SFMTA

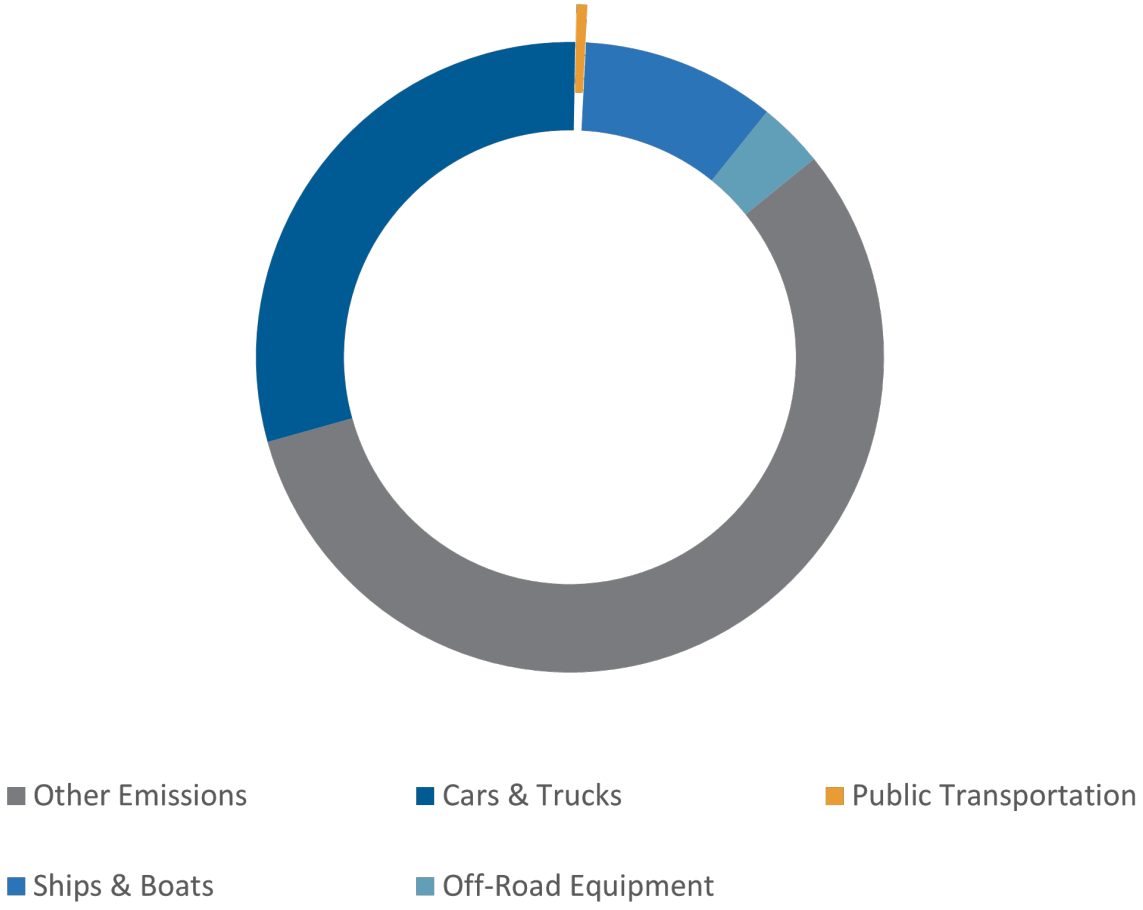
Transition to a Zero-Emission Fleet

SFMTA Board Meeting

November 7, 2023

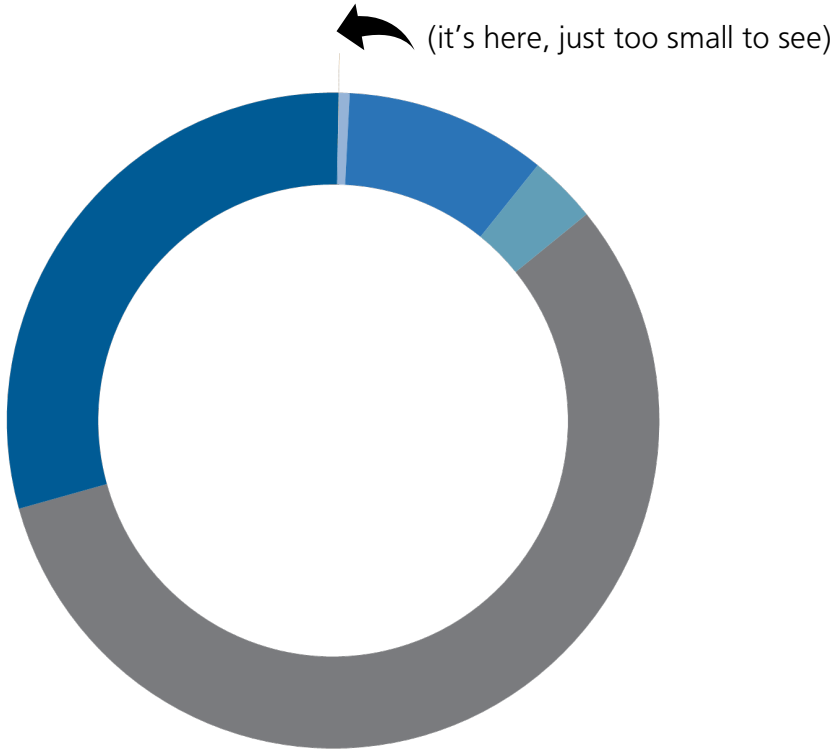
Transportation accounts for about 44% of greenhouse gas emissions in San Francisco

Public transport as a whole **accounts for 0.55%** of greenhouse gas emissions in San Francisco



Private cars and trucks account for about 30% of greenhouse gas emissions in San Francisco

