

# South Coast AQMD Regional Air Quality and Call to Action

*1710 Clean Truck Working Group  
January 25, 2022*





# OVERVIEW

- Our regions suffer from some of the worst air quality in the country
- Heavy Duty trucks are the largest source of smog-forming emissions
- The technology for trucks over 90% cleaner than current trucks is available and cost-effective
- Delaying deployment is causing significant health impacts

# BACKGROUND



## ~17 Million People

Our jurisdiction would be 5th largest state after New York.



## Environmental Justice

Nearly 67% of CA EJ population lives in South Coast region.



## Economy

CA's economy is 5<sup>th</sup> largest in the world. Southern CA Ports are the gateway to the nation.

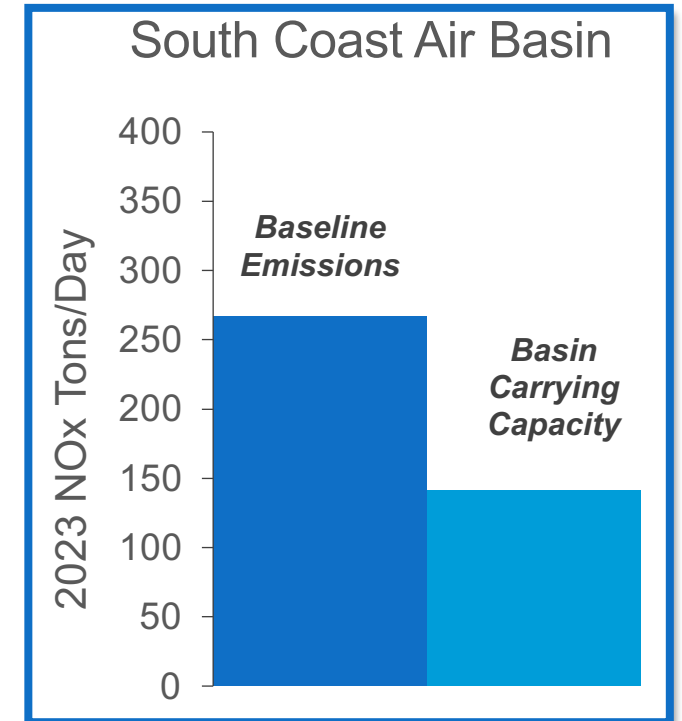


## Climate

Year-round fire season, drought, and heat-waves impact air quality, public health and the economy.

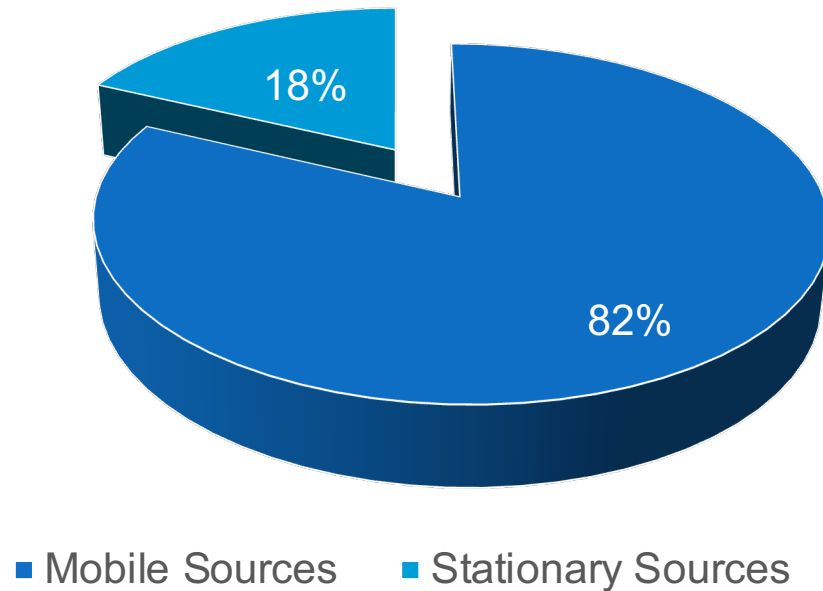
# South Coast AQMD Attainment Challenges - Upcoming Attainment Deadlines

