



Engineering & Operations Committee

# Clean Air Fleet Initiatives

Item 6a  
August 15, 2022

# Outline



Zero Emission Directives



Climate Action Plan



Fleet Overview



Proposed CARB Regulations

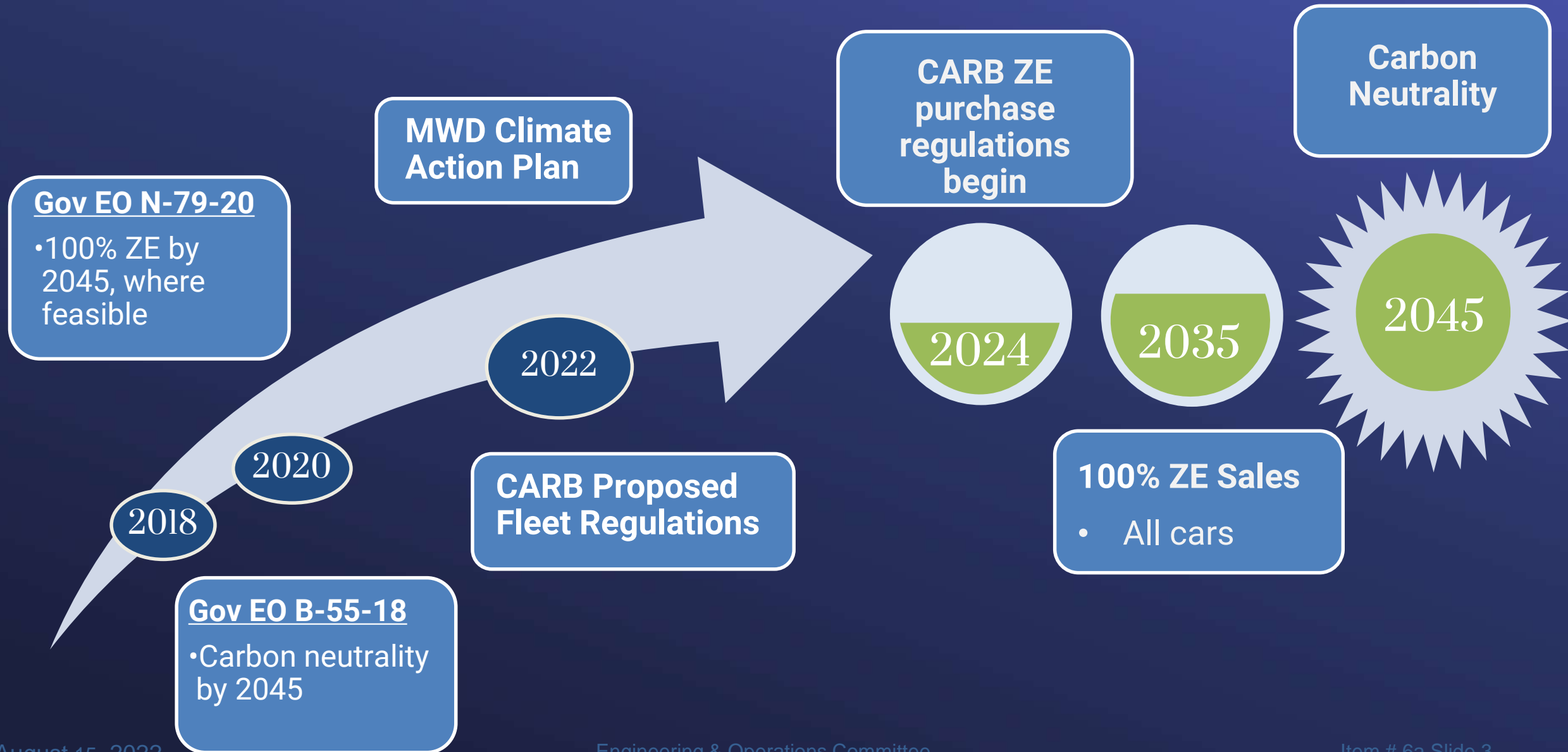


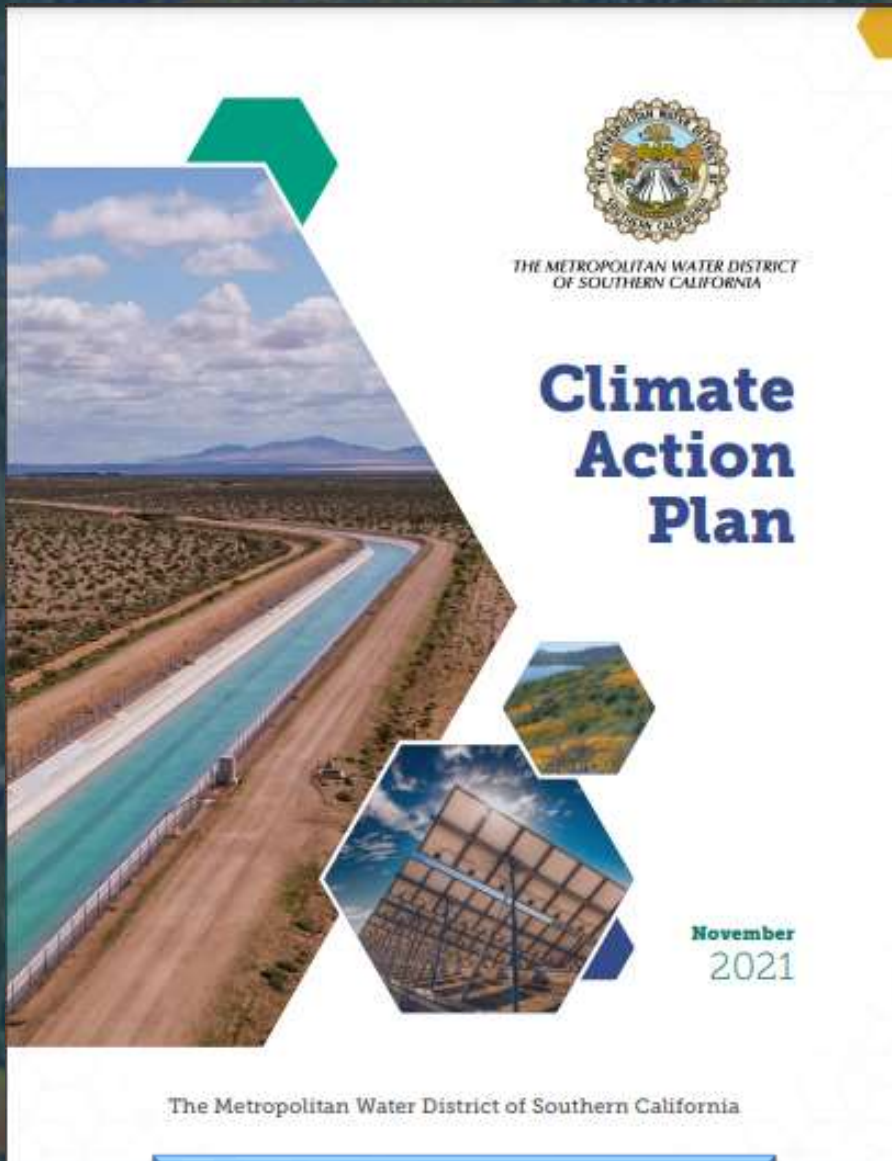
Transition Efforts



Next Steps

# California Zero Emission (ZE) Directives





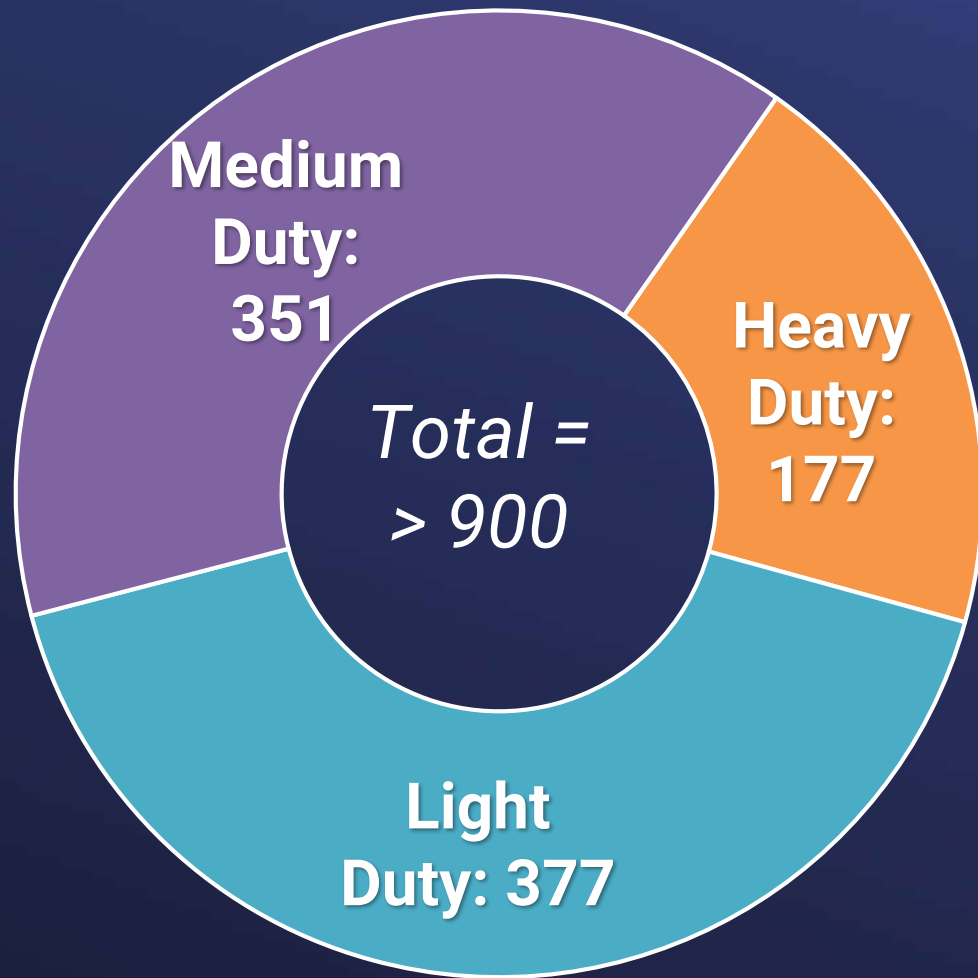
# Objectives

- Strengthen commitment to environmental sustainability
- Increase resiliency of operations
- Strategically achieve greenhouse gas (GHG) reduction goals
- Comply with CARB requirements

## Reduce “Direct Emissions” through the Transition to a Zero Emission Vehicle Fleet

- Transition of Light-Duty, Medium-Duty, and Heavy-Duty Vehicles
- Reduction from 7,000 MT CO<sub>2</sub>e per year

# Metropolitan Fleet Vehicle Overview



Light

- Sedans to Full-Size pickups



Medium

- 3/4 ton to 1-ton pickups, cargo vans



Heavy

- Heavy-Duty pickups, tankers, tractors



