October 8, 2020

Catherine McCabe
Commissioner
New Jersey Department of Environmental Protection
401 East State Street
P.O. Box 402
Trenton, NJ 08625-0420

Submitted via email: NJairrulesmobile@dep.nj.gov

Re: Reducing CO2 Emissions: Advanced Clean Trucks, Heavy-duty Engines and Vehicles, and Fleets

Dear Commissioner McCabe,

Recently, the NJDEP held a stakeholder meeting to discuss reducing carbon dioxide emissions through transportation electrification. Environment New Jersey, ChargEVC, Jersey Renews, and the New Jersey Work Environment Council are pleased to submit these comments in response to the request for comments on Advanced Clean Trucks, Heavy-duty Engines and Vehicles, and Fleets.

Transportation emissions account for 42% of New Jersey's total greenhouse gas emissions. Based on this alone, reducing emissions from mobile sources should be a priority for the NJDEP. However, there are also many other problems stemming from transportation emissions that push transportation even higher on the list of priorities. First, gasoline and diesel vehicles emit carbon dioxide (CO2), nitrous oxides (NOx), ozone, sulfur dioxides (SO2), and particulate matter (PM 2.5), which accelerate the impacts of climate change and create significant public health issues in New Jersey. These health impacts include asthma attacks, impaired lung function, and premature death, among others. Children, pregnant women, the elderly, and those with existing pulmonary or cardiovascular conditions are at increased risk for these health impacts. Trucks and buses that run on diesel fuel emit higher levels of NOx, SO2, and PM 2.5, and tend to drive on travel corridors, creating a high concentration of these emissions in already overburdened communities. Diesel school buses also emit these dangerous pollutants, putting children, who are at increased risk, in harm's way everyday on their way to school. A recent study by ChargEVC found dramatic improvements in air quality in our urban areas and along travel corridors that result from the electrification of medium- and heavy-duty diesel vehicles. With New Jersey's increasing renewable energy sources, the study found that in all cases, even when considering net emission changes on a regional basis, carbon dioxide (CO2) drops by 74% and nitrogen oxide (NOx) drops by 85%.

In addition to the numerous health impacts, transportation emissions also contribute to climate change. New Jersey is at high risk for many of the impacts of climate change, specifically sea level rise, flooding, and more frequent hurricanes. The Global Warming Response Act (GWRA) lays out specific goals for the state to reduce our climate emissions, and we will not reach those goals without considerable change in the transportation sector. We must electrify the transportation sector to improve public health and reduce our climate emissions.

Specifically, NJDEP needs to focus on electrification of the medium- and heavy-duty sectors, which to date have not been a focus, and for which there exists very little regulation. Trucks and buses account for about 25% of all transportation, and are the fastest growing source of greenhouse gas emissions in New Jersey. Additionally, the emissions from trucks and buses tend to be concentrated in areas of high traffic congestion and along travel corridors. This presents equity issues, as these areas of high emissions concentration tend to exist in overburdened, environmental justice (EJ) communities. EJ communities also tend to rely more

on public transit, specifically transit buses, which currently run on diesel. Riding in diesel buses everyday further increases EJ communities' exposure to these dangerous air pollutants. The newly released ChargEVC study found that there are multiple medium- and heavy-duty segments ripe for electrification quickly, including transit buses, delivery trucks, and refuse trucks - some of the biggest air quality offenders in EJ communities.

The importance of electrifying the medium-and heavy-duty sector is highlighted in the EV Law (P.L. 2019, c.362). The DEP must set goals for this impactful segment by the end of this year, 2020. While the focus of this law was the light duty segment, it notably included goals for New Jersey Transit and a goal setting mandate for the medium-and heavy-duty sectors, so that by the end of 2020, the state would have a complete set of goals for electrification for everything that operates on our roadways.

