



Metro

# General trends in urban transit

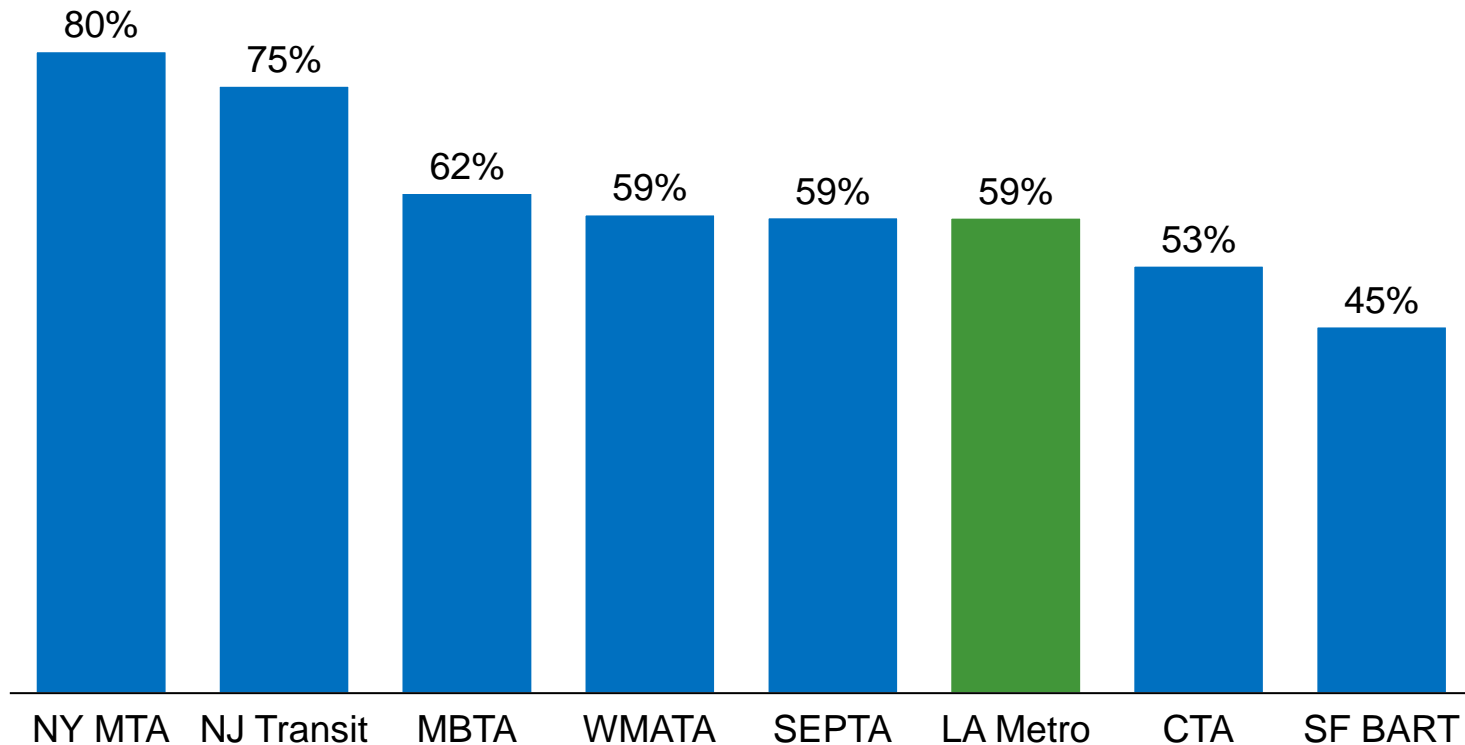
LA Metro Board Retreat

March 2024



# Agencies nation-wide have been experiencing headwinds and declines in ridership since 2008

2023 ridership recovery as a % of 2008 ridership, (%)<sup>1</sup>



1. Recovery in unlinked passenger trips (no adjustments or estimates) and service levels, in comparison to 2008. Peer set includes transit agencies that have the highest ridership in the nation, and similar modes as LA Metro – these include MBTA, NY MTA, NJ Transit, SEPTA, WMATA, CTA, BART