Muni accounts for < 0.001%
of greenhouse gas emissions in San Francisco



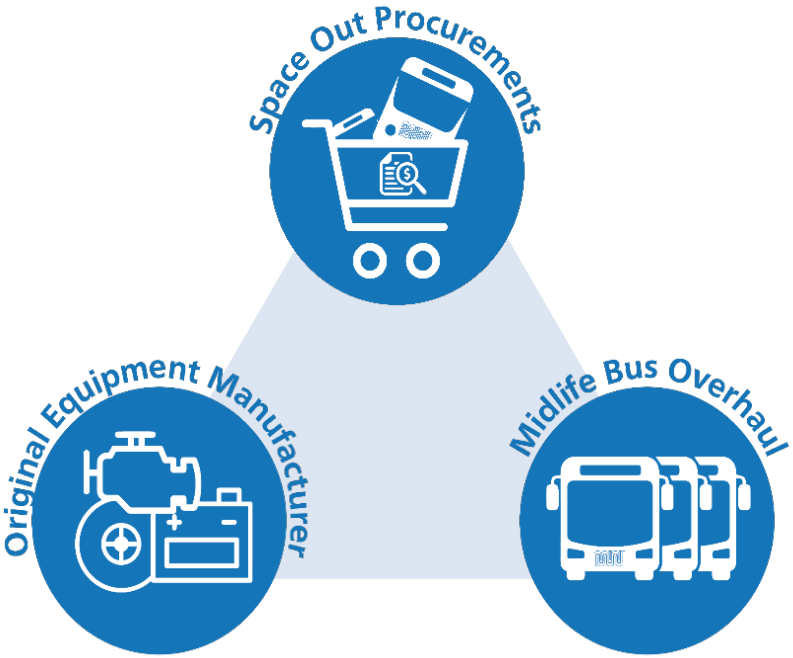
The best way to reduce vehicle emissions is to make **transit more reliable.**

Walking, rolling and using transit need to be more convenient and attractive than driving.

Right now, more reliable transit requires **more hybrid buses**.

