



Proposed 2022 State Strategy for the State Implementation Plan

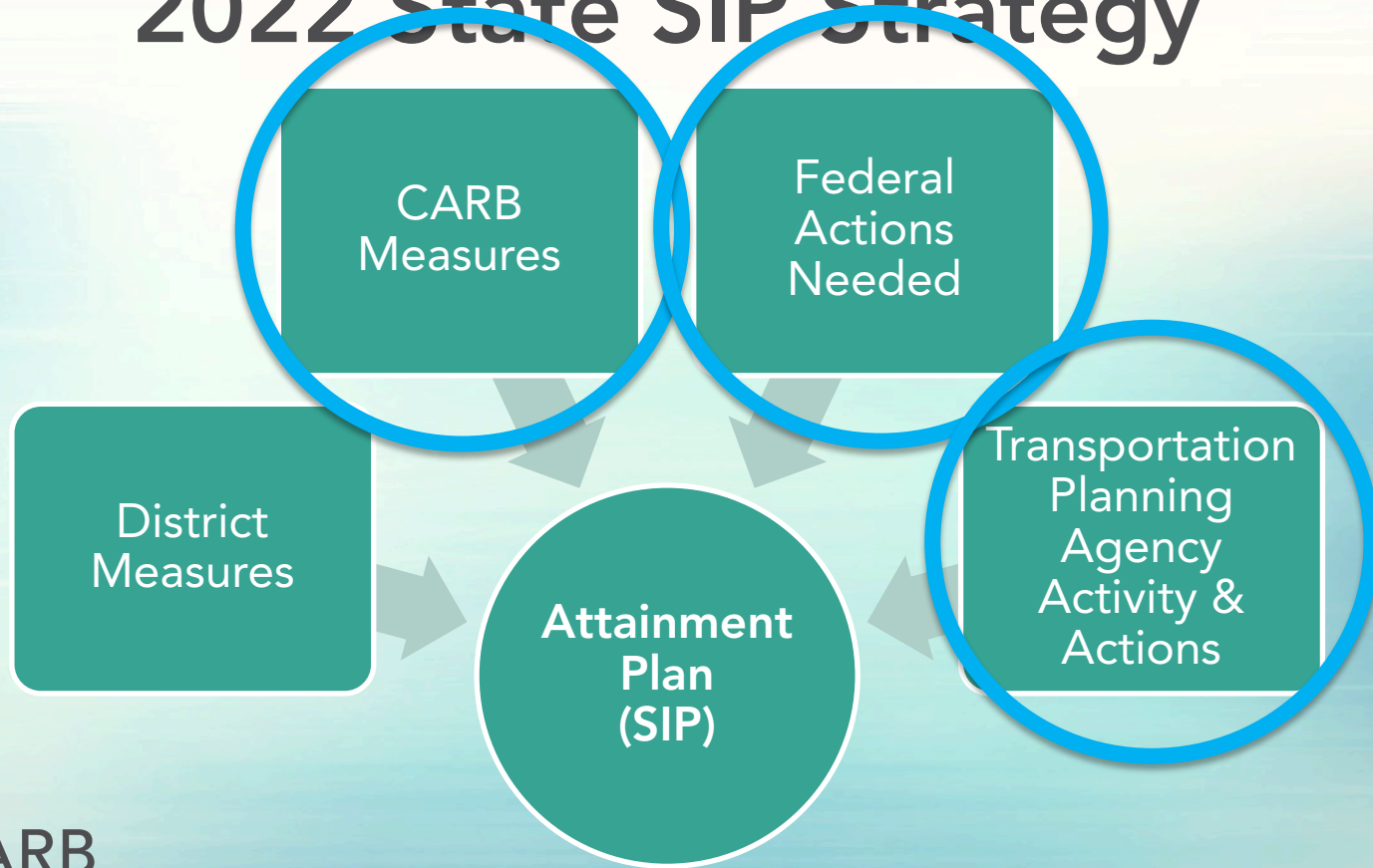
September 22, 2022

70 ppb Challenge Across the State

- EPA revised the 8-hour ozone standard to 70 ppb in 2015
- 19 nonattainment areas in California
 - Attainment years 2020-2037
- 10 areas classified Moderate+ and must submit SIPs
- San Joaquin Valley and South Coast most challenging
- 7 areas need new emission reduction commitments