Source: National Transit Databased (accessed in March '24), [SmartCitiesDive](#), McKinsey Global Institute analysis, FHWA Traffic Volume Trends analysis

## Factors leading to decreased ridership



**~20% p.a.**

Growth in number of US ridesharing trips from major providers



**3.5 days**

Expectation for in-office presence for office workers in new hybrid environment

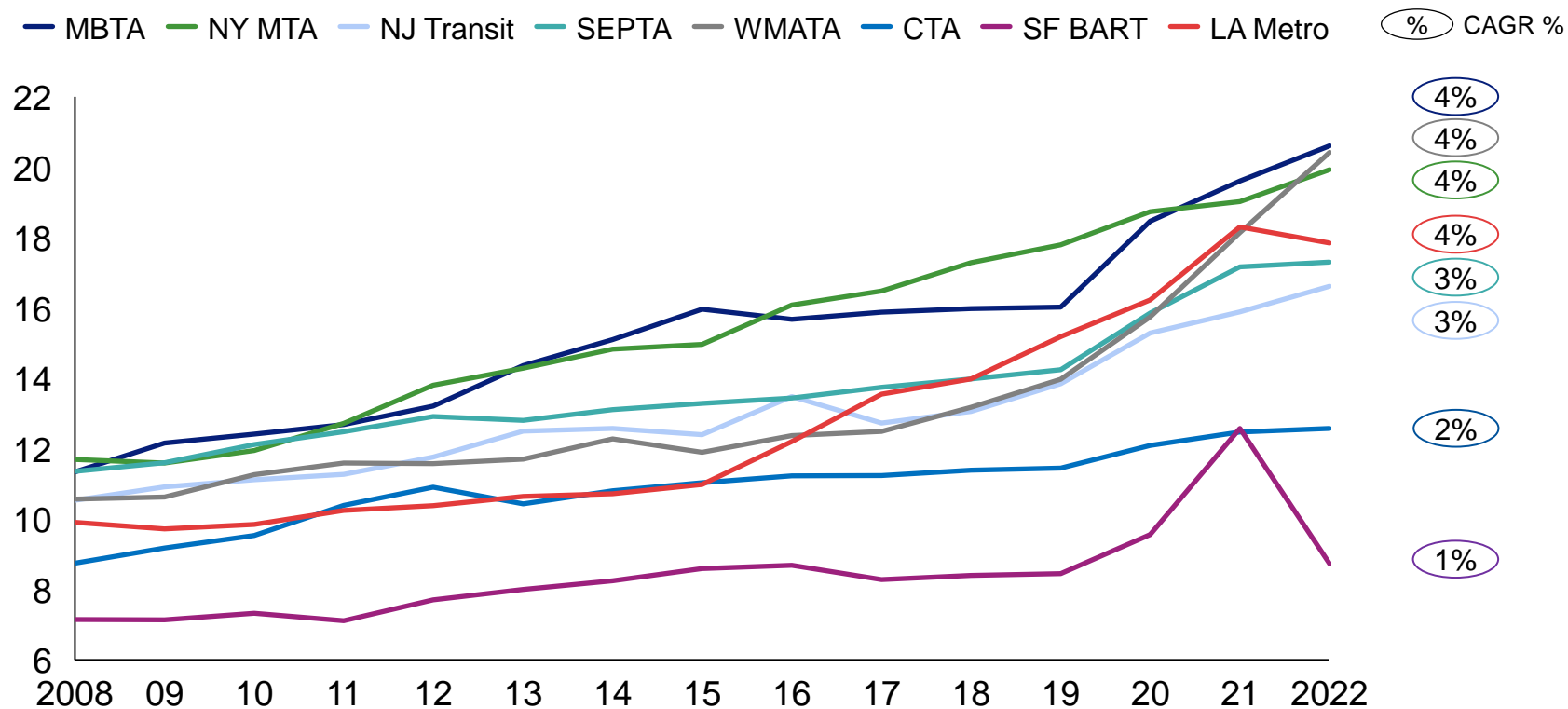


**2.1%**

Increase in roadway travel in the US in 2023

# Although ridership has decreased; costs have risen; as agencies adapt to meet evolving ridership needs

OpEx by vehicle revenue miles (VRM)<sup>1</sup> across leading transit agencies, (\$ per VRM), 2008-22



