

# Transportation Emissions



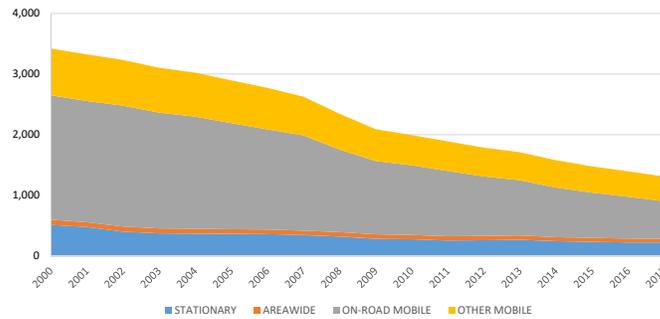
MARCH 04, 2020

PRESENTATION TO THE SENATE ENVIRONMENTAL QUALITY COMMITTEE AND  
SENATE TRANSPORTATION COMMITTEE

## Air Quality Successes – Criteria Pollutants

- NOx emissions have steadily declined since 1970s
- Reductions are due to improvements in vehicle efficiency and advancements in stationary source engine and stack emission control technologies

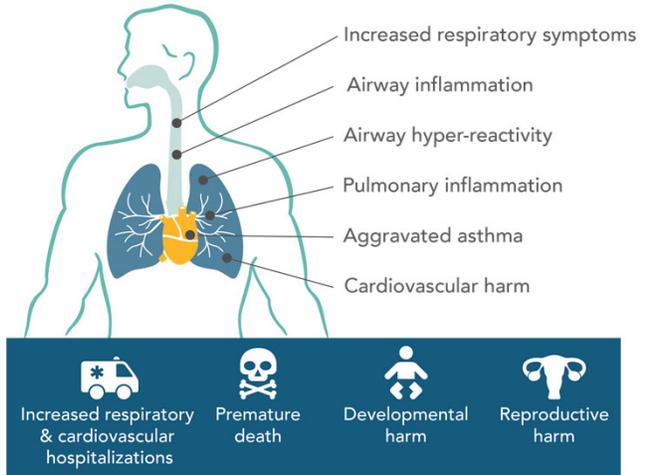
NOx Statewide Emissions Trend (tons/day)



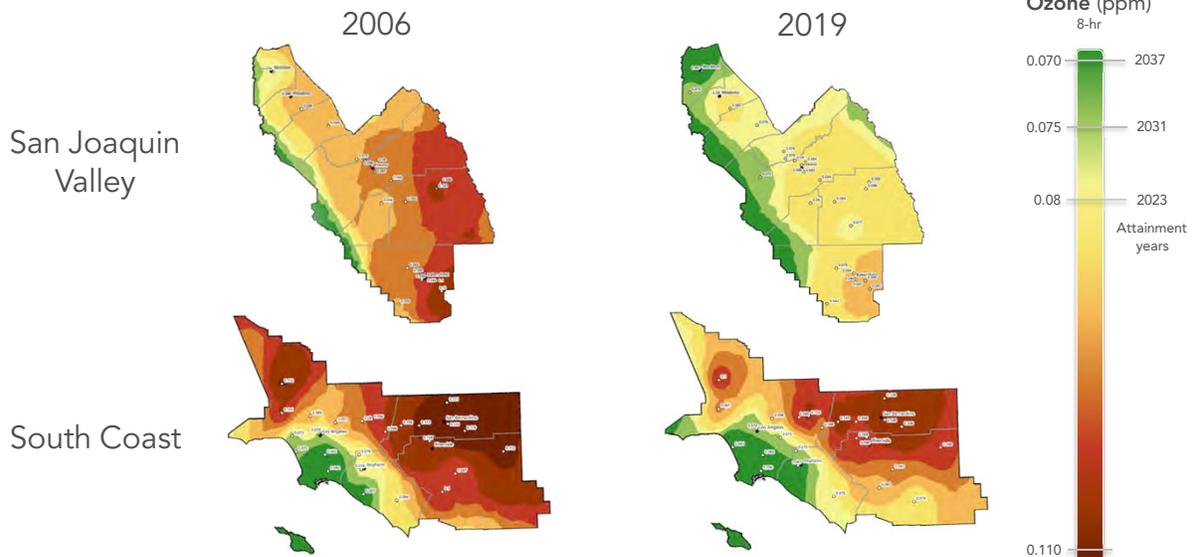
# Health Impacts

Reducing NO<sub>x</sub> emissions is important because NO<sub>x</sub> is a precursor to ozone, a smog-forming pollutant.