Fleet Management Transformation

- Maintain consistent fleet average age
- Performance-based procurements
- Uphold robust maintenance standards and midlife investments
- Align with city's sustainability goals



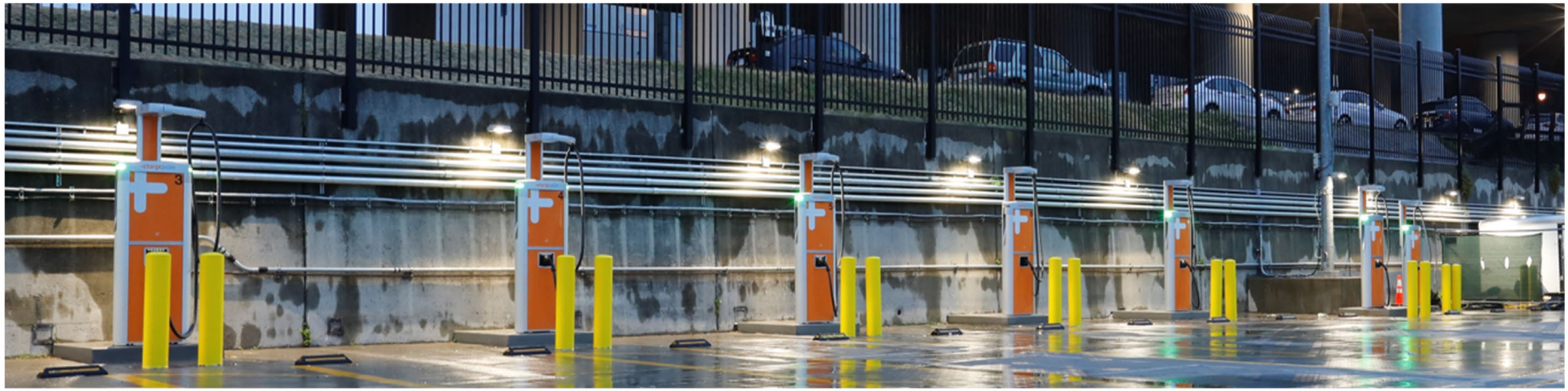
Progress Towards Zero Emissions

- 2007: SFMTA early adopter of hybrid buses – transition technology for battery-electric vehicles (BEB)
- 2016: Engine auto stop-start feature introduced to 54 buses, reducing idling times and emissions
- 2018: Green Zones introduced to 68 buses– hybrid buses run entirely on batteries through historically impacted communities

Muni runs the greenest fleet of any city in North America

Progress: Battery Electric Bus Pilot

Progress: Woods Charging Station



Progress: Potrero Creating a New Trolley Hub

Zero Emission Vehicle Policy

- 2018: SFMTA Board adopted policy that targets full electrification by 2035, calls for all new purchases beginning in 2025 to be BEB (*would phase out trolleys*)
- CARB adopts the Innovative Clean Transit regulation calling for full electrification by 2040; CARB supports all zero emissions vehicles (*including trolleys)*