Standard*	Concentration	Latest Attainment Year
2015 8-hr Ozone	70 ppb	2037
2008 8-hr Ozone	75 ppb	2031
1997 8-hr Ozone	80 ppb	2023
1979 1-hr Ozone	120 ppb	2022
2012 Annual PM2.5	12 $\mu\text{g}/\text{m}^3$	2025
2006 24-hr PM2.5	35 $\mu\text{g}/\text{m}^3$	2019

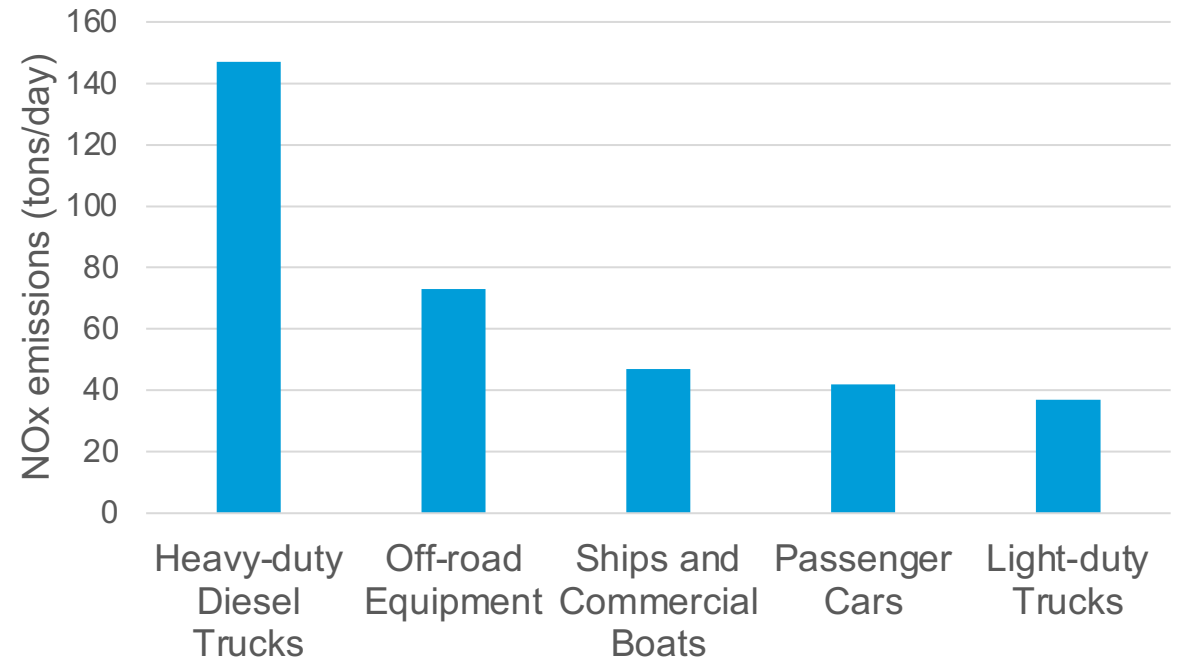


# ADDRESSING TRUCK EMISSIONS are CRITICAL to ACHIEVING AIR QUALITY GOALS

2019 NOx Emissions



Top Sources of NOx in South Coast AQMD



Transition to zero and near-zero emission technologies is essential to meeting air quality goals