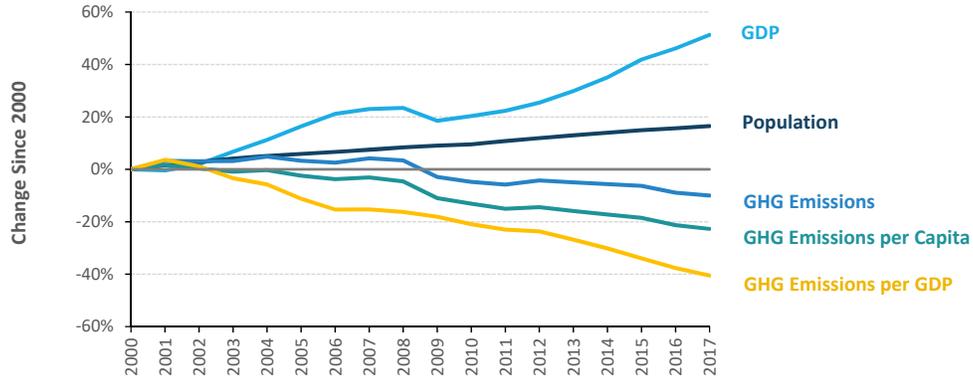
## Health Risks from Ozone Pollution



# Ozone Progress

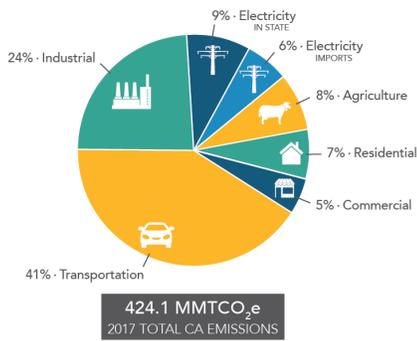


# Greenhouse Gas Emission Trends

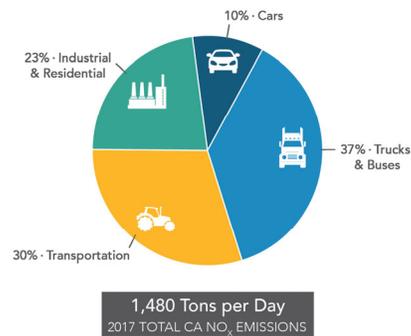


Source: 2019 Edition, California Greenhouse Gas Emission Inventory: 2000-2017

# Transportation Sector: Largest source of GHG and NOx Emissions



Source: 2019 Edition, California Greenhouse Gas Emission Inventory: 2000-2017



Source: CARB Emission Inventory

## Transportation Sector: Targets for Pathway to Zero-Carbon

### Widespread Electrification

- **By 2035:** 100% new car sales are ZEVs; All school buses, marine port & airport equipment are ZEVs
- **By 2045:** All passenger vehicles on the road are ZEVs



### Increased Transportation Options to Reduce VMT

- **By 2035:** Reduce vehicle miles traveled per capita by 25%
- **By 2045:** High-quality, efficient travel options for all Californians