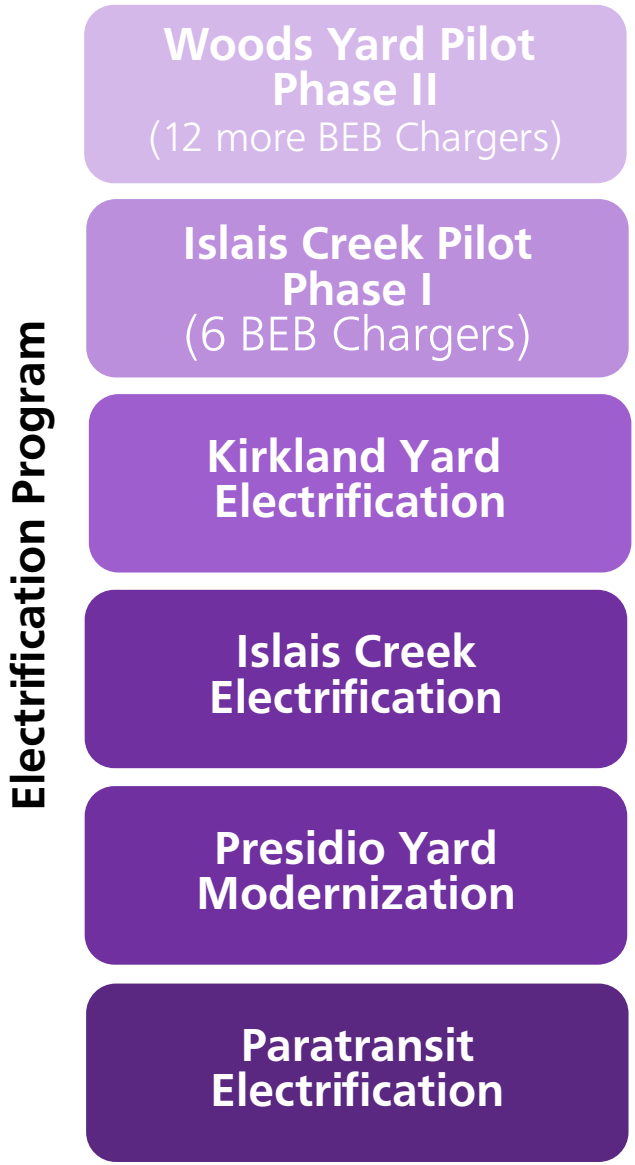
Lessons & Challenges

- COVID-19 delayed progress and highlighted the importance of fleet resilience and flexibility
- 2021 Climate Action Plan puts fleet electrification in the context of broader climate action
- Failure of 2022 General Obligation Bond significantly reduced our ability to fund facility improvements

Lessons & Challenges

- Upgrades are dependent on PG&E, delays are likely
- Our record for obtaining federal grants is mixed

Outcome: Facility upgrades are not keeping up with our vehicle replacement needs, and we will not have a facility to house and charge 100+ battery electric vehicles by 2025



The **Electrification/Retrofit Program** readies the SFMTA for transition to Zero-Emission vehicles.

- Reviewed transit fleet requirements – timing, size, type, technology.
- Schedule and project sequencing based on current regulatory requirements.

Next Steps

- Designate Potrero rebuild as trolley hub and continue trolley buses (*60ft trolley buses will be temporarily stored during construction*)
- Revise Building Progress delivery timeline to reflect project delivery lessons learned and vehicle replacement priorities
- Buy a combo of hybrids and electrics through 2030 – BEBs would increase at pace of facility upgrades and available funding

Next Steps

- **TODAY'S ACTION:** Update SFMTA Zero-Emissions Bus Policy to include trolley buses and extend 100% zero emission target date to match CARB ICT regulation
- SFMTA Board to review and approve 2025-26 procurements:
  - December 2023: New Flyer Contract for 107 vehicles
    94 40ft hybrids, 7 40ft battery-electric buses, 6 60ft battery-electric buses
  - Jan or Feb 2023: Gillig Contract for 5 40ft battery-electric busses
- Apply for 2026-2029 exemption from CARB to allow for a combination of hybrid and BEBs