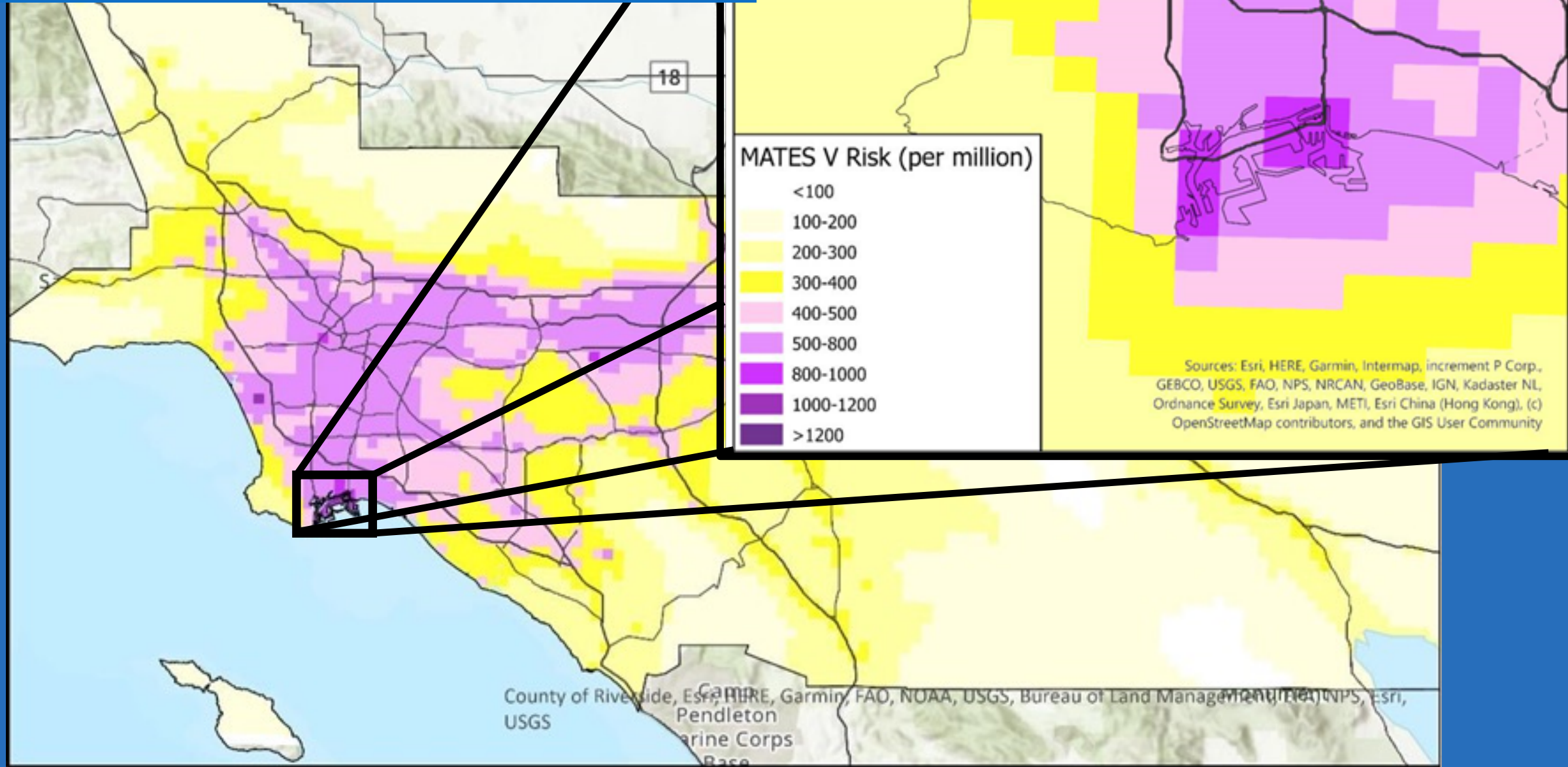
# **COSTS OF NOT MEETING CLEAN AIR ACT REQUIREMENTS:**

## ***NEED FOR REVISED NO<sub>x</sub> EMISSION STANDARD FOR HEAVY-DUTY TRUCKS***

1. Continued poor air quality for our residents
  - Premature death, higher hospitalization rates, increased asthma, more severe asthma attacks
  - Tens of billions of dollars per year in monetized health impacts
  - Impact is greater in environmental justice communities
2. Potentially millions of dollars in extra costs on major sources every year
3. Potentially billions of dollars in lost transportation revenue affecting tens of billions of dollars in projects
4. Potentially significant curtailing of economic activity