**~15%**

Increase in point-to-point trips outside of the urban core versus pre-pandemic period

**~30%**

Typical increase in capital project cost for public sector agencies compared to original estimates


1. Annual total operating expense by the annual vehicle revenue miles (VRM) at an agency level, in comparison to 2008. Peer set includes transit agencies that have the highest ridership in the nation, and similar modes as LA Metro – these include MBTA, NY MTA, NJ Transit, SEPTA, WMATA, CTA, BART


Source: National Transit Databased (accessed in March '24), McKinsey Insights "[Winning ridership for the next normal](#)", [LA Times](#), [UCLA - Vehicle Ownership Trends and Their Implications for Transit Ridership](#); Industry experts

# Leading agencies are using this moment of change to transform how they deliver service to the community

## Network accessibility

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 **Los Angeles Metro**  
Metro Micro micro-mobility service

 **Santa Cruz Metro**  
Bus route and frequency redesign

## Customer experience

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 **Los Angeles Metro**  
Ambassador and station improvement program

 **Toronto Transit Commission**  
10-minute headway program

## Reimagining operations

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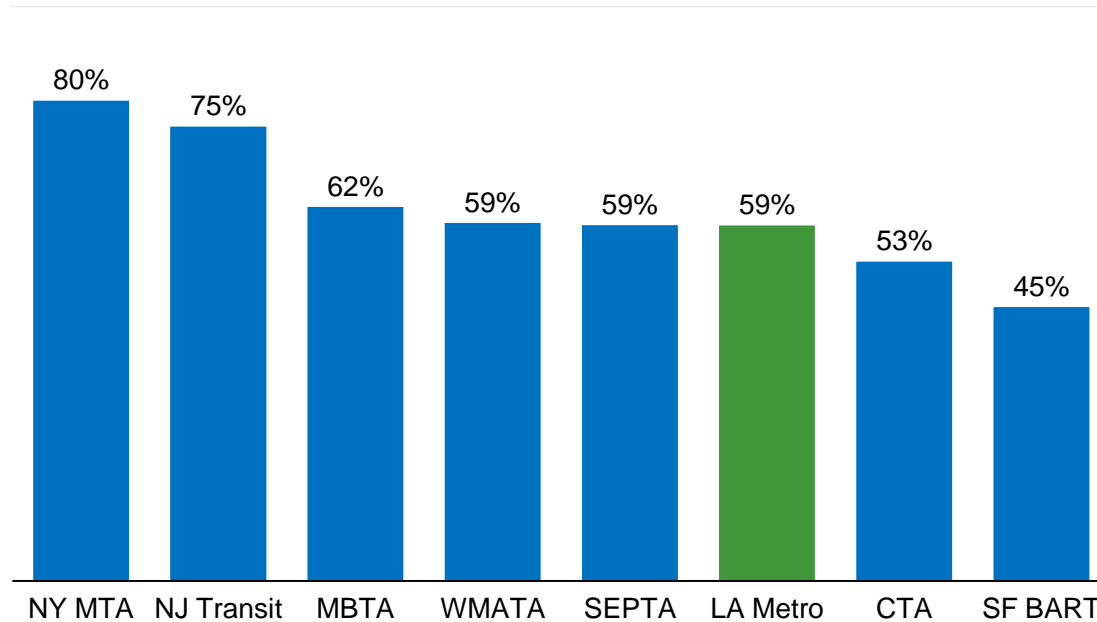
 **Los Angeles Metro**  
Early Intervention Team (EIT)