The just released ChargEVC study, *Full Market Vehicle Electrification in New Jersey*, linked as part of these comments with an executive summary, can help inform how we think about goal setting and funding. This latest study provides a statewide perspective on the potential benefits and challenges of electrification of the full market – from small passenger vehicles to buses, delivery trucks, and heavy-duty tractor-trailers. The study identifies a feasible schedule for each vehicle class, quantifies the technical potential for electrification of all types of vehicles, and assesses the net-benefit of a transition of the full on-road vehicle market to plug-in electric vehicles. The study provides projections through 2050, considers the need for new charging infrastructure and the associated grid impacts, and explores the synergy of increased use of renewable energy in the generation power mix with widespread vehicle electrification. The study identifies benefits related to savings in vehicle operating costs, reduced GHG and criteria pollutant emissions (especially in overburdened communities), and the potential for downward pressure on electricity costs that benefits all ratepayers. The study also identifies challenges associated with consumer adoption barriers, the need for vehicle charging infrastructure, and potential impact on the public grid and ways those impacts can be mitigated.

At present, New Jersey has implemented numerous programs and policies to increase adoption of light duty electric vehicles, such as the EV rebate program and It Pay$ to Plug In, but has not created programs for the medium- and heavy-duty sectors. The biggest barrier for these two sectors is the lack of charging infrastructure in New Jersey. With regard to the medium heavy duty sector, without the necessary charging infrastructure, most fleet managers will not make the switch to electric trucks, buses, or vans.

Both lower power, level 2 and high power charging stations will be required to power medium- and heavy-duty vehicles, depending on their use cycles. Although there are many makes and models of electric medium- and heavy-duty vehicles, and the cost of ownership is less for these vehicles than comparable internal combustion engine (ICE) vehicles, they still will not be embraced without policies in place to build out the necessary charging infrastructure.

To reduce New Jersey's greenhouse gas emissions, hit the goals laid out in the GWRA and EV Law, and improve public health, the state will need to address both the funding for the vehicle premiums themselves and the charging infrastructure to support the medium- and heavy-duty electric vehicle segment.

This summer, New Jersey signed onto the multistate Medium- and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding (MOU), in which the state indicated its goal to have 30% of new sales of medium- and heavy-duty vehicles be electric vehicles by 2030, and 100% of these sales by 2050. There are some existing funding sources, as well as programs from other states that New Jersey could adopt, that can help the state hit the goals laid out in the MOU. We will go into each of these potential solutions in more detail below.

Volkswagen Settlement

New Jersey received $72.2 million from the Volkswagen Settlement, earmarked for reducing NOx emissions. The state announced that it would focus these funds on projects that benefit disproportionately impacted communities and focus on expanding EV adoption in New Jersey. NJDEP said it expected to fund pilot projects that would replace diesel buses and trucks in EJ communities and the necessary charging infrastructure. Considering that NJDEP has already designated this funding for the electrification of medium- and heavy-duty vehicles, especially in overburdened communities, the Volkswagen Settlement is an ideal funding source for the state's efforts to electrify medium- and heavy-duty vehicles, with a focus on doing so in EJ communities.

Regional Greenhouse Gas Initiative (RGGI)

The Regional Greenhouse Gas Initiative (RGGI) is intended to reduce greenhouse gas emissions from power plants in the ten participating states, and generate money that the states can reinvest in clean, renewable energy, green jobs, energy efficiency, and more. The NJDEP, NJBPU, and NJEDA released the RGGI Strategic Funding Plan, which laid out the four initiatives that will be funded by RGGI in 2020 through 2022. The first of the four initiatives is "catalyzing clean, equitable transportation," which the agencies plan to do through "funding the deployment of electric medium- and heavy-duty vehicles by commercial and industrial establishments," as well as replace "diesel-fueled medium- and heavy-duty vehicles and non-road equipment with electric-powered in environmental justice communities."

Through three out of four auctions so far in 2020, the state has collected around $68 million, and expects to have about $80 million by the end of this year from the RGGI process. RGGI money is specifically for public projects, as opposed to funding private entities' electrification programs. Therefore, RGGI is a great funding source that can be used to build publicly accessible charging infrastructure, especially for medium- and heavy-duty vehicles, along travel corridors and in EJ communities. Without the charging infrastructure, it is very unlikely that municipalities or businesses will electrify their fleets, especially their medium- and heavy-duty vehicles. RGGI money could also be used to help offset the cost of purchasing electric medium- and heavy-duty vehicles, which despite having a lower cost of ownership, still have a higher initial sticker price. This would be especially helpful for cash-strapped school districts that want to electrify their school buses to protect the children from the pollution created by diesel buses.

