

# CapMetro

## Transition to Technology of Choice

### CapMetro Sustainability Plan Update

June 24, 2024

# CapMetro's Sustainability Commitment

The most environmentally-friendly thing our community can do is get people out of single occupancy cars and traffic, and into transit.

- The second thing we can do, is make the transit as clean as possible.



# Sustainability Vision Plan

- CapMetro's Sustainability Vision Plan includes a goal of reaching net-zero carbon emissions by 2040.
- CapMetro will reach this goal using a variety of initiatives across action areas.
- A change in the strategies we use to reach a goal does not change the overall goal.

## Sustainability Vision Plan Action Areas

Energy: Conservation,  
Efficiency, Renewables

Sustainable and Zero  
Emission Fleet

Water and Natural World

Zero Waste, Natural  
Resource Management

Green Building and  
Infrastructure

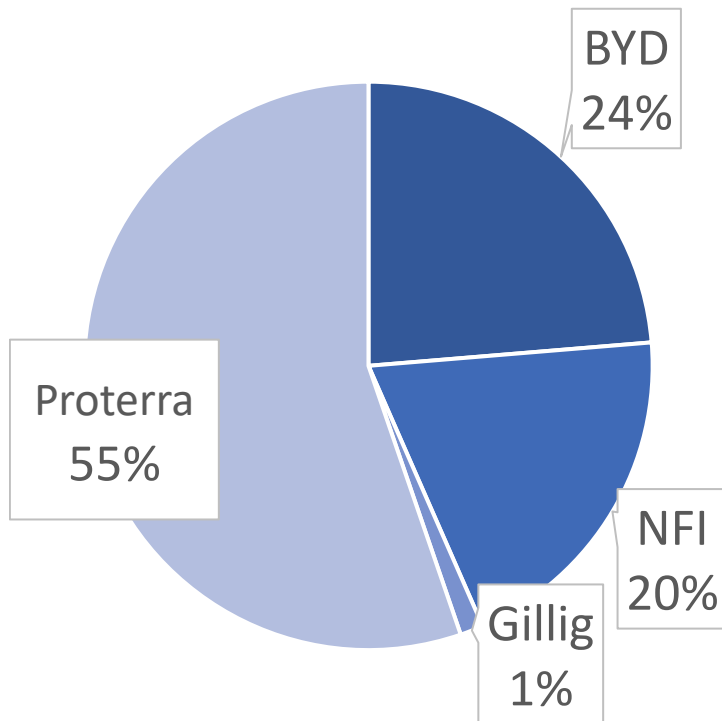
Active Transportation

Environmental and Sustainability Management

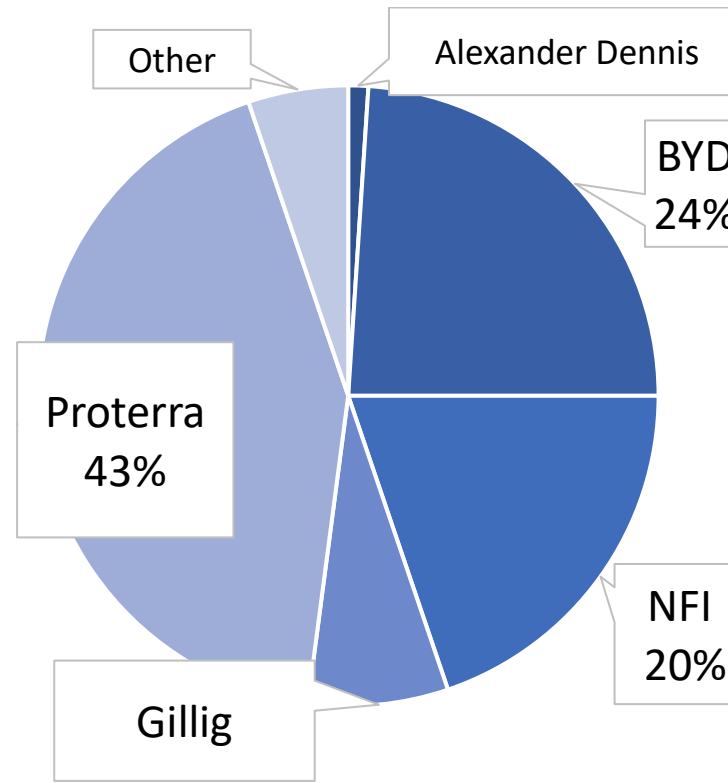
# State of the U.S. BEB Industry & Impact to CapMetro