 **Texas Department of Transportation**  
Houston ConnectSmart “Mobility as a Service” app

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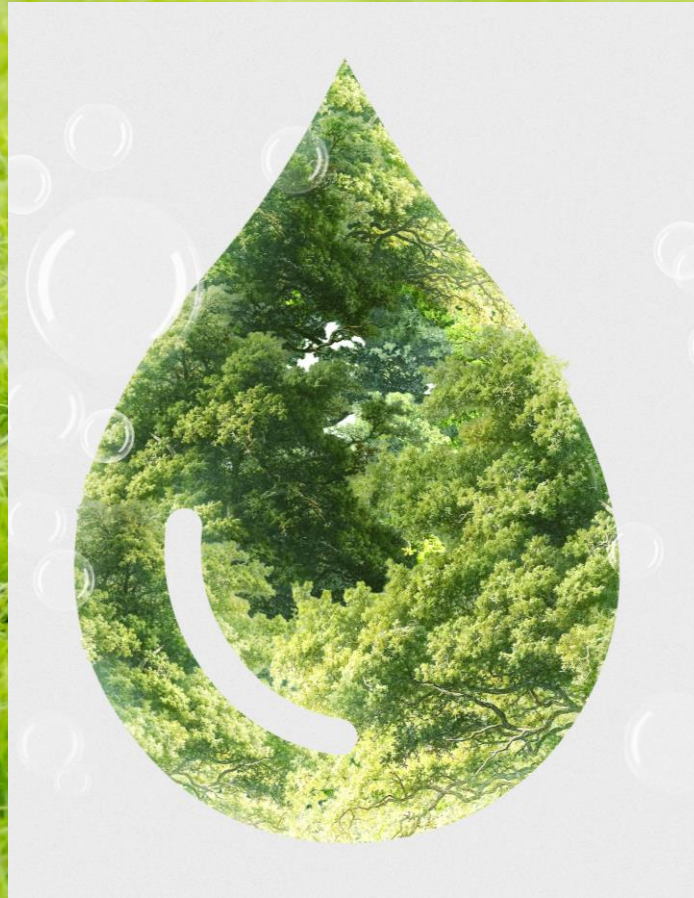


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# 01. Environmental Sustainability



## ZEB

Metro's Path to Zero Emission



## Reduce VMT

Goals to reduce VMT and Greenhouse Gas Emissions



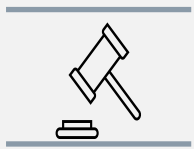
## Mega Events

Opportunity to optimize ridership this with LA's mega sporting events by increasing mode shift to transit

# Zero Emission Bus (ZEB)



## CA 2040 Mandate



### Capital Cost Increase

The implementation of the zero-emission bus program is a significant capital cost to meet the State of California's 2040 mandate for eliminating the use of hydrocarbon fueled buses

## Grant Funding



### Secured

Only 9% funding secured in grants to date for a total program requiring more than \$4.3B



## Budget Impact



### CIP Program

13% | to | 57%

In FY24, electrification makes up 13% of the total CIP program; that would need to grow to be 57% over the next five years to meet the 2030 goal

