

# Industry

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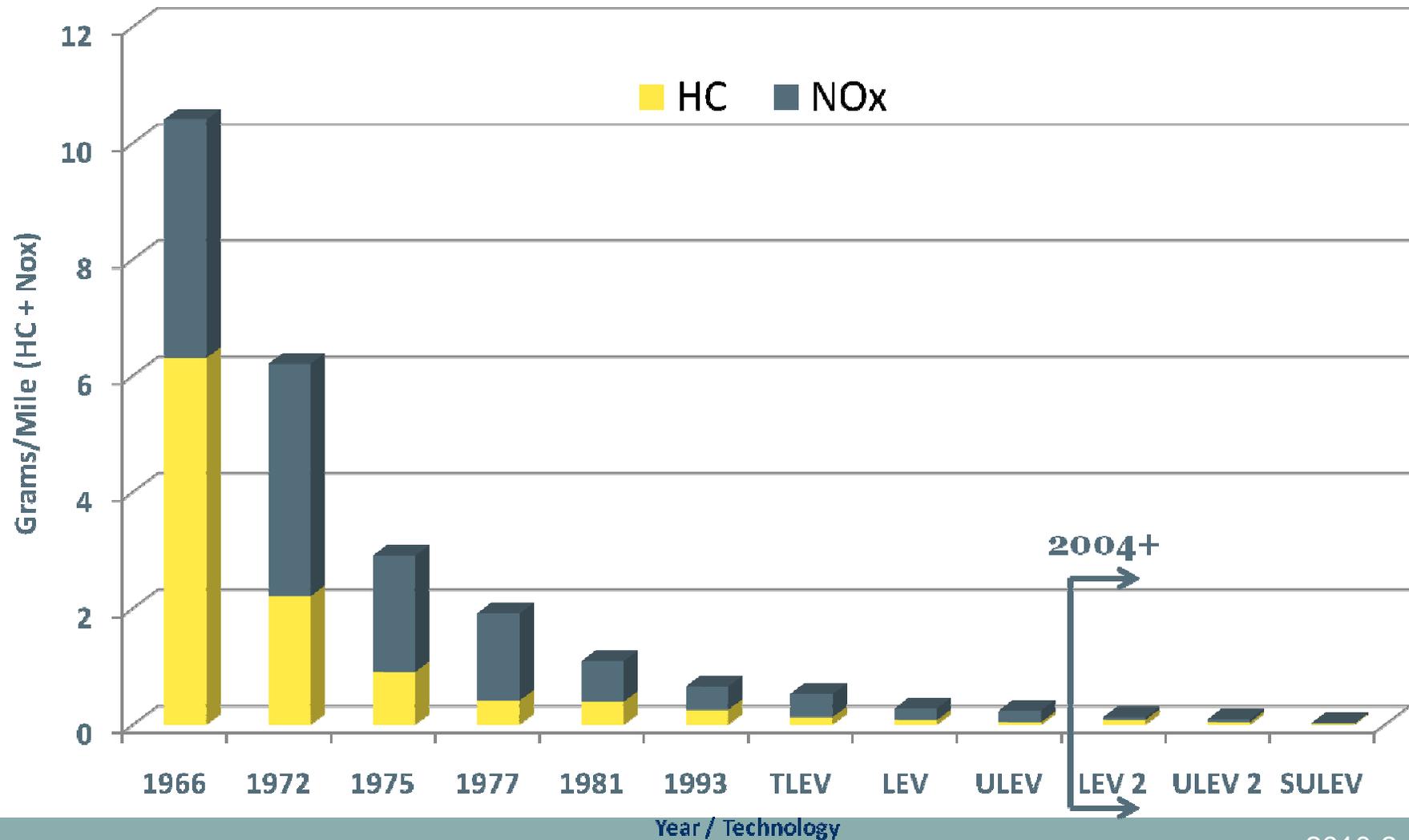
**ALLIANCE**