## Light-Duty Vehicle Regulations that Impact ZEVs

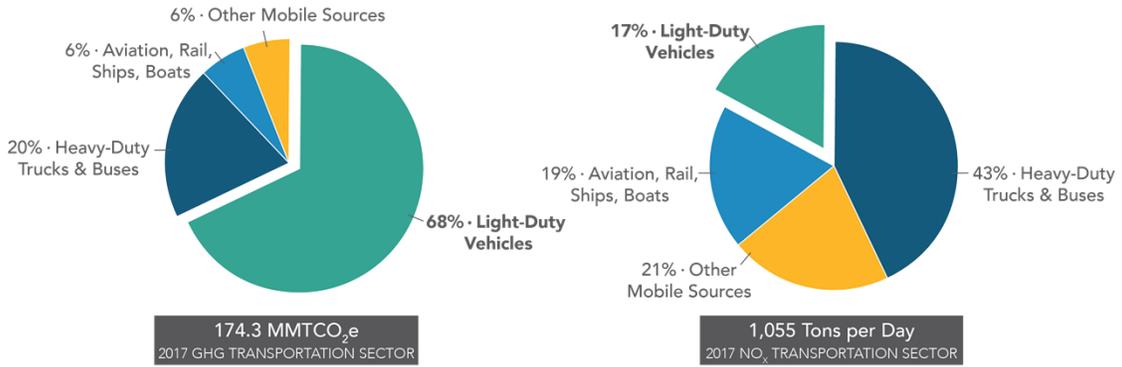
### Advanced Clean Cars II

- **Goal:** Reduce GHG emissions and increase ZEVs from automakers beyond 2025  
Reduce NOx emissions to help attain Ozone Standards in 2031 in South Coast
- **Method:** Increased requirements for ZEVs, and lowered GHG and criteria fleet requirements

### Clean Miles Standard

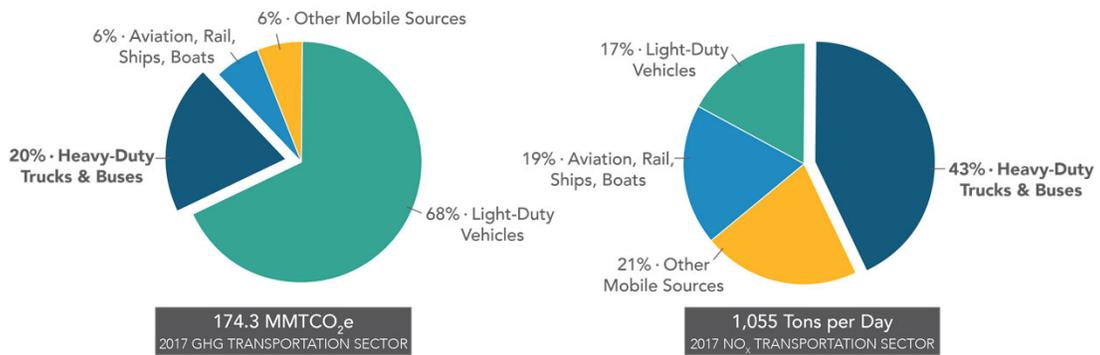
- **Goal:** Reduce emissions, promote ZEVs, and reduce VMT within ride-hailing fleets
- **Method:** Set annual GHG targets and minimum required electric VMT

# GHG and NOx Emissions from Light-Duty Vehicles



Source: 2019 Edition, California Greenhouse Gas Emission Inventory: 2000-2017

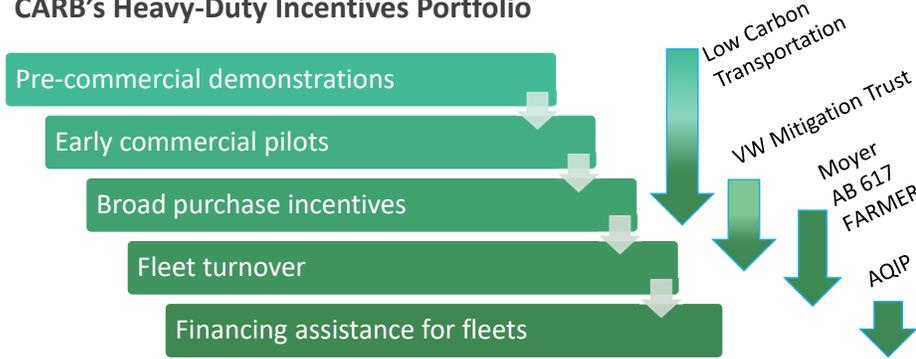
# GHG and NOx Emissions from Heavy-Duty Vehicles