Proposed Procurement Plan

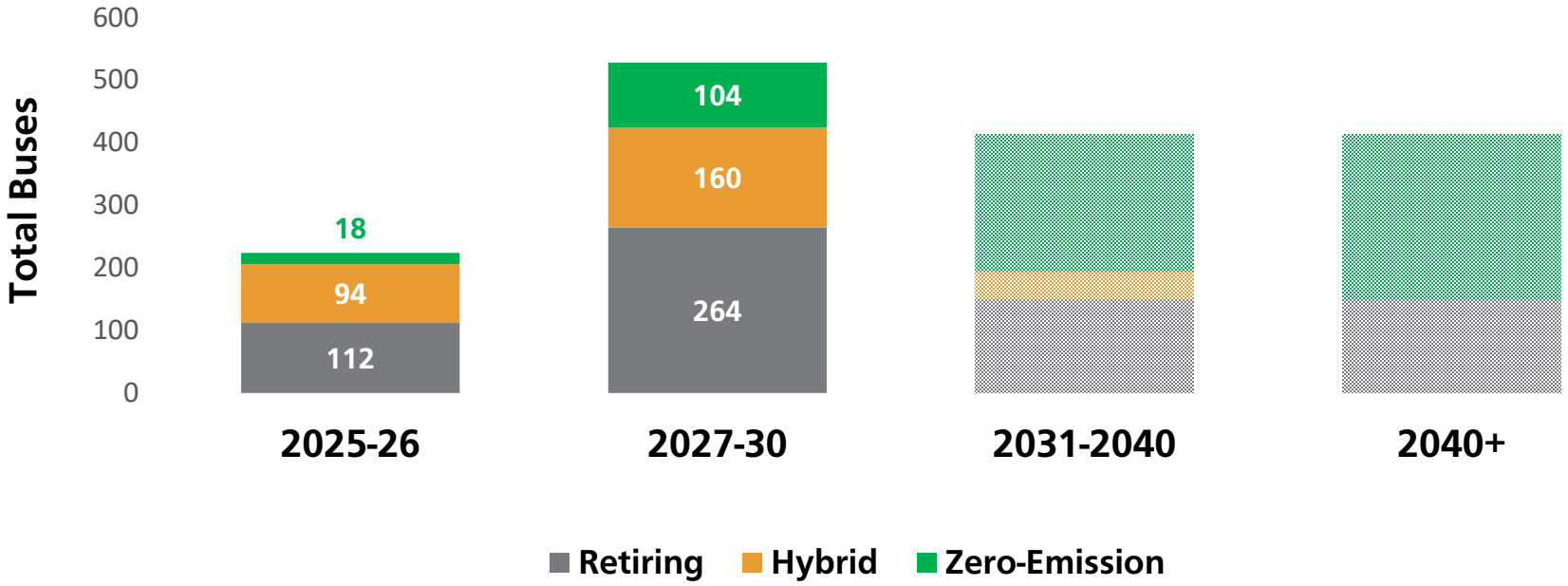
FY 25/26 - 112 hybrid electric buses need to be replaced

Recommending procuring both hybrid and battery-electric buses

- 12 40 ft Battery Electric Buses
- 6 60 ft Battery Electric Buses
- 94 40 ft Hybrid Buses

FY 27-29 procurement will also require a combination of hybrid and battery electric buses