**AIAM**

**EMA**

# 30+ Years of Progress

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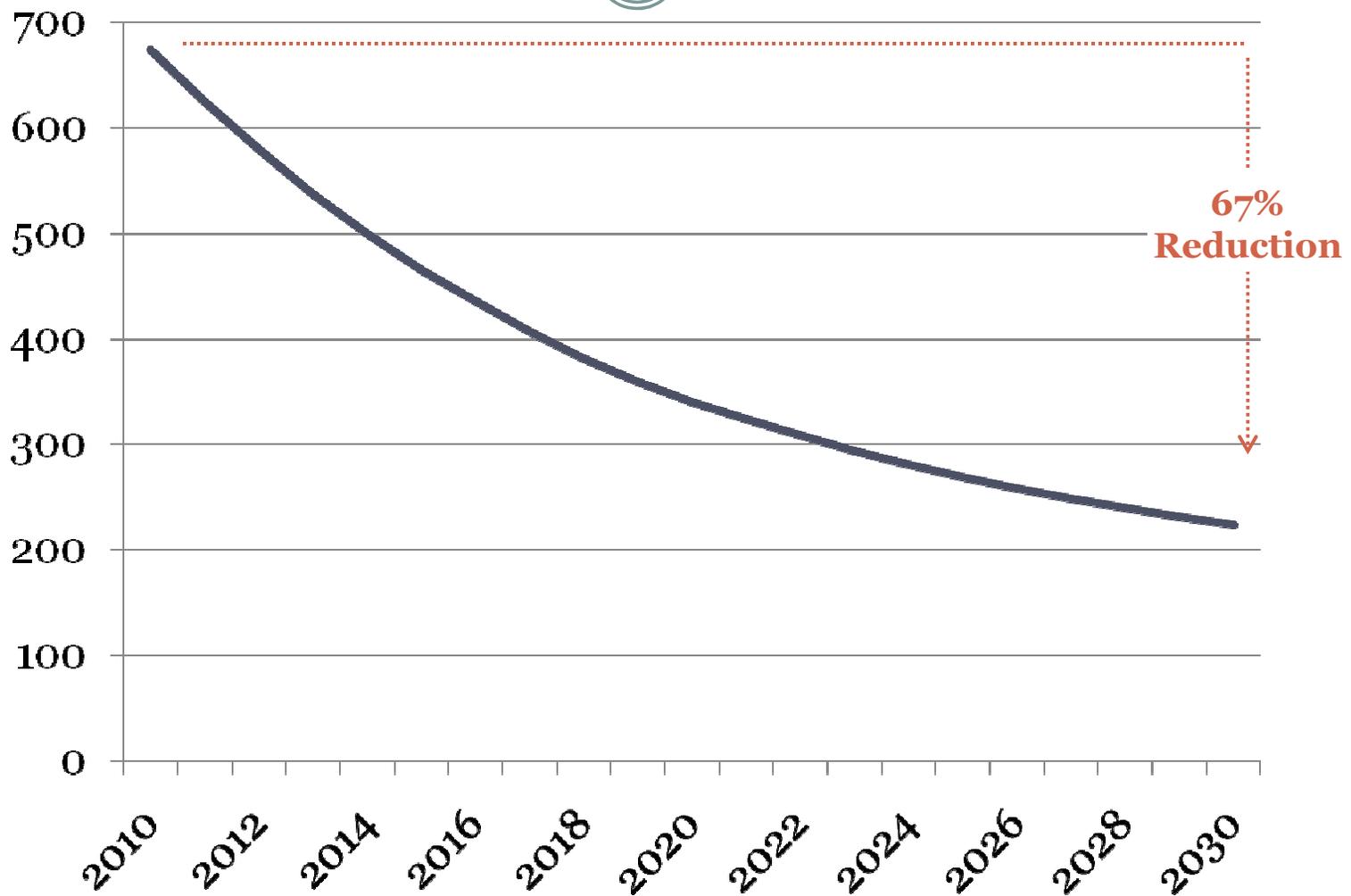
# Requirements

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- Durability
- On-Board Diagnostics
- Evaporative Emissions
- Certification
- In-Use Testing
- Warranty