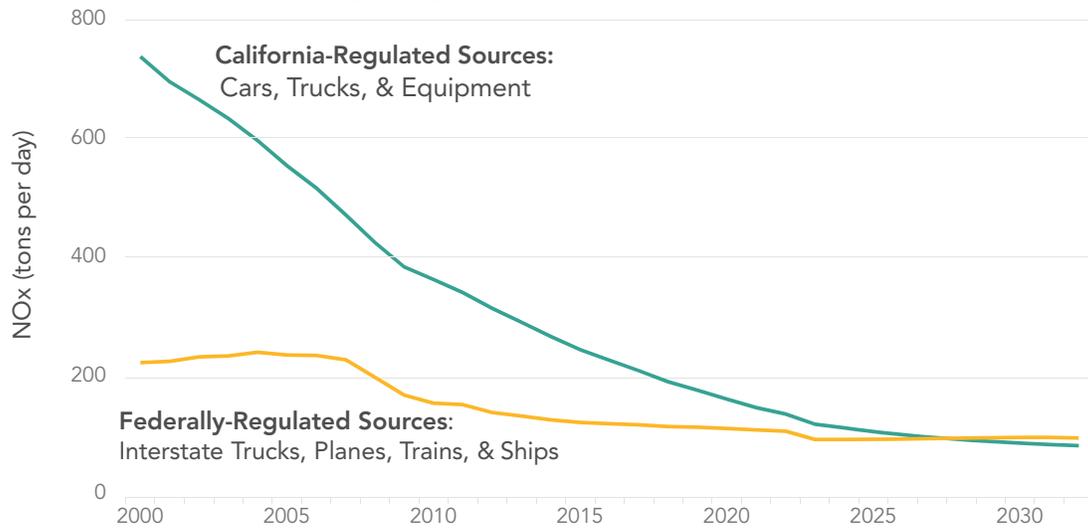
Source: 2019 Edition, California Greenhouse Gas Emission Inventory: 2000-2017

# Heavy-Duty Vehicles and Freight Incentives

## CARB's Heavy-Duty Incentives Portfolio

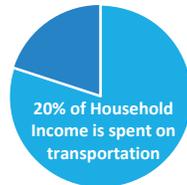


# South Coast Highlights Need for Federal Action

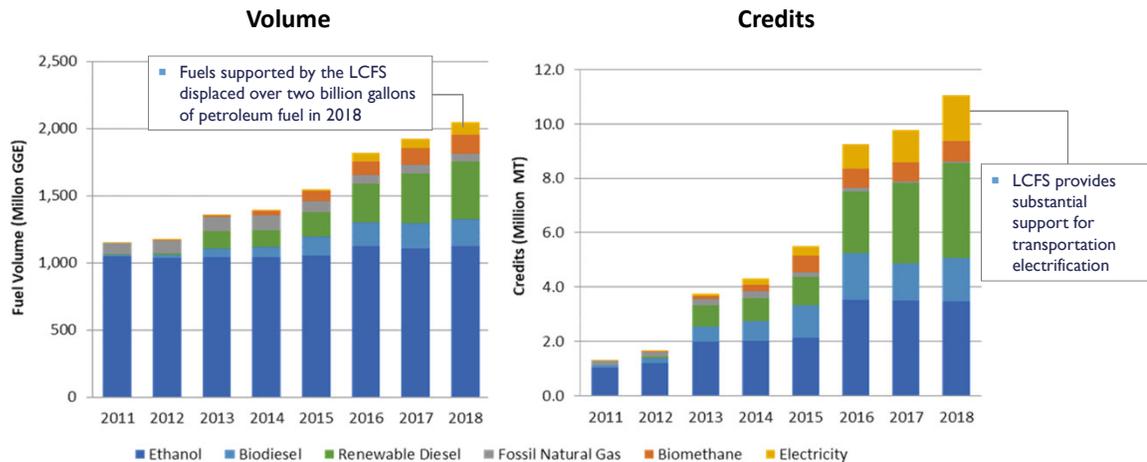


## Beyond ZEVs – Reducing VMT

- Even 100 percent ZEVs aren't sufficient to achieve air quality and GHG goals. VMT reduction is increasingly important.
- Expand travel choices that reduce the need to drive alone.
- Design our communities in a way that makes it easy, convenient, and safe for people to choose these options
- Align state policies and programs to support reducing VMT



## Low Carbon Fuel Standard Supports Diverse and Growing Alternative Fuel Pool



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Thank You