Attainment Plans and 2022 State SIP Strategy



2022 State SIP Strategy

- Released Draft on January 31, 2022
- Released Proposed on August 12, 2022
- Includes unprecedented variety of new State measures to reduce emissions using all mechanisms available
- Identifies the level of action needed to meet air quality standards and protect public health
- Drives pace and scale of CARB rulemakings
- Identifies federal actions needed in the South Coast

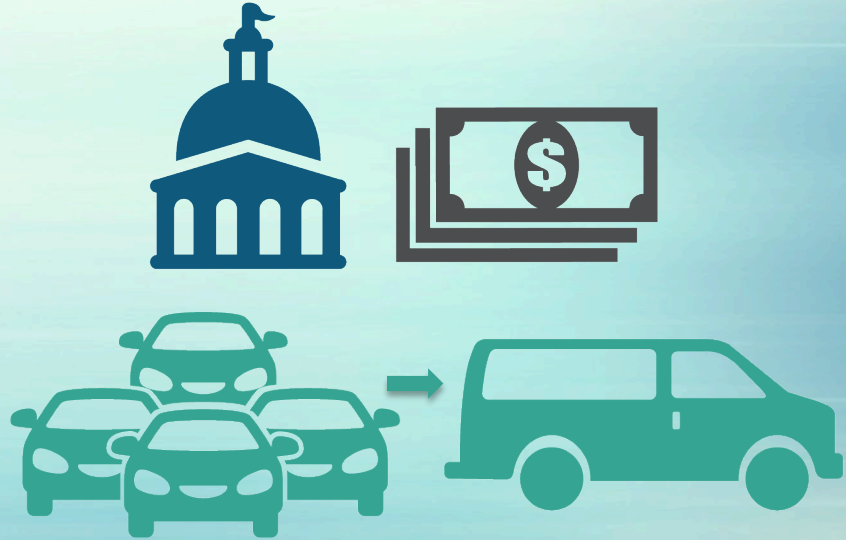
Proposed
2022 State Strategy for the State Implementation
Plan

August 12, 2022



Strategy Overview

- Transition away from combustion and reduce emissions to support attainment of the 70 ppb ozone standard
- Drive to Zero through:
 - regulations
 - incentives
 - voluntary programs



What's New Since January Draft

- Added Pesticide: 1,3-Dichloropropene Measure
- Expanded federal actions in aviation sector
- Added on-road mobile source reduction commitments for transportation conformity budgets
- Updated emissions reductions estimates
- Updated regulatory adoption & implementation schedules

Public Process to Date

July 2021:
Public
Workshop

Summer
2022:
Stakeholder
Meetings

October 2021:
Release 2022
State SIP
Strategy Draft
Measures, 2nd
Public
Workshop

Oct/Nov 2021:
Participated in
SJVAPCD &
SCAQMD
Control
Measure
Workshops

January
2022:
Release Draft
2022 State
SIP Strategy

February
2022:
3rd Public
Workshop,
Info Update
to Board

August 2022:
Release
Proposed
2022 State
SIP Strategy
and 4th Public
Workshop

Focused Outreach to Community Organizations



- Disadvantaged communities and people of color are disproportionately affected by pollution
- SIP measures will benefit communities
- Staff engaged with community-based organizations
- Public ideas and suggestions informed measure development

Status of Public Measure Suggestions

Public Measure Suggestion	Draft 2022 SSS	Proposed 2022 SSS
On-Road Heavy-Duty Vehicle Useful Life Strategy	✓	
Additional Incentive Programs Zero-Emission Trucks	✓	
Enhanced Transportation Choices		
Indirect Source Rule–Suggested Control Measure or Regulation	✓	
BACT/BARCT Determination		
Additional Building and Appliance Emission Standards		✓
Pesticide Regulation		✓
Enhanced Bureau of Automotive Repair Consumer Assistance Program		
Light-Duty Vehicle Fleet Regulation		

