



March 2023



Washington Metropolitan Area Transit Authority

Zero-Emission Bus Transition Plan

Frequently Asked Questions



What type of zero-emission technology is Metro deploying?

Metro is focusing on zero-emission buses, which have no tailpipe emissions. Currently, battery-electric and hydrogen fuel cell electric are the two types of zero-emission technologies in the transit market.

Metro will initially deploy battery-electric buses and associated charging equipment and will continue to evaluate the cost, and technical and commercial maturity of fuel cell electric buses. Battery-electric buses are the more mature and cost-effective technology at this time.



How did Metro determine which garages would be converted first?

Metro intends to convert nine bus garages as we transition to a new zero-emission bus fleet. Our garages are located throughout Washington, DC, Maryland, and Virginia.

Northern, Bladensburg, Western, and Cinder Bed Road Bus Garages will be the first of Metro's bus facilities to be converted to support a zero-emission fleet. The proposed order of garage conversion considered several factors, including:

- Ongoing planning, design, and construction efforts at the garages that are already incorporating zero-emission buses
- Equity – whether the garage and its associated routes impact riders and adjacent communities, particularly those of color, low-income, and/ or with disabilities
- The current condition of the facility and the construction time needed for conversion
- The need for the garage to remain in service during the conversion to support the current fleet
- The ability to ensure safety in all program aspects (design, installation, and operations and maintenance)
- Ensuring reliable service and minimize service disruptions during the transition

The overall timeline and specific construction and garage conversion timelines will be updated as facility-specific design and construction plans advance.

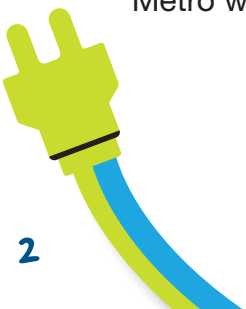


Why does the transition take so long?

Transitioning nearly 1,600 buses and nine bus garages, and training a workforce to support this new technology is significant. The transition will require the following:

- A considerable amount of construction work to provide infrastructure and charging equipment to support zero-emission buses, including electrical equipment such as transformers, and equipment to support overhead charging
- Comprehensive training for Metrobus operators and maintenance teams
- Replacing our conventional buses with new zero-emission buses, with minimal impact on service
- Coordinating with local electric utilities on the needed utility upgrades to support battery-electric bus charging

Metro will continue to identify opportunities to accelerate the transition.





Why might Metro update its plans in the future?

The initial Transition Plan proposes a framework based on current technology, markets, and Metro's service needs. As zero-emission buses and the infrastructure to support them continue to mature, the technology and markets will evolve rapidly.

Metro's ongoing Better Bus Network Redesign Project is considering where, when, and how people travel in the region and will result in a new network that better serves our customers. This Network Redesign and any other significant changes, including opportunities to accelerate the transition, may lead Metro to reassess its transition strategy. We anticipate updating the Transition Plan regularly to capture strategic changes as implementation moves forward.



How is Metro coordinating throughout the region?

As part of developing the Transition Plan, Metro staff coordinated with the local electric utilities that serve Metro's garages – Pepco, Dominion Energy, and BGE – to explore the anticipated utility improvements needed to support the new fleets at each facility. As garages are converted, Metro will continue to engage these partners to ensure power is provided to support battery-electric bus charging, while exploring options for resilience.

Metro coordinates frequently with other transit agencies throughout the region and recently launched a Regional Zero-Emission Bus Working Group to formalize this coordination.



Is Metro considering en-route charging?

Metro is evaluating potential locations to deploy en-route charging, including partnership opportunities with other regional transit agencies to share charging infrastructure. Leveraging Metro property and ongoing construction projects to incorporate en-route charging may enable a more efficient transition to zero-emission technology for the region.



How is Metro incorporating lessons learned from peers into the transition?

Metro staff regularly meets with transit agencies in the region and throughout the country. We have gained knowledge from our peers to improve the design and implementation of our initial zero-emission bus work. Metro is a member of several national groups that provide forums for information sharing, such as the Zero-Emission Bus Resource Alliance and the American Public Transportation Association's Zero-Emission Fleet Committee.



How will the deployment of zero-emission buses impact Metrobus service?

Metro's transition to zero-emission buses is part of our Better Bus initiative, designed to provide a better Metrobus experience across the region. Customers will continue to experience safe and reliable service with a much smaller carbon footprint. Every trip taken with Metro instead of a car reduces greenhouse gas emissions and local air pollution. Transitioning the bus fleet to zero-emissions delivers additional environmental benefits to the region by making each bus trip cleaner.

Metro's full Zero-Emission Bus Transition Plan is available at wmata.com