# Light-Duty Vehicles: LEV II 2010-2030

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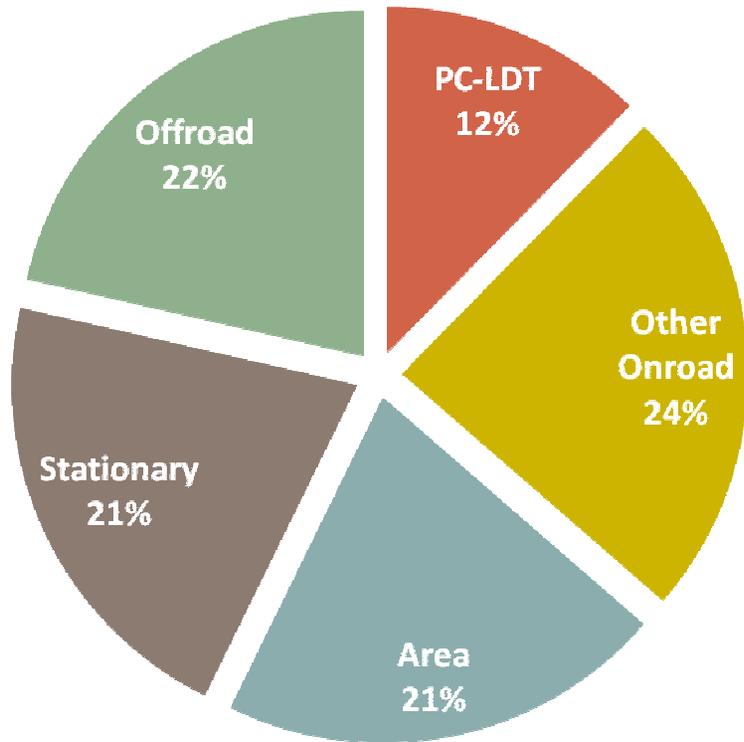