Proposed 2022 State SIP Strategy Measures

On-Road

- Advanced Clean Fleets Regulation
- Zero-Emission Trucks
- On-Road Motorcycle New Emissions Standards
- Clean Miles Standard*
- Enhanced Regional Emission Analysis in State Implementation Plans

Off-Road

- Tier 5 Off-Road Engine Standard
- Amendments to In-Use Diesel-Fueled Fleets Regulation
- Zero-Emission TRU Part II
- Commercial Harbor Craft*
- Cargo Handling Equipment
- Off-Road Zero-Emission Targeted Manufacturer Rule
- Clean Off-Road Fleet Recognition Program
- Spark-Ignition Marine Engine Standards

Primarily Federally-Regulated

- In-Use Loco Regulation
- Future Measures for Aviation Emissions Reductions
- Future Measures for OGV Emissions Reductions

Other

- Consumer Products Regulation Amendments
- Zero-Emission Standard for Space and Water Heaters
- Pesticides: 1,3-D



Proposed Measure Schedule

Measures	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Enhanced Regional Emission Analysis in SIPs																	
Clean Miles Standard	★																
Commercial Harbor Craft Amendments		★															
Amendments to the In-Use Off-Road Diesel Fueled Fleets		★															
Pesticides: 1,3-Dichloropropene Health Risk Mitigation		★															
On-Road Motorcycle New Emissions Standards		★															
Advanced Clean Fleets			★														
In-Use Locomotive Regulation			★														
Cargo Handling Equipment Amendments					★												
Clean Off-Road Fleet Recognition Program					★												
Tier 5 Off-Road Vehicles and Equipment					★												
Zero-Emission Standard for Space and Water Heaters					★												
Transport Refrigeration Unit Regulation Part 2						★											
Consumer Products Standards							★										
Future Measures for Aviation Emission Reductions							★										
Off-Road Zero-Emission Targeted Manufacturer Rule							★										
Future Measures for OGV Emission Reductions							★										
Zero-Emissions Trucks Measure								★									
Spark-Ignition Marine Engine Standards									★								



On-Road Mobile Sources

- Advanced Clean Fleets Regulation
- Zero-Emission Trucks
- On-Road Motorcycles New Emissions Standards
- Clean Miles Standard Regulation (Adopted)
- Enhanced Regional Emissions Analysis in SIPs



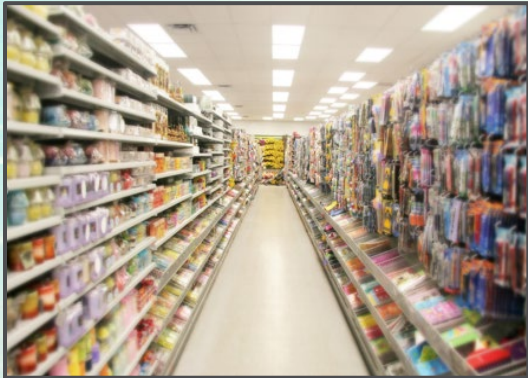
Off-Road Vehicles and Equipment

- Tier 5 Off-Road Engine Standards
- In-Use Off-Road Diesel Fuel Fleets Regulation Amendments
- Transport Refrigeration Unit Regulation – Part II
- Commercial Harbor Craft Amendments (Adopted)
- Cargo Handling Equipment Amendments
- Off-Road Zero-Emission Targeted Manufacturer Rule
- Clean Off-Road Fleet Recognition Program
- Spark-Ignition Marine Engine Standards



Non-Mobile Control Measures

- Consumer Products Regulation Amendments
- Zero-Emission Standards for Space and Water Heaters
- Pesticides: 1, 3-Dichloropropene

