



Climate Change Mitigation Technologies LLC
92 Park Street
Montclair, New Jersey 07042
www.ccmtgd.com

By email only to EMP.comments@bpu.nj.gov

October 12, 2018

Honorable Joseph L. Fiordaliso, President
New Jersey Board of Public Utilities
44 South Clinton Avenue
Trenton, NJ 08625

Re: Comments and Recommendations on the Clean and Reliable Transportation Element
of the Revised New Jersey State Energy Master Plan

Dear President Fiordaliso:

Climate Change Mitigation Technologies LLC (“CCMT”) is an independent developer of renewable energy and energy efficiency projects based here in New Jersey. CCMT’s core focus is on the electrification of medium and heavy-duty trucks and we helped pioneer this effort starting a decade ago when we worked extensively with the Proterra Bus company and TransPower Inc., the first company to build heavy-duty battery electric Class 8 trucks. We are now working with one of the world’s leading original equipment manufacturers (“OEMs”) to deploy medium and heavy-duty battery electric trucks (“ETrucks”) into New Jersey starting in 2019.

We attended the September 20 public hearing on the Clean and Reliable Transportation element of the revised New Jersey State Energy Master Plan and offered testimony at that time. The following constitutes CCMT’s formal written comments and recommendations on how to achieve a clean and reliable transportation sector in New Jersey, especially as it relates to the need for the rapid introduction and transition from medium and heavy-duty diesel trucks to ETrucks, in order to achieve the Governor’s greenhouse gas emission reductions goals.

1. Background: The Public Health, Environmental, and Climate Change Crises Caused by Medium and Heavy-Duty Diesel Trucks

Earlier this week, the Intergovernmental Panel on Climate Change issued its most dire warnings yet that the Earth is on a collision course with irreversible climate change consequences unless society undertakes immediate changes to the way it produces power and transports goods.¹ New Jersey’s

¹ “Life-or-Death U.N. Warning about Climate,” The Star-Ledger, October 9, 2018 at page A1.

transportation sector contributes 42% of the state's greenhouse gas emissions, as compared to a national state average of approximately 33%, and as compared with the 16% of the state's greenhouse gas emissions attributed to the power generation sector. The disproportionately large share attributable to the transportation sector is due in large part to the presence of a vast fleet of diesel trucks coming out of Ports Newark and Elizabeth and New Jersey's location at the crossroads of freight movement in the northeastern United States. The concentration of medium and heavy-duty diesel trucks in northern New Jersey has caused an asthma epidemic in the City of Newark and has now been linked to childhood autism.² New Jersey has the highest childhood autism rate in the nation.

Against this backdrop, the New Jersey State Energy Master Plan's Clean and Reliable Transportation element must mobilize all departments and agencies of state government to promote and help finance the conversion of the state's transportation sector from diesel to ETrucks. New Jersey is ideally suited to make this transition because of its population density and co-located trucking terminals and distribution centers that allows for trucking duty-cycles that are well within the range of currently available ETrucks.

2. Recommendations

- A. In conjunction with other Departments and Agencies such as the NJDEP and EDA, the Board of Public Utilities Must Implement a 5 year, \$50 million per year, ETruck Voucher Program Covering 50% of the Cost of Medium and Heavy-Duty ETrucks so they can Achieve Cost Parity with Diesel Trucks

As documented in the McKinsey & Company report "What's Sparking Electric-Vehicle Adoption in the Truck Industry"³, the key ingredient to "move the market" forward and bring about the transition from diesel to ETrucks is the necessity to achieve cost parity with diesel trucks. While major international "original equipment manufacturers" ("OEMs") are now beginning to introduce medium and heavy duty ETrucks, with the sole exception of the FUSO eCanter, no OEMs have yet begun mass production of medium and heavy duty ETrucks. As a consequence, medium and heavy duty ETrucks cost two to three times the cost of a comparable conventional diesel truck.

