



September 16, 2019

State of New Jersey
NJ Board of Public Utilities
energymasterplan@bpu.nj.gov

Re: 2019 Draft Energy Master Plan

Dear NJBPU:

Proterra, the leading U.S. manufacturer of electric, zero-emission transit buses, appreciates the opportunity to provide comments on the Draft 2019 New Jersey Energy Master Plan ("EMP"), which outlines a roadmap to reach the goals of 100% clean energy and 80% emissions reductions from 2006 levels by 2050. We agree that bold action is needed now to implement comprehensive energy policy change and commend the state's leadership in striving to achieve a 100 percent clean energy economy by 2050.

The proposed EMP appropriately prioritizes maximum electrification of the transportation sector, a leading contributor to carbon emissions in the state. The EMP is rightly focused on electrifying the transportation sector by 2050 and prioritizing clean transportation options in low- and moderate-income and environmental justice communities. By implementing its strategies, the state will help achieve its goals of reducing emissions, strengthening the grid, providing cleaner and more reliable transportation options, reducing overall energy consumption and improving air quality.

In response to the state's request for feedback (EMP at 95), Proterra urges the state to consider the following comments and suggestions before finalizing its EMP:

- The current plan states that medium- and heavy-duty vehicle battery technology is in a more "nascent stage of market development than passenger vehicle battery technology for several technical, economic, and infrastructural reasons." (EMP at 34). Recent market trends would suggest that this is not true for public transit buses. By the end of 2017, approximately 10% of all new U.S. bus sales were battery electric buses.¹ By contrast, the sale of light-duty electric vehicles (EVs) only surpassed the 2% mark at the end of 2018.² Proterra alone has delivered more than 350 electric buses throughout the United States and has helped eliminate 50M pounds of CO₂ emissions.
- The transit bus market is ideally positioned to adopt electric powertrains given its unique operational characteristics, including high annual mileage at low fuel economy, predictable routes, use of depot-based fleets and operation in urban environments. Moreover, the financial, operational, ratepayer, environmental and public health benefits are numerous.³ This is precisely why cities and states have called for the complete adoption of

¹ <https://www.greenbiz.com/article/zero-emissions-future-vehicles-approaching>; CTE Center for Transportation and the Environment.

² <http://www.ev-volumes.com/country/usa/>; <https://evadoption.com/ev-market-share/>

³ <https://info.aee.net/electric-mdv-hdv>



zero-emission transit buses by a date certain. In California, for example, the Innovative Clean Transit regulation requires all public transit agencies to transition to a 100% zero-emission bus fleet by 2040. New York City has also announced plans to convert its public fleet to an all-electric fleet by 2040.⁴ We urge the state to adopt similar measures.

- New Jersey has lagged behind other states in the adoption of EV public transit buses. New Jersey Transit operates ~ 3,000+ buses in its fleet. But as the EMP indicates, only six electric buses are operating in the entire state. (EMP at 40). And the current plan is to purchase only eight public transit buses for the City of Camden using VW settlement funds. (EMP at 19-20, 83). That does not constitute a “substantial number” of heavy-duty vehicles. By contrast, neighboring states are embracing zero-emission buses more quickly. Philadelphia, for example, has introduced 25 electric buses.⁵ And Delaware’s Transit Corporation has won several Low or No Emission Vehicle Program grants to implement electric transit buses, with a vision to operate at least 20 electric buses by 2021.⁶
- The current plan acknowledges that the state must “reduce its greenhouse gas emissions immediately and aggressively.” (EMP at 26). It goes on to note that the state must take concrete steps to “phase out motor gasoline and conventional diesel consumption as quickly as possible by electrifying the transportation sector ... and increasing mass transit ridership.” (EMP at 27). Proterra agrees that, as part of this effort, the state should look to implement a truck and bus voucher program to reduce the incremental cost of purchasing heavy-duty EV public transit buses. (EMP at 34). Similar programs have helped contribute to the purchase of dozens of EV public transit buses throughout the United States.⁷
- In addition, Proterra recommends implementation of a Master State Contract that would enable transit agencies and other customers of EV public transit buses to purchase EV buses off of a single contract, thereby reducing the procurement and sales cycle by upwards of 12 months and lessening administrative costs. Virginia and Georgia currently have Master State Contracts for EV public transit buses and the states of Washington and California are finalizing their own contracts.
- Further, Proterra strongly recommends that the state allocate a greater percentage of VW settlement dollars for a zero-emission, battery-electric transit bus replacement program, which will advance the electrification of public transit buses in those priority areas and emission sectors that have the greatest impact on New Jersey’s overall on-road NOx emissions. Nationally, 7,558,684 tons of NOx, or 60% of the 12,595,525 tons of NOx emitted derive from mobile sources; 35% attributable to on-road sources.⁸ In the state of New Jersey, 115,944 tons of NOx, or 74% of

⁴ <https://insideclimatenews.org/news/26042018/nyc-air-pollution-electric-bus-public-transportation-mta-clean-technology>

⁵ <https://electrek.co/2019/06/06/philadelphia-electric-buses-east-coast/>

⁶ [https://www.delawareonline.com/story/news/2016/07/25/dart-wins-2-million-grant-electric-buses/87529910/;](https://www.delawareonline.com/story/news/2016/07/25/dart-wins-2-million-grant-electric-buses/87529910/)
<http://www.wboc.com/story/40884580/delaware-to-expand-fleet-of-electric-dart-buses-with-dollar26-million-grant>
<https://www.dartfirststate.com/dtc.ejs?command=PublicDTCPressReleaseDisplay&id=6768>

⁷ Current programs include California’s Hybrid & Zero Emission Truck & Voucher Incentive Project (HVIP), the New York Truck Voucher Incentive Program, Chicago’s Drive Clean Truck Voucher Program, Maryland’s Freedom Fleet Voucher Program and Colorado’s ALT Fuels Colorado Program. These programs have proven valuable in allowing agencies (and commercial properties) to grow their fleets of zero-emission buses.

⁸ https://edap.epa.gov/public/extensions/nei_report_2014/dashboard.html#trend-db



the 156,590 tons of NOx emitted are from mobile sources.⁹ On this basis alone, we urge the state to advance the electrification of public transit buses in those areas disproportionately impacted by diesel vehicle emissions.

- Lastly, Proterra urges the state to extend its goal of a diesel truck buy-out program (EMP at 40) to EV public transit buses as part of an approved plan to transition to a zero-emission bus fleet.

Proterra certainly agrees with the statewide focus on achieving 100% clean energy by 2050. As part of this effort, the seven proposed strategies will result in “drastically reducing demand for fossil fuels” and achieving significant reductions in diesel emission exposures in priority air quality areas and areas that receive a disproportionate amount of air pollution from diesel vehicles. The state can accomplish both goals by investing heavily in battery-electric transit buses. Replacing diesel buses with electric buses is simply one of the best investments the state can make to help electrify transportation and improve ambient air quality throughout New Jersey. This approach will help spur the adoption of a greater number of electric buses among transit agencies, airports and universities.

Thank you for the opportunity to provide comments on the draft EMP. Please feel free to contact me directly about these comments. I can be reached at 864-214-2668 or emccarthy@proterra.com.

Sincerely yours,

Eric J. McCarthy
SVP, Government Relations, Public Policy and Legal Affairs

⁹ https://edap.epa.gov/public/extensions/nei_report_2014/dashboard.html#trend-db