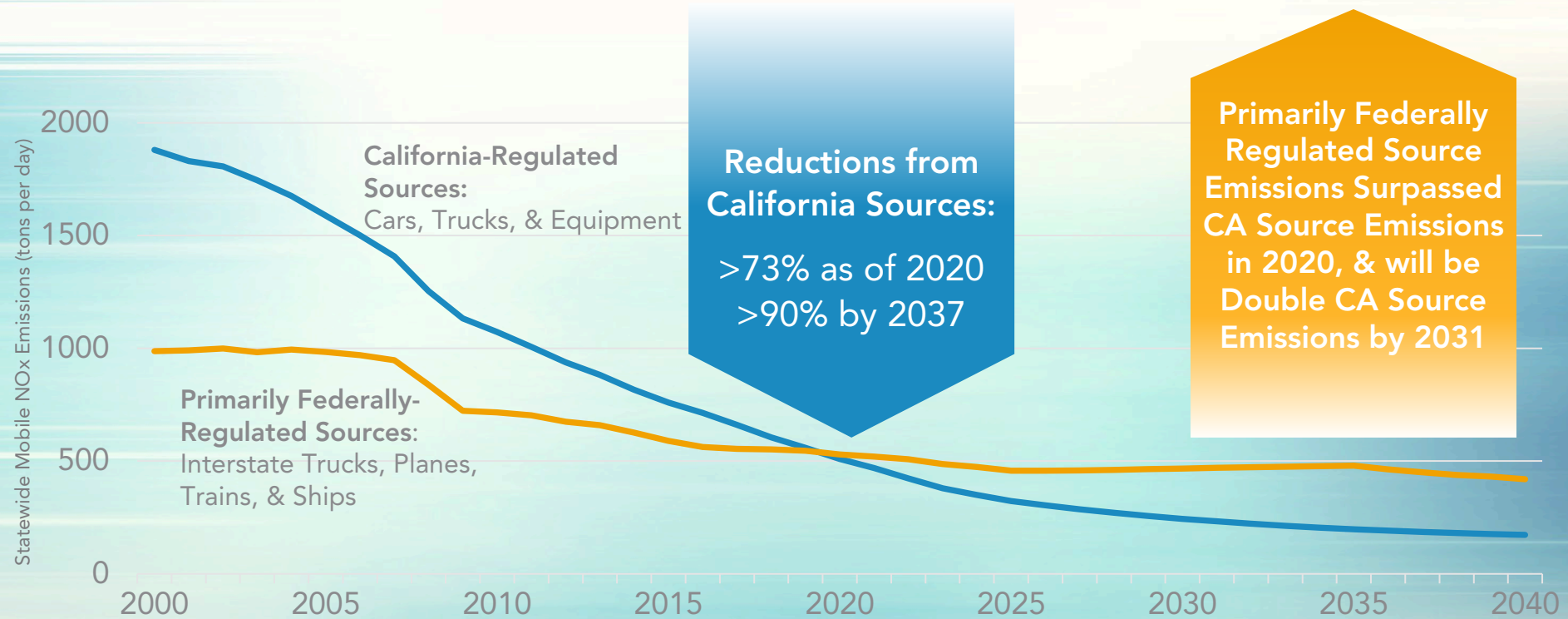


Sources Primarily Regulated at the Federal and International Level – CARB Measures

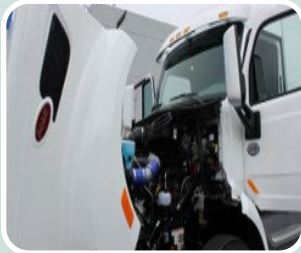
- In-Use Locomotive Regulation
- Future Measures for Aviation Emissions Reductions
- Future Measures for Ocean-Going Vessel Emissions Reductions



Federal Action Increasingly Critical



Federal Actions Needed



On-Road Heavy-Duty Vehicles

- Low-NOx Engine Standards
- Zero-Emission Engine Standards



Off-Road Equipment

- Tier V Standards
- Zero-Emission Standards Where Feasible



Locomotives

- More Stringent National Emission Standards
- Zero-Emissions Standards for Locomotives
- Address Unlimited Locomotive Remanufacturing