Hybrid and ZEV Procurements



Facilities Projects

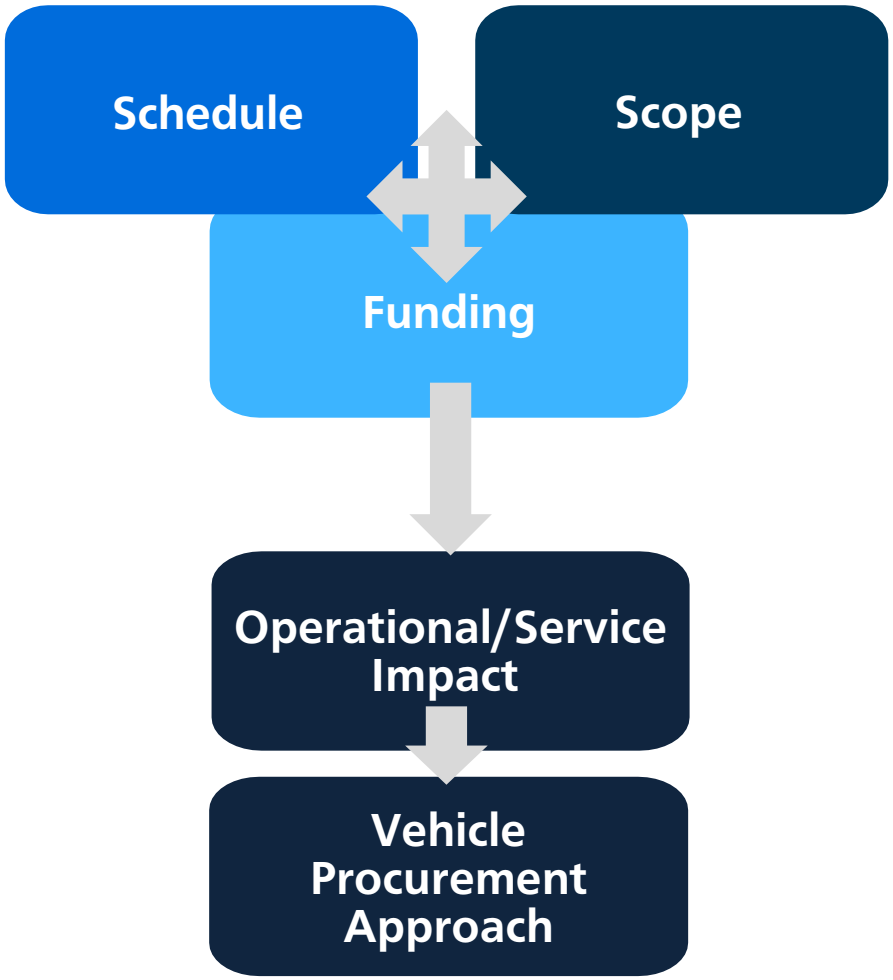
- Islais + Woods BEB Pilot
- Marin Upgrade
- Kirkland BEB Conversion
- Potrero Rebuild
- Islais BEB Conversion
- Presidio Conversion
- Woods Rebuild

A Just Transition for our Workers

Transition to zero-emissions vehicles won't cut jobs

- Minimal training needed to transition staff
- Expanded workforce for infrastructure maintenance

Labor Task	Union
BEB Maintenance	Local 1414
Trolley Maintenance	IBEW Local 6
Overhead & Charging Infrastructure	IBEW Local 6
Electronic Component Repair	IBEW Local 6



Risks

- The Building Progress is a "pay-go" program, and with planning, design, construction and funding advocacy occurring simultaneously
- Funding and subsequent impact on schedule, delivery and cost (due to escalation) are risks that to date we have managed but remain
- Vehicle procurement approach therefore must be adaptable as we manage these risks

Outreach and Engagement

- Briefed City Family and Legislators
  - Mayor
  - Supervisors – Ongoing
  - Senate delegation
- Sent Email Updates
  - To Interested Stakeholders
- Ongoing Update Presentations
  - Environmental Groups
  - Community Groups
  - Local Advocates

Today's Action

Amend the SFMTA Zero Emission Vehicle Policy to:

- Align with the California Air Resources Board's Innovative Clean Transit (ICT) regulation, which is currently 2040 for 100% zero emissions fleet.
- Allow the SFMTA to continue to procure BEB, hybrid and trolley buses as laid out in the SFMTA's CARB Rollout Plan.
- Integrate fleet electrification initiatives with broader climate change initiatives focused on mode-shift.


Thank you


SFMTA
APPENDIX

Role of Trolley Buses

- Trolleys are an important part of the SFMTA's ZEV Program
- In Motion Charging trolleys are promising – currently conducting a pilot and planning to upgrade our existing fleet
- Considerations for expanding trolley fleet:
  - Run trolley buses on routes with partial overhead coverage
  - Only one trolley manufacturer available
  - Focus on ensuring availability of trolleys in North America market
  - State of good repair needs for trolley network should be prioritized over expansion
  - Massive build-out of trolley network would be costly and be met with public resistance
  - Still working on reliable and quick process for reconnecting with overhead wires after off-wire segments