# Percent Battery Electric Buses Deployed by Original Equipment Manufacturer (OEM) (NTD Data)

2021



2022



2023

Battery Electric Bus Original Equipment Manufacturer availability went from 4 to 2:

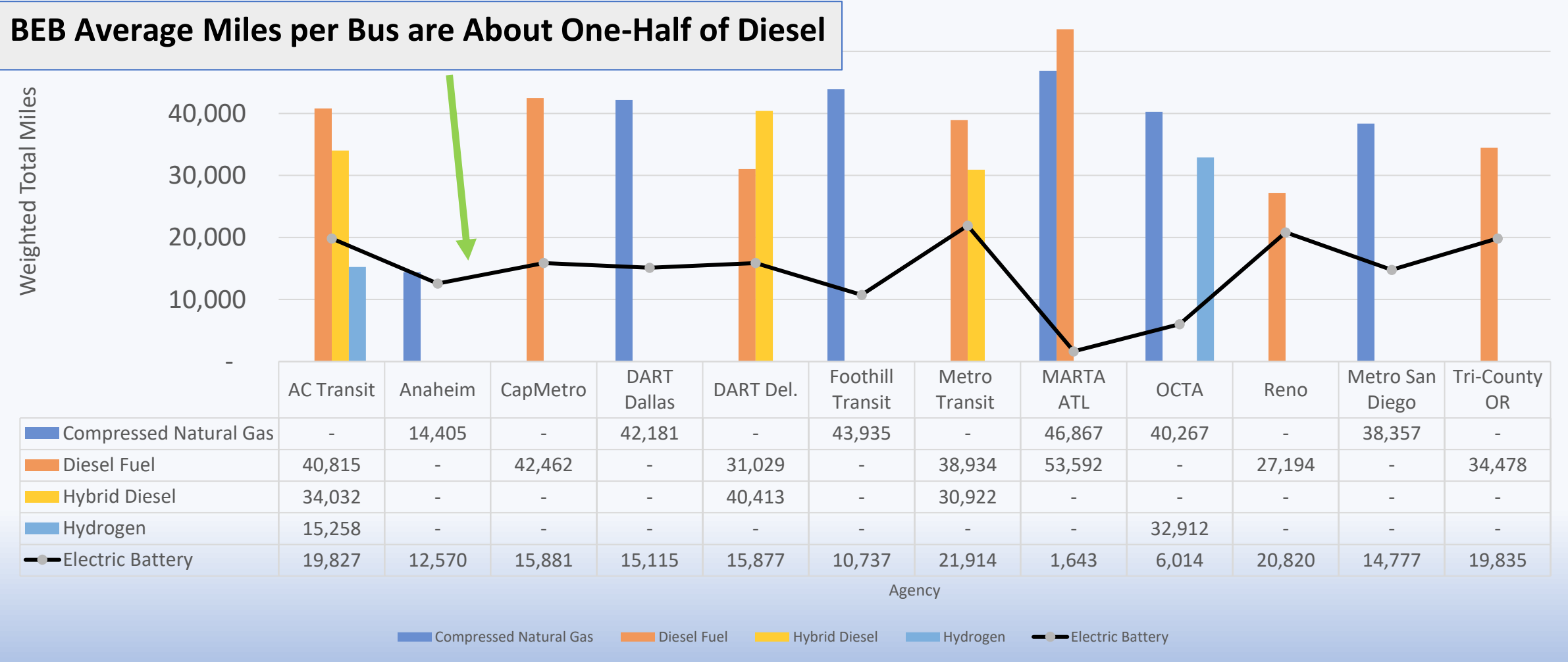
Gillig & NFI

# State of the industry

- Proterra bankruptcy uncertainty with warranty, service, parts, software
- Phoenix Motor Cars not yet viable, no battery contract, vehicle software
- Camber and Volvo spin-offs not yet viable, no charger service
- New Flyer financial struggles
- Lack of competition (ENC and Nova have left the market)
- Inflation and supply chain issues
- Long lead times (18-24 months to build a bus)
- Construction delays, long lead times for critical equipment

Battery Electric Buses are more expensive, harder to get (more competition among only a few manufacturers), and require a more comprehensive operational approach due to their complex systems and battery management needs.