## Metro's Near-Term Outlook



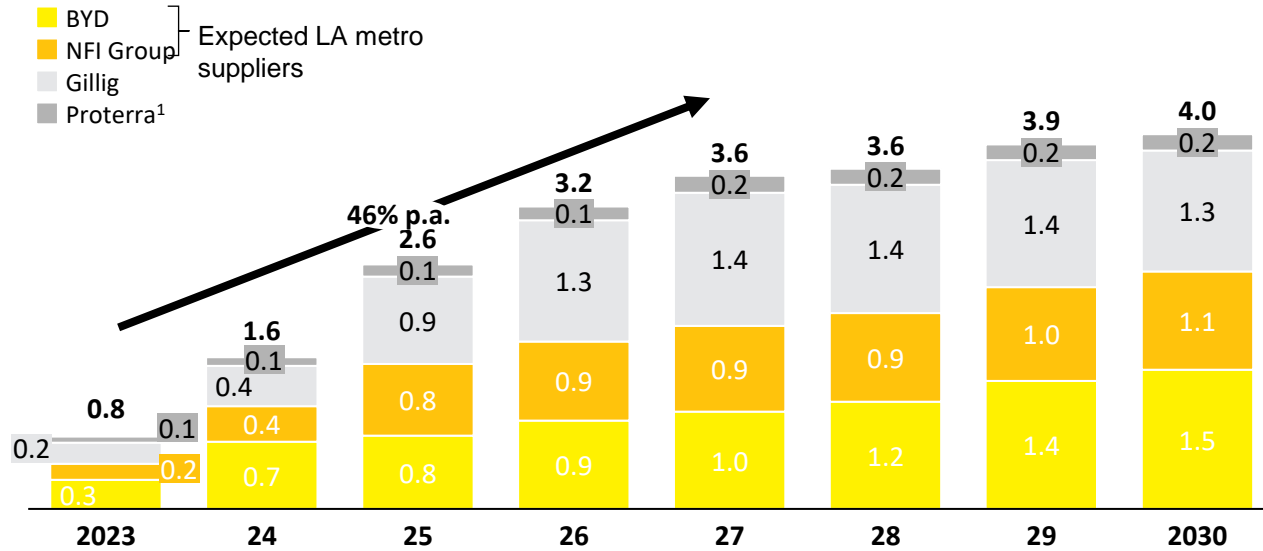
### Forecast

Assumes an accelerated goal of achieving a zero-emission fleet by 2030, which includes procuring zero-emissions Battery Electric Buses (BEB) and related electric charging infrastructure



# Converting to ZEB in 2030 requires ~15-25% of future supply, based on OEM ability to scale

## North America electric bus production, K units



### LA Metro annual orders, % total production - BYD/NFI Group production

<b>ZEB 2030</b>	0	0	0	14 - 25%	14 - 24%	14 - 23%	14 - 21%
<b>ZEB 2035</b>	0	0	0	5 - 10%	5 - 9%	6 - 10%	6 - 9%

<sup>1</sup> Declared bankruptcy in November 2023; assets were purchased by a small EV manufacturer Phoenix Motorcars

Source: LA Metro Discussions in December 2023 and January 2024, LA Metro procurement data, I.H.S. Markit

## Select insights

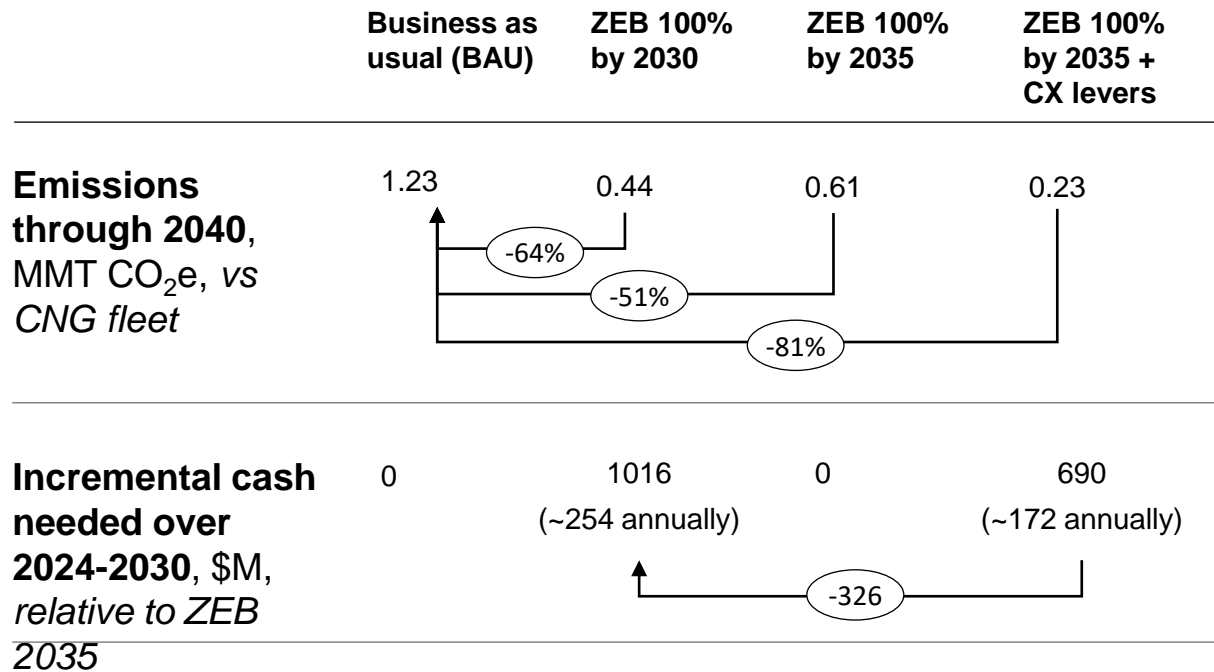
**BEB supply projected to grow at 46% p.a. through 2027** as OEMs scale to meet market demand