# Metropolitan Fleet Service Areas



# Metropolitan Fleet Transition Challenges

**MWD maintains sufficient resources to respond to two simultaneous pipeline failures at any time**

**Fueling/Charging Infrastructure**



**Asset Geographic Location**

**Vehicle and Infrastructure Cost**

**Vehicle Commercial Availability/  
Suitability/Technology**

**Workforce Adaptation**

# Proposed CARB Regulations

## Light-Duty Vehicles (377)



**2026-2035  
Increase to  
All ZE Sales**

## Medium-Duty Heavy-Duty Vehicles (528)



**2024 - 50%;  
2027-100%  
Public Fleet  
ZE Purchases**

## Diesel Construction Equipment (73)



**2024-2028  
Phaseout of  
47 Units**

## Propane/Gas Forklifts (18)



**2024-2031  
Phaseout to  
ZE**

# ZE Transition – Actions Taken



Mobile Power Station charging Ford eTransit



Weymouth - 3-week Demo eTransit Van



Lake Mathews – Renewable Diesel Refueling

## Advocacy

- Partnered with ACWA, CMUA and other agencies to meet with CARB to achieve practical regulations
- Shared ZE technology knowledge & experience with other agencies

## Technology & Incentives

- Demonstrated ZE Vehicles
- Applied for Incentive Voucher for ZE Mobile Power Station
- Piloted renewable diesel for vehicles & construction equipment to bridge the gap for the ZE transition