# Multiple Air Toxics Exposure Study (MATES V)



# STATE OF TECHNOLOGY

- South Coast AQMD leading efforts to commercialize heavy-duty, class 8 Zero Emission Trucks – Volvo, Daimler, Petebilt, Kenworth, BYD
- Scale of Zero Emission Truck commercialization is in infancy





# On-Road Heavy-Duty Scenario

HD Omnibus & Fed. 0.02 g

HD ZEV (w/Accelerated Turnover)

20%

24%

27%

48%

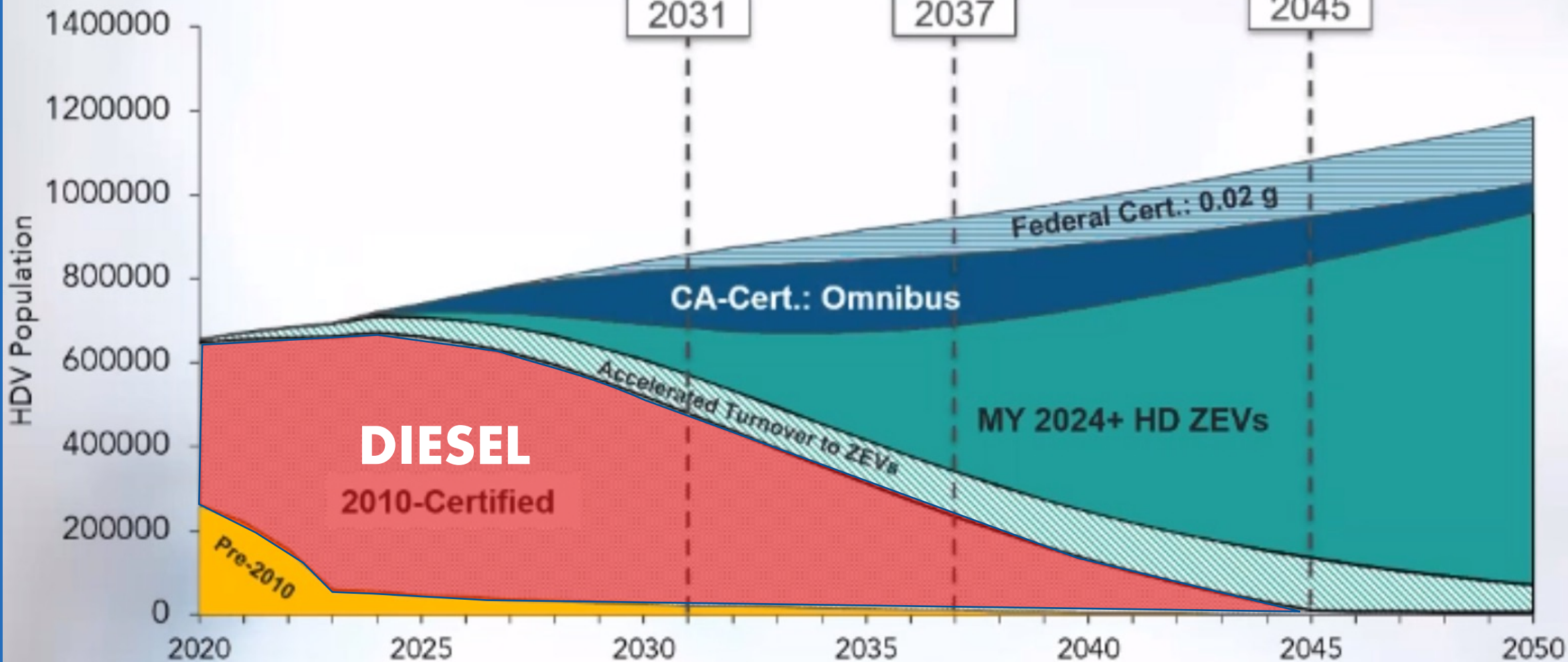
22%

77%

2031

2037

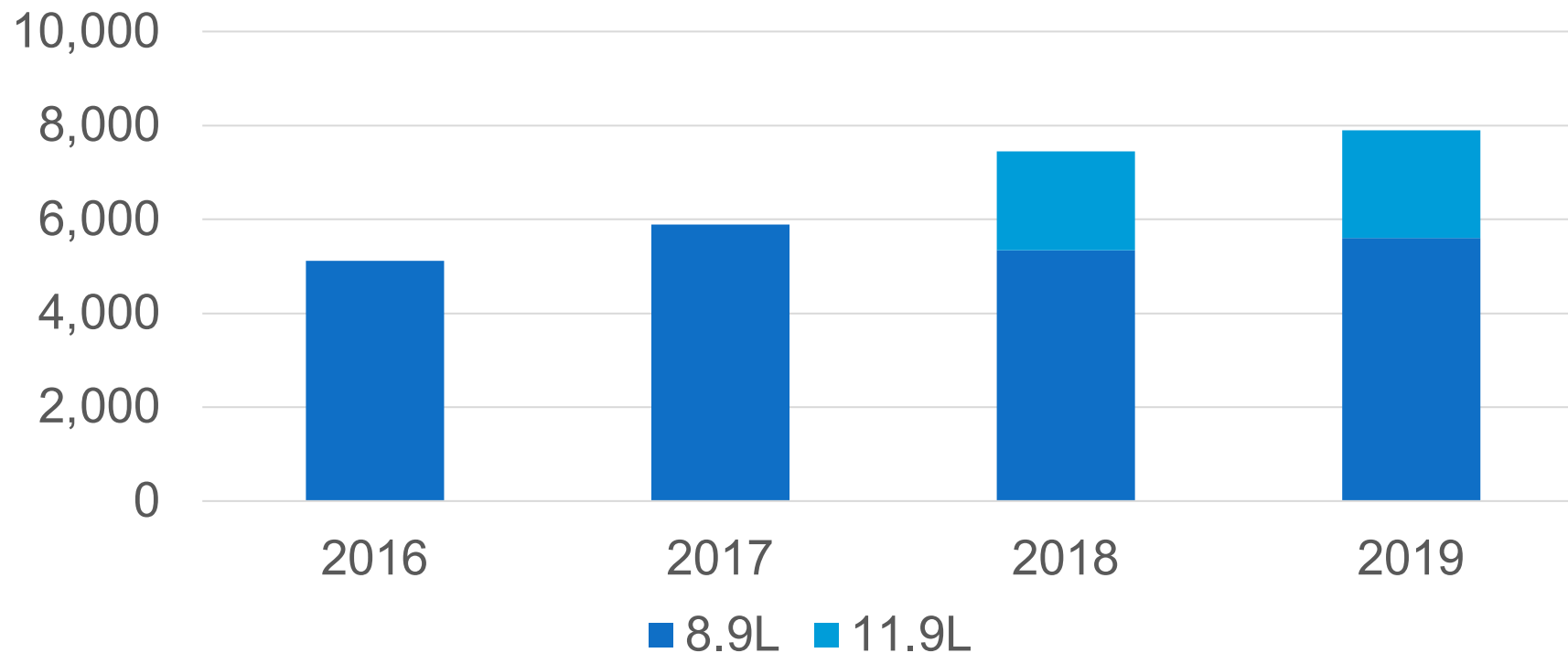
2045





## NEAR-ZERO ENGINES

- 8.9L engine certified at 0.02 g/bhp-hr NOx in 2016
- 12L engine certified at 0.02 g/bhp-hr NOx in 2018



# SUMMARY

- Diesel emissions from trucks represent a significant on-going health concern, especially in disadvantaged communities
- South Coast AQMD is leading the state and nation in commercializing Zero Emission class 8 trucks
- The scale to commercialize and adopt ZETs (incl. infrastructure) is not on pace to meet our air quality goals
- NZE offers near-term, lower cost emission reductions