In order to bring medium and heavy duty ETrucks into cost parity with diesel trucks, the Board of Public Utilities, in conjunction with the NJDEP, EDA, and other state departments and agencies, needs to implement a 5 year, \$50 million per year, ETruck voucher program that will pay 50% of the cost of an ETruck. New York State has already done this with its "All Electric Voucher Incentive Fund."⁴

² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5910592/>

³ Heid, et al., "What's Sparking Electric-Vehicle Adoption in the Truck Industry?" McKinsey & Company (September 2017) <https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/whats-sparking-electric-vehicle-adoption-in-the-truck-industry>

⁴ <https://truck-vip.ny.gov/NYSEV-VIF-vehicle-list.php>

The Board of Public Utilities implemented a similar program almost fifteen years ago in order to grow the solar photovoltaic industry in New Jersey. Just as is the case with ETrucks today, New Jersey then saw that California had spent hundreds of millions of dollars to increase the efficiency of solar photovoltaic cells and grow the industry in California. In order to coopt the solar industry to New Jersey, the Board of Public Utilities incentivized the growth of the solar industry in New Jersey by initially offering 60% rebates for the cost of solar photovoltaic system installations in the first years of BPU's solar program. The rebate was then lowered to a 50% for another few years and then the SREC program was created. Now the SREC program is being wound down to a pure private market solar program.

The Board of Public Utilities should use its resources and experience with the solar program and should create a comparable 5 year, \$50 million per year ETruck Voucher program that pays 50% of the cost of ETrucks. There are several sources of potential funding for an ETruck voucher program, including the use of Regional Greenhouse Gas Initiative ("RGGI") revenues, the use of Congestion Mitigation and Air Quality ("CMAQ") funds, the use of BPU Societal Benefit Charge ("SBC") funds, or some combination of all three. In addition, the State of New Jersey can issue a green bond for the ETruck Voucher program as many states and cities have begun to do.⁵

If the BPU has the wisdom and foresight to be an early investor in the coming ETruck industry, the State of New Jersey can experience the kind of local industry and jobs that followed the Board's investment in the solar industry fifteen years ago.

- B. The Board of Public Utilities Should Allow the Electric Distribution Companies to Rate-base the Cost of the Necessary Electrical Infrastructure Upgrading Costs from the Off-Site Transformer to the On-Site Charging Equipment

As a renewable energy project developer, CCMT's first goal is to always try to "close the green energy loop" by using on-site solar power and storage to provide the necessary power to charge fleets of commercial ETrucks. However, not all sites are candidates for solar power. In order to charge fleets of commercial ETrucks, a substantial amount of grid power will be required. Fortunately, the necessary electric power capacity already exists, especially for overnight charging. The constraint is not the availability of power; the constraint is the electrical infrastructure running from the off-site transformer to the on-site charging equipment.

Many trucking terminals and distribution centers have antiquated power infrastructure that will need upgrading at considerable cost, a cost that may scuttle an otherwise meritorious ETruck project. In order to allow for the wide-scale introduction and transition to ETrucks in commercial trucking fleets around the state, CCMT recommends that electric distribution companies (EDCs) be allowed to rate-base the cost of upgrading the necessary electrical infrastructure from the transformer outside the facility to the charging equipment location inside the facility. While we understand that normally a property owner is responsible for the cost of the electrical infrastructure on its property, an exception needs to be made in the case of ETruck electrical charging infrastructure if we are to realize the rapid deployment of fleets of ETrucks around the state.

⁵ https://comptroller.nyc.gov/wp-content/uploads/2016/06/Green_Bond_Program_Update.pdf

3. Conclusion

By implementing a 5 year, \$50 million per year, ETruck Voucher program that pays 50% of the cost of an ETruck and by allowing EDCs to rate-base the cost of the necessary electrical infrastructure from the off-site transformer to the on-site charging equipment, the Board of Public Utilities will have taken the necessary steps to enable the transition away from diesel trucks to ETrucks. This is what the Board of Public Utilities did to jump-start the solar industry and is precisely what is needed again now to jump-start the ETruck industry. The Board must act now and enable the transition from diesel trucks to ETrucks if we are going to pass a livable planet and state to the next generation of New Jerseyans.

We appreciate the opportunity to submit these comments and recommendations and would welcome the opportunity to discuss them further with the Board of Public Utilities staff.

Respectfully Submitted,

Climate Change Mitigation Technologies LLC

By: 

James Sherman,
Chief Operating Officer

c by email only to:

K. Frangione
V. White
M. Urbish
P. Hanna, NDEP
M. Hornsby, BPU
R. Kenard, CCMT CEO