**BEBs primarily available for LA Metro from two suppliers** due to no contract bids from Gillig and Proterra supply uncertainty, **reducing the available supply by ~60%**

**14-25% of primary supplier annual production required to achieve ZEB 2030 vs 5-10% for ZEB 2035**, due to larger annual orders in quicker transition



# Converting to ZEB in 2035 may present cashflow to improve CX levers, leading to additional emission reduction compared to 2030 timeline



Investing in ZEB 2035 with prioritized CX levers could lead to **~81% emission reduction** compared to business-as-usual scenario

The cash flow needed for CX levers could be offset by increased cash flow availability from slower transition, i.e. ZEB 2035 vs ZEB 2030

# Opportunities with 2035 target (Ridership Building)

## Ridership Building

- Improving bus ridership is a more effective way to reduce emissions
- Metro contributes a small portion to the county's transportation sector emissions
- Investing a portion of ZEB 2035's cash flow into CX efforts could raise ridership by 10% to 13% which outperforms the 2030 ZEB emissions impact by 2.8x



## Operational Stability

- BEB Reliability
- Supply Availability
- Technology and Cost Improvements
- Hiring Surge for BEB Commissioning
- Legacy Events
- Staff Training & Capacity Building
- Accelerated Retirement

Operational  
Stability



## Would you rather...

- A. Advance the zero emission ZEB program in 2030?
- B. Continue investments in speed and reliability, cleanliness, and security improvements?

# Reducing VMT – Opportunity to make LA “Transit-First” Culture



## Games Time

- “Transit-first” Games (**LA’s goal**)
- Restricted parking and increased enforcement
- Bus lines connect the four sports parks (**LA’s strategy**)



## Legacy

- 40 projects
  - Station upgrades, rail line capacity improvements, new rail vehicles, and first/last mile
  - Implemented 75 miles of BRT
  - Constructed 20 miles of rail

## By the Numbers

**15%**

of Londoners permanently changed their travel behavior after the 2012 Games

Ridership increases 2 years after 2016 games

**35%** BRT **117%** Rail



**Metro**

- **Current mode split:** Transit/ walking/biking averages 10% (major LA venues )
- **2028 Games:** opportunity to show people how to get around LA via transit

2028 Games-Time Mode Split Assumptions for Modeling

Venue(s)	Car/ Rideshare %	Transit/ Walk/Bike %
Downtown LA	22%	78%
USC/Expo Park	37%	63%
Sepulveda Basin	32%	68%
Carson	37%	63%
Long Beach	32%	68%
Inglewood	47%	53%
Santa Monica	27%	73%
Frank G Bonelli Park	17%	83%
Pasadena	40%	60%

**One Car Challenge Pilot**



# One Car Challenge Pilot Program



## Initial Results: Treatment Group

- 4.5X more likely to NOT drive additional car
- Reduced VMT
- Traded Driving for Transit, Walking and Biking

### **Discussion Questions**

1. On a scale of 1 to 5, 1 being the most important, rank the strategies you would like Metro to explore to address this area of focus.
2. What other information do you want Metro to provide so you can prioritize this policy decision?
3. Do you have any other policy or strategy ideas you would like Metro to consider in this area of focus?