The Road to Zero Emission Buses

November 12, 2019
Nomenclature

**ZEB/ZEV**: Zero Emission Bus/Zero Emission Vehicle

**BEB**: Battery Electric Bus

**Lower-Emission**: Highest standard, lowest emission traditional propulsion (diesel, gas)
Road to Zero Emission Buses (ZEB)

- CMTA Board approved initial purchase of electric buses - 22 April 2019
- Coordinating energy readiness with **Austin Energy**
  - North Ops Bus Depot redevelopment
- Participating in Austin Community Climate Plan, and integrating ZEB
- Actively participating in peer exchange and coordinated research:
  - APTA and transit peers
  - Zero-Emission Bus Resource Alliance (ZEBRA)
  - West Coast Center for Excellence
  - Center for Transportation and the Environment (CTE)
Transit Bus Replacements – FY2020

• FY18 and FY19 have included preparatory work to prepare for Battery Electric Buses
• Fleet plan requires replacement of 33 transit buses in FY20.
• 10 Electric Buses:
  – 4 Proterra 40 foot
  – 2 New Flyer 60 foot
  – 4 New Flyer 40 foot
Zero Emission Buses

- Proterra Battery Electric Bus
Zero Emission Buses

- New Flyer 60 foot and 40 foot
Charging systems
Zero Emission Roadmap

• North Ops Bus Depot at 9315 McNeil Lane, will become Capital Metro’s state-of-the-art electric depot
• Coordinated planning for smooth bus deployment and charging infrastructure development
• Requires strong partnership between Austin Energy and Capital Metro
Depot Project Scope

- Demolition of the 165,567 SF Serta foundation
- Repaving for battery electric bus fleet
- Lot will accommodate 186, 40’ and 60’ buses
- Includes demo & repaving of Metro Rapid lot
- Large amount of electrical conduit
- Lighting, security cameras, stormwater drainage
- Restriping of entire bus yard
Charging Requirements (estimated)

10 Buses = 0.95 MW
40 Buses = 3.8 MW
Exploring Solar

• Bus stop solar lighting
• Depot solar study
• Solar to storage
Safety Considerations/Process

Safety and Security Certification

Participate in industry workgroups: ZEBRA, APTA, West Coast Center for Excellence in ZEB, Center for Transportation and Environment

Pilot Phase: reviewing and adapting operations and safety procedures from 2 manufacturers

BEB Workgroup: Developing best management practices – Safety, Training, Operations, etc.
Next steps

• Continue grant and funding support
  – Including: TCEQ Clean Fleet, EPA DERA, FTA Low and No Emission Bus, and Texas VW Environmental Mitigation

• Coordinate with Austin Energy for infrastructure needs and rate structure

• Complete ZEB Roadmap and performance measures

• Integrate ZEV into Project Connect