



By Email Only to board.secretary@bpu.nj.gov

October 5, 2021

Ms. Aida Camacho-Welch, Secretary of the Board
New Jersey Board of Public Utilities
44 South Clinton Avenue, 9th floor
Trenton, NJ 08625-0350

Re: New Jersey Electric Vehicle Infrastructure Ecosystem 2021
Medium & Heavy Duty Straw Proposal
I/M/O Medium and Heavy Duty Electric Vehicle Charging Ecosystem
Docket No. QO21060946

Public Comments of Climate Change Mitigation Technologies LLC

Dear Secretary Camacho-Welch:

Climate Change Mitigation Technologies LLC (CCMT) submits these public comments to the official record for I/M/O Medium and Heavy-Duty Electric Vehicle Charging Ecosystem, Docket No. QO21060946 ("MHD Straw Proposal"). These comments are in addition to CCMT's presentation and comments made during the August 24, 2021 Medium and Heavy-Duty Ecosystem stakeholder meeting panel discussion and question and answer session that followed.

Comment No. 1: Make-Ready Infrastructure Has to be Made Available at Both Public and Private Fleet Depot Locations

In the main, CCMT supports the "modified share responsibility" public-private business model that underlies the MHD Straw Proposal in which local electric distribution companies (EDCs) would be responsible for the provision of "Make-Ready Infrastructure" (MRI) on both sides of the customer meter and private companies would be responsible for providing the charging equipment and related services. However, as we read the MHD Straw Proposal, funding and incentives for MRI is limited to public or publicly accessible charging stations, while MRI at private fleet depot locations is left to an "EDC-Industry Study Group." Consigning private fleet depot locations to a study group creates a massive gap in the MRI infrastructure that will be necessary to meet New Jersey's MHD fleet electrification goals.

A large portion of the fleets in New Jersey operate from a private fleet depot location. In the Port drayage market, a large number of the fleets make two runs per day down to the Exit 8A warehouse and distribution complex or over the George Washington Bridge to the Hunts Point food market in the Bronx. These duty-cycles are well within the range of some current battery electric truck models now on the market, but there is simply no time during the day to go over to a publicly owned or accessible charging station. So the very nature and daily duty-cycles of the MHD electric truck market we are trying to address in the Straw Proposal requires charging at private fleet depot locations.

This is not just CCMT's position. Mr. Kellen Schefter of the Edison Electric Institute made this exact same point during the August 24 MHD Ecosystem panel discussion. Mr. Schefter stated that *"[private] depot charging is the focus in the short-term...it is the critical path and cannot be a 3 year wait."*

It also bears noting that these trucks will be vehicle-to-grid (V2G) equipped and provide local public health benefits in environmental justice communities while at the same time providing important grid services. So there is no public policy reason not to provide MRI at private fleet depot locations.

Comment No. 2: EDCs Should be Required to Give First Priority to MRI at Public and Private Fleet Depot Locations Receiving NJDEP VW Consent Order Grant Funding

EDCs should be required to give first priority to MRI at public and private fleet depot locations that are receiving NJDEP VW Consent Order grant funding. As of the time of this comment letter, CCMT customers are scheduled to receive a total of thirty-three (33) different kinds of MHD battery electric trucks and buses including garbage trucks, yard tractors, senior-citizen shuttle buses, LMD delivery trucks, and school buses that were all funded by the NJDEP VW Consent Order funding program. These vehicles are spread-out across multiple public and private fleet locations, the vast majority of which do not have the required 480VAC, 3 phase, 4 wire power.

The provision of MRI at these fleet locations is of the highest importance because these will be the first MHD battery electric fleets to operate in the State of New Jersey and the charging infrastructure has to be ready when the truck and buses arrive. The alternative will be scenes of trucks and buses sitting idle because there is no charging infrastructure. This is not a hypothetical and would represent a failure of the Board, the EDCs, and industry to work together to achieve the State's MHD electric truck deployment goals.

There is currently more than sufficient time to plan, contract, and install MRI at both public and private fleet depot locations in the year between now and when deliveries will start in January, 2023. Virtually all of CCMT's NJDEP VW Consent Order projects involve "starter fleets" of two (2) heavy-duty vehicles each, so the planning, contracting, and installation of MRI at these

locations can certainly be achieved by January, 2023 if the Board, EDCs, and industry cooperate to make it happen. At the same time CCMT understands that fleet projects involving more than two or four MHD battery electric trucks will have a demonstrably larger load and effect on the local distribution system circuits and so for large fleet projects of 10+ MHD trucks CCMT is agreeable to an 18 month period in which to plan, contract, and install, the necessary MRI for these larger fleet deployments.

Comment No. 3: All MRI Has to be Vehicle-to-Grid (V2G) Equipped

V2G bi-directional inter-operability between the battery in the truck or bus and the regional transmission operator in order to provide frequency regulation and other grid services and benefits has been the vision of PJM for more than a decade. In addition to providing system-wide grid benefits, V2G is also the basis for several emerging business models that are essential to the rapid, wide-scale deployment of zero emission public and private battery electric truck fleets. These business models include Charging as a Service, Energy and Charging as a Service, and Transportation as a Service. V2G-equipped charging equipment already exist today, so there is absolutely no reason not to require it for all MRI projects.¹

As part of the requirement that all MRI be V2G-equipped, the Board needs to incentivize the EDCs in such ways that maximize their willingness to rapidly and timely develop the necessary programs and procedures to fully and timely implement FERC Order No. 2222. As CCMT understands it, FERC Order No. 2222 is intended precisely to allow for full participation of distributed energy resources in the PJM markets. V2G is the means by which batteries in electric trucks and buses communicate and participate in the PJM markets. And since it is CCMT's understanding that the V2G interconnection process is through the local EDC, not PJM, it is absolutely essential that EDCs timely implement FERC Order No. 2222.

Comment No. 4: The MHD MRI Program and the Battery Incentive Program
 Go Hand-in-Hand and so the Battery Storage Incentive Program
 Needs to be Rolled Out

In many situations, fleets will want to combine MRI with solar + storage and V2G-equipped chargers and trucks to complete the green energy loop and have a resilient microgrid supplying low-cost power during normal operating conditions as well as during grid power failures. The cost of the solar + storage portion of a microgrid system is critical to funding these projects, but is impossible to know until the Board comes forward with its battery storage incentive program.

As discussed during the August 24 panel discussion, CCMT is involved in a number of projects where we are looking to add solar + storage to the chargers and trucks. The problem is

¹ <https://rhombusenergysolutions.com/2021/03/res-dcvc60-480-v2g>

that the work cannot be bid together because no one knows what the storage will cost after incentive. So CCMT recommends that the Board come forward with the stationary storage incentive program as soon as possible so that MRI and stationary storage can complement each other in resilient microgrid projects providing sustainable green power to MHD electric trucks.

CCMT's powerpoint used during the August 24 MHD Ecosystem panel discussion is attached for inclusion in the record. Thank you for this opportunity to comment.

Respectfully,

Climate Change Mitigation Technologies LLC

By: /s James Sherman

James Sherman
Vice-President & Chief Operating Officer