



## MEMORANDUM

**TO:** TPB Technical Committee  
**FROM:** Antonio Castañeda, TPB Transportation Planner  
**SUBJECT:** Regional Public Transportation Subcommittee (RPTS) Regional Electric Bus Overview - DRAFT  
**DATE:** February 26, 2021

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This memorandum provides an overview of recent and planned electric bus procurement in the National Capital Region. The region's bus agencies have been investing in electric bus (e-bus) procurement and deployment for several years, and the overall e-bus fleet is set to expand. Agencies continue to share best practices and lessons learned, including at the [July 2020 TPB Regional Public Transportation Subcommittee \(RPTS\) meeting](#). To stay up to date, TPB staff worked to collect the latest information on e-bus activities. An earlier draft of this information was presented at the January 2021 RPTS meeting.

### GROWTH OF E-BUS PROCUREMENT IN THE US

Electric buses, and zero emission vehicles more broadly, have rapidly grown in public transit agencies' fleets over the last few years. This is largely due to federal programs like the FTA's Low-No Emissions Vehicles and Facilities Grant Program, as well as state incentives (e.g., California's Hybrid and Zero-Emission Truck and Bus Voucher Incentive Program (HVIP)). Furthermore, reduced prices, better technology and more efficient supply chains have all helped catalyze this growth. Today more than 200 transit agencies across the US count e-buses as a part of their fleet according to the national non-profit conglomerate Calstart. According to the non-profit's most recent count (In late 2019) over 2,200 zero emission buses (ZEBs) were either 'in use' or 'on order' in the US; a 37% increase over the previous year. However, the growth of e-bus procurement is not distributed equally, with California alone counting over 1,000 ZEBs in their stock (largely due to the HVIP program mentioned earlier). The next 4 leading states of e-bus use are Washington (211), Florida (142), Illinois (75) and Colorado (73) according to the 2019 report figures.

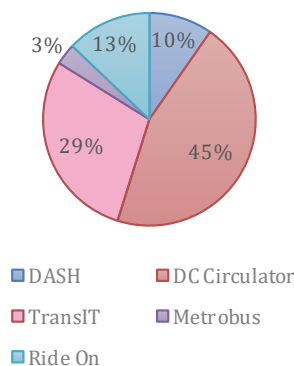
### RELATED GHG EMISSIONS AND CLIMATE GOALS

This rapid growth has also coincided with national, regional and local climate goals to reduce greenhouse gas emissions and decarbonize the transportation sector. DC, Maryland and Virginia all have their own long term goals of being *carbon free*, *zero emission* or *fully electric* by 2050 at the latest. Furthermore, these states and municipality are all members of larger regional initiatives like the *Regional Greenhouse Gas Initiative* and the *Transportation & Climate Initiative* which further emphasize the importance of capping carbon emissions and utilizing cleaner fuels and vehicles.

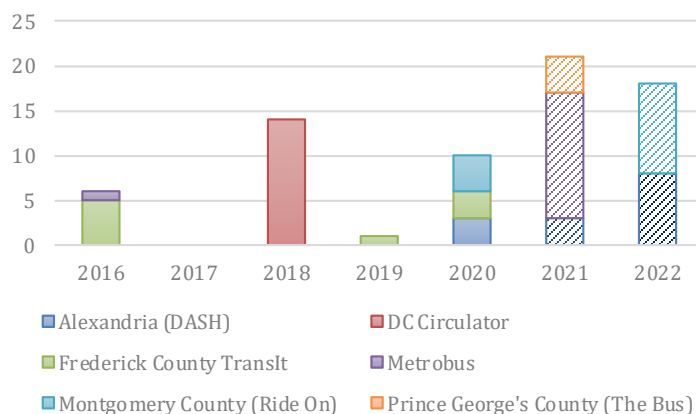
## REGIONAL E-BUS FLEET AND PROCUREMENT BY YEAR

Regional e-bus procurement data was compiled by TPB staff via a mixed method approach: using NTD 2019 data and review of local news articles / press releases. By the end of 2020, the National Capital Region had a total of 31 e-buses either in operation or in the final steps of procurement: a 48% increase in the number of electric buses from the year prior. Some three-quarters of these 31 buses are operated by DC Circulator or Frederick County TransIt.

2020 Regional E Bus fleet (by agency)



Regional E-Bus Procurement By Year



This year the NCR can expect to see an additional 21 electric buses in procurement or operation as WMATA Metrobus begins their pilot of 14 electric buses, Alexandria DASH adds an additional 3 e-buses to their fleet (totaling 6, with an additional 8 expected in 2022) and Prince George's County The Bus completes their first procurement of 4 electric buses. However, it must be noted that the 31 electric buses currently comprise less than 1.5% of the existing 2,700 buses in the NCR, meaning a significant increase in e-bus procurement and fleet conversion would be needed to meet future 2030 and 2050 climate goals. Lastly procurement alone will not be the only challenge moving forward as significant investments and related coordination across the region will be necessary to prepare for a regional electrified bus fleet (e.g., new energy infrastructure investments, training and workforce development programs, harmonized policies and utility rate structures with energy companies, coordinated fleet lifecycle and replacement timelines and additional funding for these changes).

Fleet Conversion (as %) to E-Buses (by agency)