# Average Miles per Active Bus (Based on NTD Data at 12 Agencies)



# BEB Percent Availability by Year and Peer Agency





# Battery Electric Performance & Availability

Factors impacting BEB performance:



Workforce



Topography



Size of Service Area  
& Distance of Routes

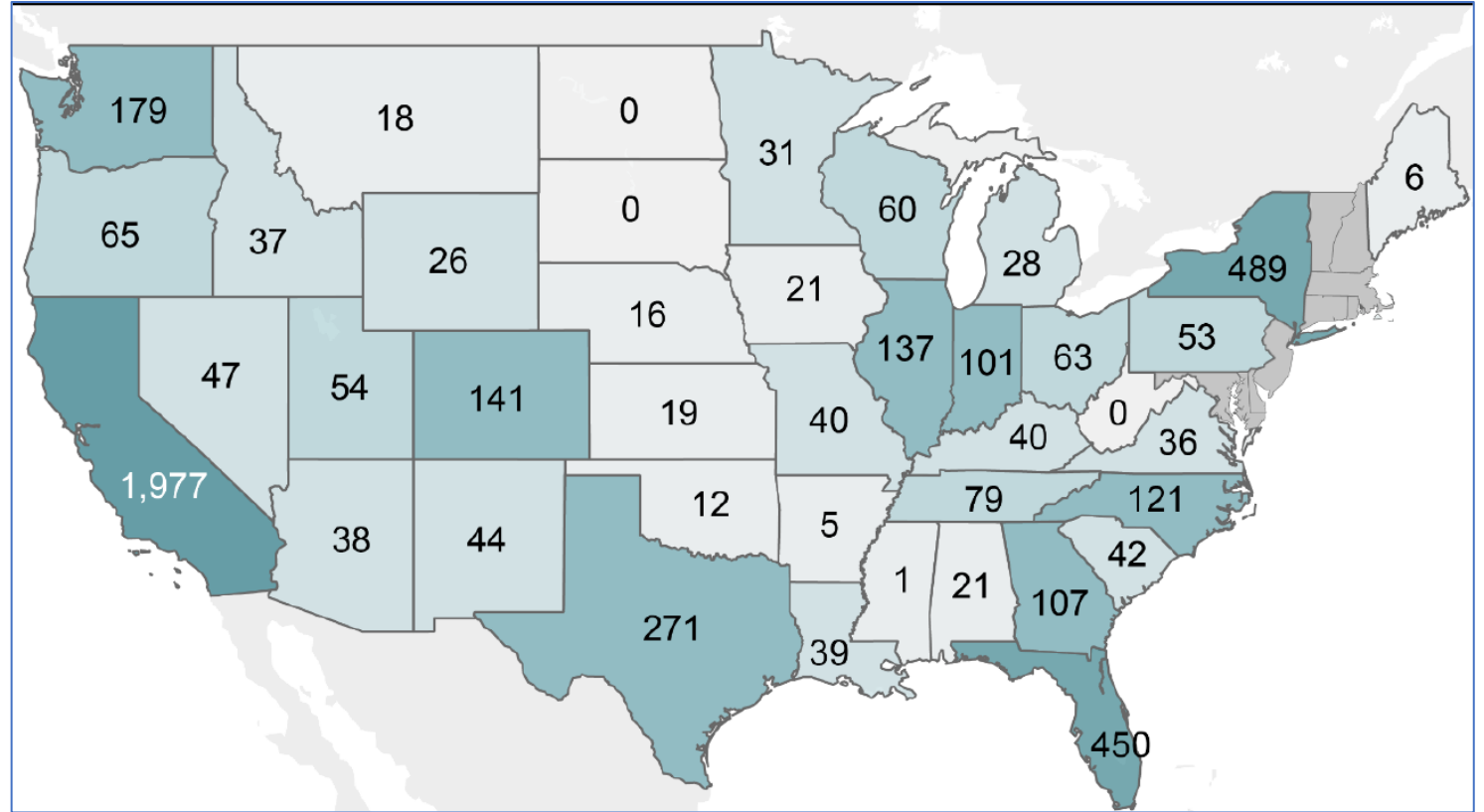


Weather

Battery Electric Buses are only viable to support 36% of CapMetro's service blocks.