Ocean-Going Vessels

- More Stringent NOx and PM Standards Requirements
- Cleaner Fuel and Visit Requirements



Aviation

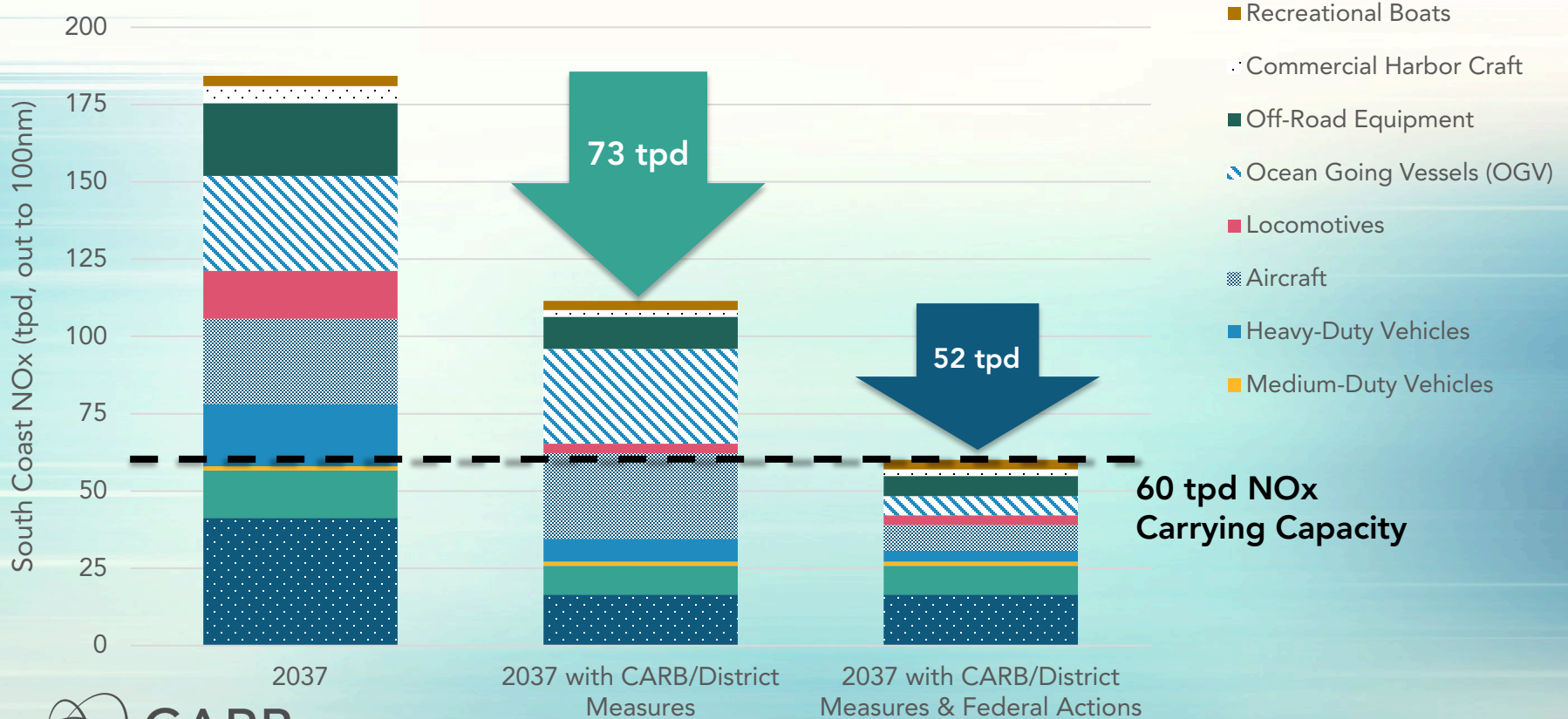
- More Stringent Engine Standards
- Cleaner Fuel and Visit Requirements
 - Zero-Emission Airport On Ground Support Requirements
- Airport Aviation Emissions Cap