Transportation and Climate Initiative

A third potential funding source, assuming New Jersey signs the Memorandum of Understanding to join the program, is the Transportation and Climate Initiative (TCI). TCI is a cap and invest program that would cap transportation emissions, and generate funds to invest in low emission or emission-free transportation such as electric vehicles, bike lanes, public transit, and more. Oil companies would have to pay for the transportation emissions they create by selling gasoline and diesel, and the state would reinvest it in cleaner transportation programs. TCI is expected to create impressive health benefits and billions of dollars for investment in cleaner transportation, while also having a focus on equity to not further the inequities of our current transportation system, and actually to mitigate some of those disparities. Complementary policies will be needed, however, to ensure emission reductions in EJ communities and further eliminate transportation inequities.

TCI is expected to generate hundreds of millions of dollars for the state each year for New Jersey, assuming we participate in the program, by signing the final MOU and receive legislative approval, which could be used to fund the transition to electric medium- and heavy-duty vehicles.

Electric Utilities/ Utility EV filings

All electric utility customers will benefit from the widespread adoption and use of electric vehicles in New Jersey, and therefore should be involved in the build out of electric vehicle charging infrastructure across the state. The four utilities in the state have either submitted, or will soon be submitting, their EV utility filings for electric vehicle programs to help promote the use of EVs in the state. These filings have been led by ACE and PSEG and the latest NJBPU electric vehicle straw calls for all utilities to move forward with electric vehicle filings. These include incentives for customers who install residential or commercial charging infrastructure, incentives for DC fast chargers and electric school buses, and programs to accelerate adoption of school and transit buses and other medium- and heavy duty electric vehicles. In addition to providing financial assistance, the utilities have a unique position in terms of educating the public as they collectively serve every person in the state. They are knowledgeable on the subject of EVs, can provide their customers with information on incentives they provide, and are more likely to reach people than state agencies or advocates with this information.

CALSTART New York truck replacement program

New Jersey could also consider adopting a successful program from our neighbors in New York, who are operating a truck replacement program with the help of CALSTART. Through this program, New York has set aside $20 million for point of sale rebates offered to businesses, transit agencies, or municipalities that replace their diesel trucks or buses with electric trucks or buses. The point of sale rebates mitigate the high sticker price problem and bring the electric trucks and buses close to price parity with similar ICE vehicles. To receive the point of sale rebate, the business, agency, or municipality must retire the equivalent diesel vehicle that has an engine from 2009 or prior. These rebates can and should be offered to independent truck drivers who often own and operate their own trucks and have very limited dollars for capital improvements like a new vehicle.

The funding for such a program could come from the VW settlement, RGGI, utilities, TCI, a combination of these programs, or elsewhere. New York funds its program through a combination of VW Settlement funds and federal funding from the Department of Transportation, and the program is administered by NYSERDA, NYDOT, and NYDEC. Through a former iteration of this program, New York was able to fund 594 vehicles as part of 60 fleets, including six electric buses owned by the Port Authority.

We support New Jersey reaching the goals of the Medium- and Heavy-Duty Zero Emission Vehicle MOU to reduce New Jersey's air and climate pollutants to improve public health and reduce our climate impact. We can hit these goals by using the VW settlement and RGGI funding, and TCI funding should New Jersey participate in the program, to build a state-wide network of electric vehicle charging stations especially along travel corridors and in EJ communities. The state can also utilize the electric utilities to help build out a network of charging stations and encourage EV adoption. Finally, we should be strategic about how we can attract private sector investment to leverage this public sector investment.

We are happy to answer any questions you may have on these comments. You may reach use through Doug O'Malley at Environment New Jersey at domalley@environmentnewjersey.org and via phone at 917-449-6812.

Sincerely,

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