# Zero Emission Buses in the United States

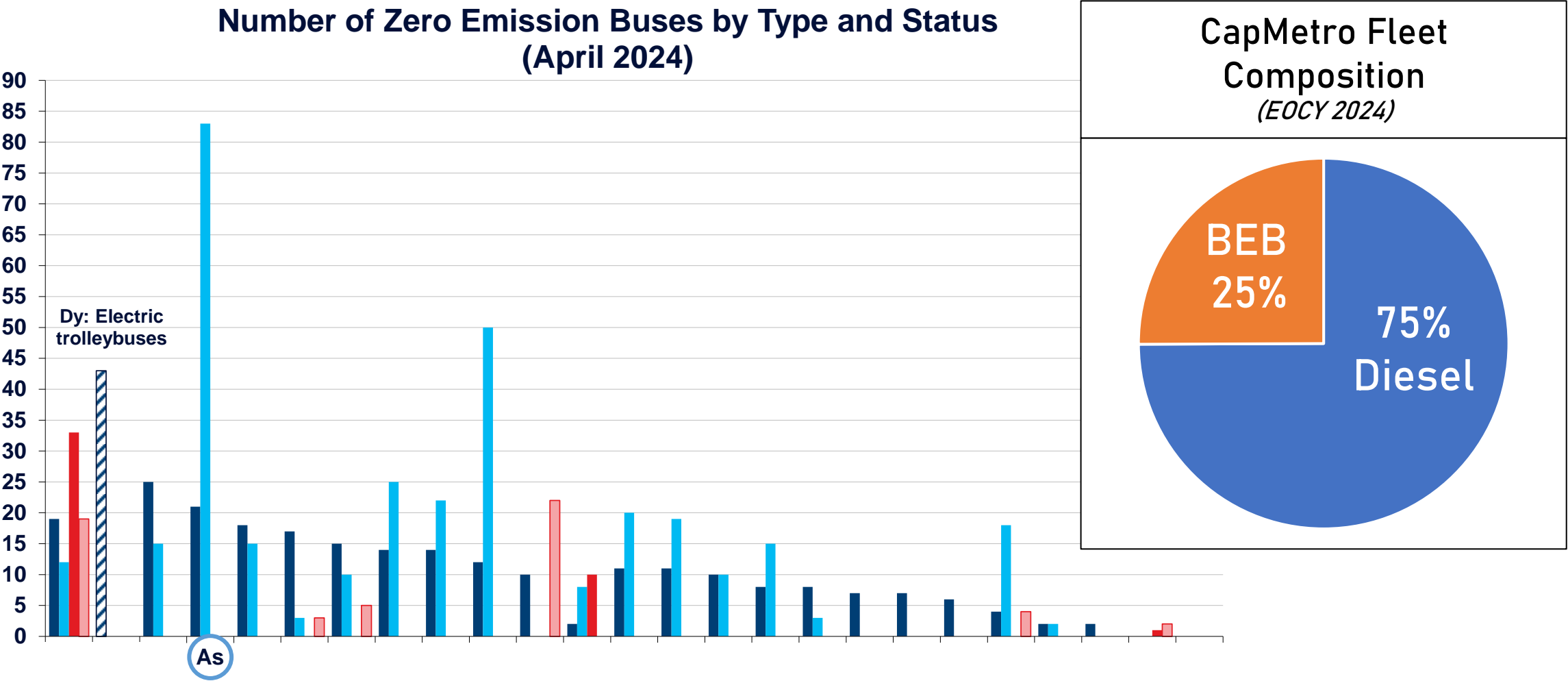
Year	BEB	FCEB
2023	5,775	161
2022	5,269	211
2021	3,168	129



Source: (CALSTART, 2024). [Zeroing in on ZEBs](https://calstart.org/zeroing-in-on-zeb-2024/)  
<https://calstart.org/zeroing-in-on-zeb-2024/>

# Zero Emissions Fleets: Electric Battery and Hydrogen Growing

## CapMetro has the highest number pending short-term



■ Battery Electric (On Property) ■ Battery Electric (Ordered/Funded) ■ Hydrogen (On Property) ■ Hydrogen (Ordered/Funded)

Sources: Member updates and websites, Media News. Note: FI tested electric & hydrogen >10 years ago

CapMetro is a member of the American Bus Benchmarking group, a consortium of medium-sized bus agencies in North America that benchmark performance and share experiences & best practices for fixed route and paratransit services. This data has been compiled by ABBG.



# Looking Ahead

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CapMetro's Sustainability Vision Plan includes a goal of reaching net-zero carbon emissions by 2040.

- Under-construction Project Connect Rapid service will still ultimately be all-electric.



# Pursuing our Commitments

- CapMetro will pursue a variety of solutions to meet sustainability goals considering performance, cost, reliability, availability, and more.
  - Options include Hybrid Electric and Hydrogen Fuel Cell Buses
    - Ongoing evaluation of vehicle and fuel availability/cost.
  - CapMetro's next regular vehicle procurement will be in late 2024 for late 2026 vehicle delivery
- CapMetro will continue leveraging efficient operations with our existing battery electric buses and infrastructure

CapMetro

Thank you!