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# **ZE Transition – Actions Taken**

## **Infrastructure**

- Developed CIP for Districtwide ZE Fleet Infrastructure
- Initiated study to develop comprehensive transition plan for implementation in 2023

## **Vehicle Assessment**

- Completed vehicle & power needs inventory and market assessment
- Created online fleet tool to screen ZE replacement vehicles

# ZE Transition

## Vehicle Replacement Scenario – Selecting the Cleanest Emissions Vehicle for the Job

Gasoline FORD F-250, Medium-Duty Pickup \$41,000 (cost)			
	Current Daily Range (miles)	Power-Take-Off (hrs/day)	Battery Size Needed (kW)
1)	350	10	285
2)	100	None	50



POTENTIAL ZE REPLACEMENT			
	New ZE	Max Range (miles)	Upfront Cost
1)	None Available	NA	NA
2)	Electric F-150 Lightning	300	\$53,000
	Electric Rivian R1T	300	\$68,000



# ZE Transition Critical Success Factors



**Commercial Availability**

**ZE Vehicle First Policy**

**Infrastructure**

**Funding**

**CARB Regulations**

# Next Steps

**Develop  
Budget for ZE  
Vehicles and  
Infrastructure**

**Pursue Grants  
and Incentives**

**Purchase  
vehicles and  
equipment**

**Implement ZE  
Infrastructure  
CIP**