Emissions Reduction Commitments

Nonattainment Area	2026 NOx (tpd)	2032 NOx (tpd)	2037 NOx (tpd)
Ventura County	0.3		
Eastern Kern County		1.8	
Sacramento Metro		6.1	
West Mojave Desert		20.6	
Coachella Valley			5.2
San Joaquin Valley			25.3
South Coast*			95.7

*Includes emissions reductions from Federal Actions Needed

Strategy Provides for South Coast Attainment



Economic Impact Analysis

Category of Cost or Benefits	Value
Total Amortized Cost of Control Measure Through 2037 (Billion 2021\$)	\$96.18
Average Annual Amortized Cost (Billion 2021\$)	\$8.84
Cumulative NOx Reduction (Million tons through 2037)	1.04
Average Annual Job Impacts (From 2023 through 2037)	-53,000
Cost-Effectiveness (\$ per ton of NOx)	\$92,000

August Workshop

- Held in conjunction with release of Proposed 2022 SSS
- Provided overview of Economic Analysis and update on 2022 SSS development including new measures
- Heard significant input from stakeholders



Public Workshop Feedback

Thank you!

- Zero-Emissions Trucks Measure
- In-Use Locomotive Regulation

More Opportunities

- Stronger pesticides commitment
- Accelerate Zero-Emission Trucks Measure Schedule
- BACT/BARCT Determinations
- Equitable transition to zero-emission future

Stronger Pesticides Commitment

- Advocates want a stronger pesticide measure
 - Broader DPR measure
 - Additional action under CARB authority
 - Targeted emissions reductions commitment



Accelerated Zero-Emission Trucks Measure



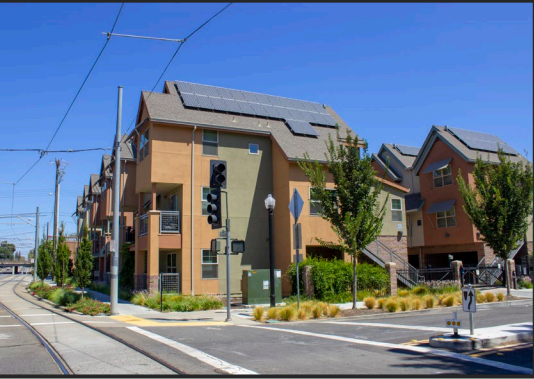
- Supportive of Zero-Emission Trucks Measure
- Want accelerated schedule
 - Adoption: 2028 → 2026
 - Implementation: 2030 → 2028

BACT/BARCT Measure

- Advocates want CARB to develop BACT/BARCT Determinations
- CARB continues to explore Statewide options for BACT/BARCT, and work closely with Districts to ensure Statewide consistency
- CARB evaluating ways a measure could meet EPA's SIP measure requirements



Equitable Transition to Zero-Emission Future

- Supportive of ZE measures
 - Advocate for equity in measure design and focused incentives for low-income populations
- 
- Incentives and coordinated focus on equity in Zero-Emission Space and Water Heater measure, and across complementary State/local efforts
 - Continue to identify and provide additional targeted incentive funding for transition to ZEVs

Summary

- Proposed 2022 State SIP Strategy identifies pathway to attaining 70 ppb 8-hour ozone standard across the State
- Districts are releasing SIPs that rely on measures in the Proposed 2022 State SIP Strategy
- Proposed 2022 State SIP Strategy meets SIP requirements
- 70 ppb ozone SIPs are due to U.S. EPA
- Staff will continue to work with the public to potentially incorporate additional measure suggestions through upcoming Board actions

Board Recommendation

- Adopt the Proposed 2022 State SIP Strategy and commitments to pursue SIP measures according to the defined schedule
- Certify the Final Environmental Analysis and Response to Environmental Comments
- Direct the Executive Officer to submit 2022 State SIP Strategy to U.S. EPA for inclusion in the California SIP alongside relevant District SIPs

2022 State SIP Strategy

Next Steps



Thank you