Zero Emissions
Bus Transition
Plan Update

Metropolitan Council Committee of the Whole
Presented by: Carrie Desmond
10/20/21
Zero-Emission Bus Transition Plan (ZEBTP)

- Establish a plan to move Metro Transit’s bus fleet from primarily diesel to zero-emission buses
- Metropolitan Council is required to develop the Transition Plan by State of Minnesota Statute 473.3927
- Due to State Legislature February 15, 2022
  - Update at least every five years
- Anticipated to be a requirement of future FTA competitive grant applications
ZEBTP Project Goals

Define Guiding Principles
- Technical viability
- Equity & environmental justice
- Financial impact

Set Milestones & Goals
- Short term (2021-2025)
- Medium term (2026-2030)
- Long term (beyond 2030)

Develop Strategies
- Service design
- Bus quantities
- Charger types & locations
## Preliminary ZEBTP Schedule

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<td><strong>Fleet / Facility / Service Assessment</strong></td>
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<td><strong>Stakeholder Engagement</strong></td>
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<td><strong>Finalize Plan</strong></td>
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Stakeholder Engagement

Virtual ZEB Summit
- 11/3
  - 12-1:30pm
- 11/4
  - 5:30-7pm

Community Meetings
- Neighborhood meetings
- Community group meetings

Online Tools
- Website updates
- Social media
- Informational video
Battery-Electric Bus: Benefits and Challenges

• **Benefits:**
  - Less dependence on fossil fuels
  - Fewer greenhouse gases (GHG)
  - Quieter vehicles, less vibration, greater comfort

• **Challenges:**
  - Technology readiness for vehicles and infrastructure
  - Fleet lifecycle / replacement timing
  - Major facility and operational changes
**Met Council’s Equity Considerations Dataset**

- **Population Characteristics of Service Areas:**
  - Population Density
  - % Black, Indigenous, People of Color (BIPOC)
  - % Zero-Car Households
  - % Housing Cost Burdened
  - Number of years Areas of Concentrated Poverty

- **Environmental Factors of Service Areas:**
  - Avg. land surface temperature on a hot summer day (heat island)
  - Lifetime cancer risk from inhalation of air toxics (Persons per million)
Zero Emission Fleet Plan in CIP

- CIP planned funding of electric buses and infrastructure:
  - 8 buses in 2022
  - 70 buses in 2025
  - 22 buses for Gold Line and Purple Line

- CIP includes unfunded targets for zero emission fleet:
  - 30 electric buses in 2022-2024 identified with proposed Xcel Energy Partnership
  - 155 buses in 2026 and 2027

- CIP updated annually
  - ZEBTP will inform 2023-2028 CIP
  - Technical viability and funding availability key to future adoption
C Line Update

• Factory Acceptance Testing - completed 9/23
• Replacement charger installation – completed 10/4
• Commissioning ongoing
• Training activities
• Return to service
Minneapolis Bus Garage Electrification

• FY21 Low/No Grant
  • (8) 40’ Proterra 675kWh long range buses for use in local service
  • Proterra depot chargers

• FY19 Low/No Grant
  • (2) Indoor pantograph style quick chargers
  • 2MW rooftop solar array
  • 2MW/800kWh battery storage system
How to Stay Engaged

• Participate in the ZEB Summits and invite your network
  • Wednesday, November 3, 2021 from 12pm – 1:30pm
  • Register at https://us02web.zoom.us/webinar/register/WN_qWaiORm0TgSQbZ561xjtVQ
  • Thursday, November 4, 2021 from 5:30pm - 7pm
  • Register at https://us02web.zoom.us/webinar/register/WN_N3VdwFbFRrihzmLELIUMDw

• Next Council Presentation – early 2022

• Contact Carrie Desmond, Principal Engineer Electric Bus Infrastructure with questions: Carrie.Desmond@metrotransit.org