thus, it would be a prudent suggestion that this effort should start with public operators of buses to determine the challenges and address concerns identified during the buildout and operation of the infrastructure and have the sources of funding to do so. Once public operators have been electrified, we can then determine the actual costs and challenges with mandating private fleets and the practicality of this effort.

It is noted that the Straw Proposal does suggest that the EDCs undertake the task of doing the work for the Make-Ready sites for MHD EVs both on public and private property for MHD EVs that serve the public, and that is supported and is a start to addressing all the component factors that affect a successful program. Socializing the cost for such a major transition is what will be required, in that society contributes to the overall cost and reaps the benefits, and in order to sustain the current infrastructure network and the viability of private providers of public transportation and to preserve good jobs in the process. This idea is similar to the operation of public transit, schools, law enforcement and other critical services provided to the public.

In the Straw Proposal, staff recommends EDCs do not incentivize private owned fleets, but provide only technical assistance. We believe that approach would be a deterrent to such transition. As noted above, the NJDEP undertook a diesel particulate filter retrofit effort years ago, fully funded, for private heavy-duty buses. That program was successful and was completed swiftly as the only impact to the operator was the installation of the equipment. That was an excellent example of a public-private partnership that paid dividends and was a benefit to all New Jersey residents. The same applies to publicly accessible charging stations, and the overall infrastructure for MHD EVs.

There are also alternative zero emission options for heavy duty vehicles, such as hydrogen, that are already in use to some extent and reduce the challenges of range and technology complications related to the operation of large buses. These alternatives also come with significant infrastructure challenges, but they may be more practical than electrification.

Current clean diesel technology incorporated into buses since 2007 and continually improved upon since then, has resulted in minimal emissions from such equipped engines. This technology resulted in an increase in the average cost of an over-the-road bus by an average of \$50,000. These costs must be absorbed by private bus fleet operators and cannot be passed onto the passengers given the highly competitive nature of the industry.

Clearly there are complex considerations that need to be confronted by all stakeholders. Any transition to electric buses (or other alternative zero emission options) must be over a long period of time to allow for the planning, funding and building of the necessary systems, availability of equipment and trained technicians, and the gradual elimination of clean diesel buses over time as we ramp up to electric buses. The private bus industry should most definitely have a seat at the table as to these discussions and the decision-making process in the interest of supporting a successful effort.

We thank you for the opportunity to offer these comments on the revised straw proposal.

Sincerely yours,

Dan Rodriguez

Dan Rodriguez
President
Bus Association of New Jersey