



November 5, 2019

Transportation & Climate Initiative
Of the Northeast and Mid-Atlantic States

Re: Proterra's Comments on TCI's Draft Regional Policy Proposal

Dear TCI:

Proterra, the leading U.S. manufacturer of electric, zero-emission transit buses, appreciates the opportunity to provide comments on the Draft Regional Policy Proposal ("RPP"), which presents a high-level framework for a regional transportation policy. Bold action is needed now to implement comprehensive policy change and move toward a cleaner mobility future.

The proposed RPP appropriately prioritizes the development of cleaner transportation systems that reduce congestion, support economic growth and improve public health. The RPP is rightly focused on prioritizing clean transportation options in low- and moderate-income and environmental justice communities. By implementing these strategies, the region will help achieve its goals of reducing emissions, strengthening the grid, providing cleaner and more reliable transportation options to all, reducing overall energy consumption and improving air quality.

Proterra urges the TCI to consider the following comments and suggestions before finalizing its program:

- The transit and school bus markets are ideally positioned to adopt electric powertrains given their unique operational characteristics, including high annual mileage at low fuel economy, predictable routes and use of depot-based fleets. Moreover, the financial, operational, ratepayer, environmental and public health benefits are numerous.¹ This is precisely why cities and states have called for the complete adoption of 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 2040.² We urge the region to adopt similar measures.
- The nine states and the District of Columbia that comprise the TCI of the Northeast and Mid-Atlantic region are embracing zero-emission buses. Philadelphia, for example, has introduced 25 electric buses.³ Delaware's Transit Corporation has won several Low or No Emission Vehicle Program grants to implement electric transit buses, with

¹ <https://info.aee.net/electric-mdv-hdv>

² <https://insideclimatenews.org/news/26042018/nyc-air-pollution-electric-bus-public-transportation-mta-clean-technology>

³ <https://electrek.co/2019/06/06/philadelphia-electric-buses-east-coast/>



a vision to operate at least 20 electric buses by 2021.⁴ And we have seen Connecticut,⁵ Maryland,⁶ Massachusetts,⁷ New Jersey,⁸ Rhode Island,⁹ Virginia,¹⁰ Vermont¹¹ and Washington, D.C.¹² all purchase and in most cases deploy zero-emission, battery-electric buses.

- Emissions from transportation account for the largest portion of the region's carbon pollution. Nationally, 7,461,458 tons of NOx, or 55% of the 13,489,110 tons of NOx emitted derive from mobile sources; 35% attributable to on-road sources.¹³ In the above-referenced TCI jurisdictions, ~ 55% of NOx emissions are from mobile sources.¹⁴
- We therefore urge the TCI to invest proceeds from the program to prioritize the electrification of public transit and school buses in those areas disproportionately impacted by diesel vehicle emissions. One suggestion is to allocate a specific funding percentage for a zero-emission, battery-electric bus replacement program, which will advance the electrification of public transit and school buses in those geographical areas and emission sectors that have the greatest impact on the region's overall GHG emissions. Another suggestion is to implement a regional truck and bus voucher program to reduce the incremental cost of purchasing heavy-duty EV public transit buses and school buses. Similar programs have helped contribute to the purchase of dozens of EV public transit buses throughout the United States.¹⁵
- In addition, Proterra recommends implementation of Master State Contracts 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.
- The electrification of heavy duty vehicles offers a pathway towards achieving the numerous benefits associated with zero emission transit. Park City, Utah's recent deployment of Proterra electric transit buses is the poster child for why states should emphasize the electrification of transit buses. In June 2017, Park City Transit deployed six

⁴ <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>

⁵ <https://cte.tv/project/bridgeport-electric-bus-deployment/>

⁶ <https://www.prnewswire.com/news-releases/baltimore-gas-and-electric-and-proterra-deploy-nations-first-electric-shuttle-buses-at-a-utility-campus-300614513.html>; <https://bethesdamagazine.com/bethesda-beat/transportation/grant-allows-montgomery-county-to-buy-electric-buses-for-its-fleet/>

⁷ <https://www.masstransitmag.com/home/press-release/12285678/proterra-worcester-embraces-zeroemission-proterra-buses-to-withstand-coldweather-challenges>; <https://www.masstransitmag.com/home/press-release/12288280/pioneer-valley-transit-authority-pvta-pvta-introduces-first-battery-electric-buses-into-fleet>

⁸ <https://www.sustainable-bus.com/electric-bus/18-proterra-electric-buses-for-new-york-airports/>; <https://cleantechnica.com/2017/10/06/camden-home-new-jerseys-1st-electric-buses-purchasing-units-proterra/>

⁹ <https://www.metro-magazine.com/bus/news/731741/ripta-leases-3-proterra-electric-buses-using-vw-funding>

¹⁰ <https://ngtnews.com/state-of-virginia-earmarks-12m-for-electric-transit-buses>

¹¹ <https://www.wamc.org/post/grant-will-help-buy-electric-buses-central-vermont>

¹² <https://www.prnewswire.com/news-releases/washington-dc-circulator-deploys-proterra-battery-electric-buses-across-nations-capital-300633609.html>

¹³ https://edap.epa.gov/public/extensions/nei_report_2014/dashboard.html#trend-db

¹⁴ https://edap.epa.gov/public/extensions/nei_report_2014/dashboard.html#trend-db

¹⁵ 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 (currently not funded) 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.



battery electric buses. In the first year of service, the electric fleet traveled more than 431,000 miles using 783,700 of kWh electricity, resulting in an average fuel efficiency of 1.8 kWh/mile, or 21 MPGe (compared to 4 MPG for Park City's diesel buses). In that year, the electric buses displaced the use of ~ 110,000 gallons of diesel fuel, while eliminating more than 2,475,000 lbs. of GHG emissions. Additionally, the electric buses saved Park City Transit money through the savings in fuel and maintenance. In fact, the cost per mile of operation has dropped from a high of \$0.63 a mile using diesel to a low of \$0.30 using electricity. Not surprisingly, Park City has seen an increase in ridership on those routes utilizing zero emission buses, causing other municipalities to determine how they too can add and/or increase the number of zero emission buses on the road.

- The focus on electrifying transportation will result in significant reduced demand for fossil fuels and achieve drastic reductions in diesel emission exposures in priority air quality areas and areas that receive a disproportionate amount of air pollution from diesel vehicles. The region can accomplish both goals by investing heavily in battery-electric buses. Replacing fossil-fuel powered buses with electric buses is simply one of the best investments the region can make to help electrify transportation and improve ambient air quality throughout the region. This approach will help spur the adoption of a greater number of electric buses among transit agencies, airports, school districts and universities.

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

Sincerely,

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