# California Criteria Emissions 2015-2030

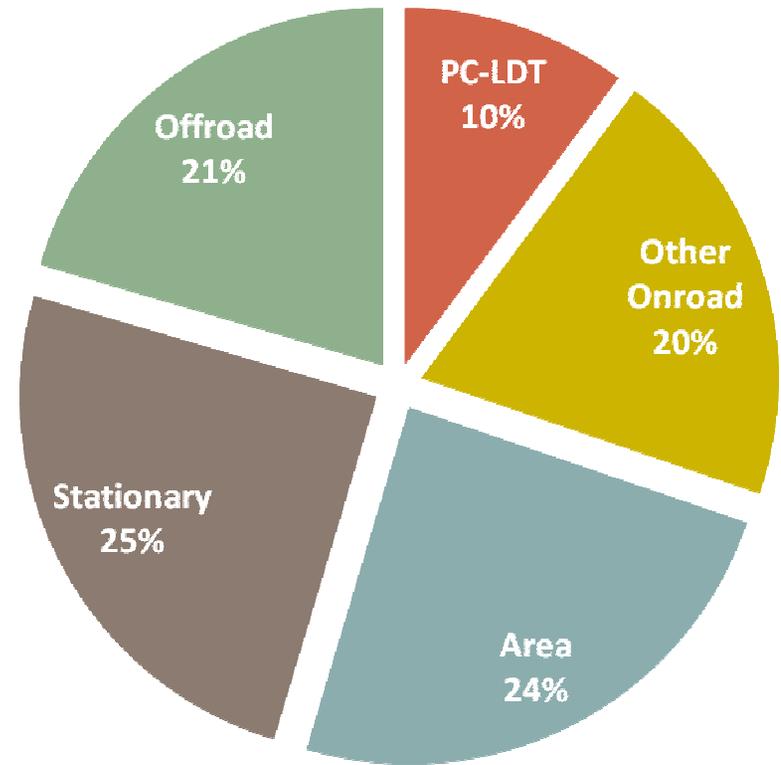
## LEV II

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**2015**



**2020**

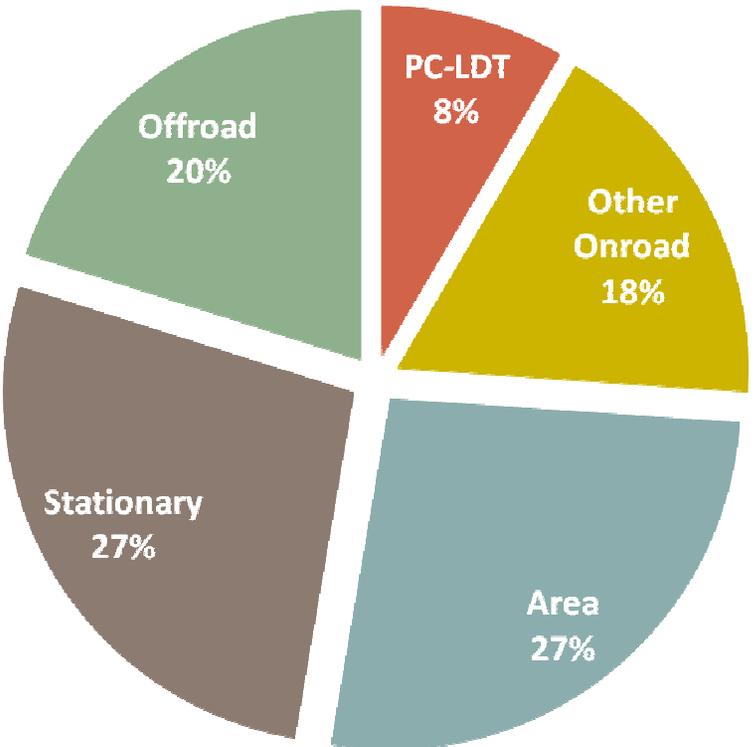


# California Criteria Emissions 2015-2030

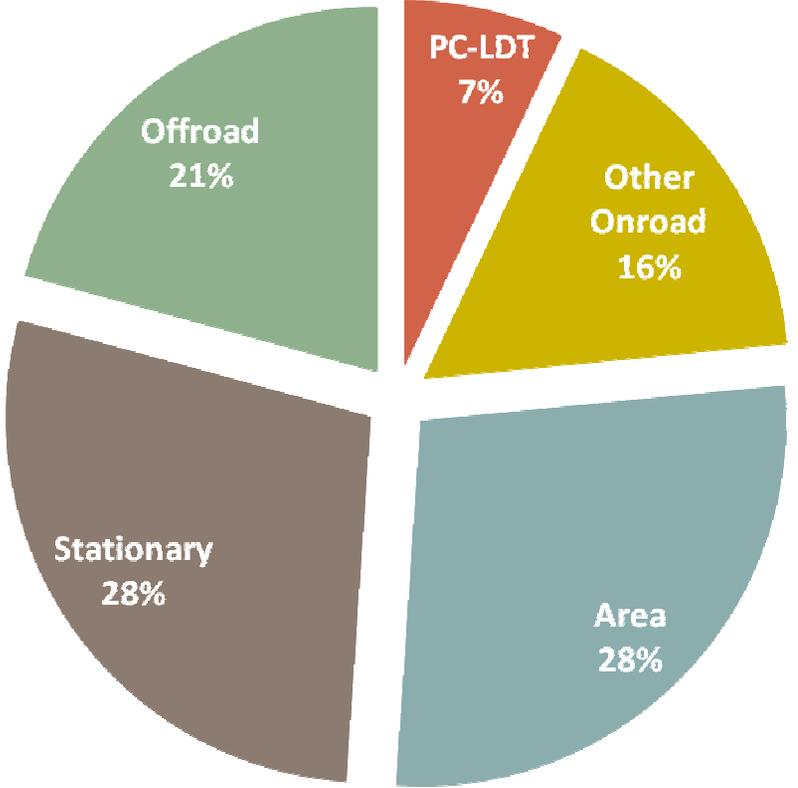
## LEV II

6

2025



2030



# Still Working

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- Lower fleet average emissions
- Lower evaporative standards
- Lower SFTP Standards
- Longer durability
- Maintain low PM emissions

# Challenges

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- Scarce resources
- Extremely low emissions very difficult to reduce
- ZEV Mandate
- GHG Emission Requirements
- OBD requirements

# Particulate Matter Standard

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- Support maintaining low PM levels
- Low levels are difficult to measure
  - Non-vehicle emissions
  - Test-to-test variability
  - Lab-to-lab variability
  - Vehicle-to-vehicle variability
- Continue working with ARB to ensure measurement issues are addressed

# Evaporative Emissions

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- Support goal of extending current PZEV technology to light-duty fleet, but must address:
  - Non-fuel emissions
  - E10 cert fuel
- 0.15 gram per test not consistent with goal
- Robust test program critical to determine appropriate standards

# SFTP

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- SFTP intended to address off-cycle emissions by calibration changes (FTP sets hardware standards)
- Agree to the comparable stringency for SFTP as for FTP
- Agree to change of compliance requirements from 4k demonstration to 150k durability
- Industry supports 2 composite based approaches
- Consider the interactions of future technologies and GHG requirements