Advanced Clean Cars II Regulations
Informational Update
May 28, 2020
ACC II Rules Are Needed

California’s climate and air quality challenges still require deep reductions from light-duty vehicles.

2017 Statewide GHG Emissions
Total = 424 MMTCO2e

Other Sectors 59%
Light-Duty 28%
Medium-Duty 2%
Heavy-Duty 7%
Off-Road Mobile 4%

2017 Statewide NOx Emissions
Total = 1294 tons per day

Other Sectors 20%
Light-Duty 13%
Medium-Duty 6%
Heavy-Duty 26%
Off-Road Mobile 35%
Early Reductions Are Critical

Preventing Irreversible Climate Impacts

Reducing Respiratory Illnesses
Role of Advanced Clean Cars II

Contribute to SIP Ozone Targets

LEV Criteria
Air Quality Improvements

LEV GHG
Greenhouse Gas Reductions

ZEV Technology Advancement

Contribute to SB 32 and Carbon Neutrality Targets
ACC II Objectives

1. Maximize criteria and GHG emission reductions from combustion vehicles
   - Increase stringency
   - Real-world reductions

2. Accelerate transition to zero emission vehicles
   - Improving ZEVs for consumers
   - Increase market share of ZEVs
Maximize Reductions from Combustion Vehicles

Increase Stringency
- More stringent criteria and GHG fleet average
- Robust PM emission control
- Optimize emission control for heavier vehicles

Real-World Reductions
- Align GHG standards to real-world performance
- Better control of engine start emissions
- Address unique challenges for PHEV engine start emissions
Increase Stringency: Robust PM Emission Control

More than 80% of vehicles tested by CARB already below 3 mg/mile on the US06 cycle
Increase Stringency: Optimize Emission Control for Heavier Vehicles

- Some medium-duty vehicles qualify to use either chassis or engine testing for certification
  - Ensure equivalency between standards
- Explore effects of higher loads and towing on emissions
- Evaluating in-use standards for this category
Real-World Reductions: Better Control of Engine Start Emissions

- Real-world cold start emissions can exceed lab test emissions due to:
  - Shorter initial idle
  - Intermediate soak duration
- Implement regulations for better control of cold start emissions

Cold Starts
>70% of criteria emissions
Real-World Reductions: Unique Challenges for PHEV Starts

Car PHEVs
- High power start emissions similar to certification value

Truck/SUV/Minivan PHEVs
- High power start emissions significantly higher than certification standard
Improving ZEVs for Consumers

- Warranty and durability requirements
- Add vehicle and battery state-of-health monitoring
- Raise minimum requirements for PHEVs to earn ZEV reg credits
- Standardize fast charging port
Increase Market Share of ZEVs

- Significantly increase ZEV reg requirements and GHG standards
- Limit ZEV credit life to increase certainty on future sales volumes

Preliminary Updated VISION Scenarios
Additional Policies Also Needed to Reduce Transportation Emissions

• Increase non-regulatory support for ZEV market development
• Continue reducing carbon intensity of liquid fuels
• Collaborate with other agencies to develop policies that influence vehicle purchases and usage
The Road Ahead

We are here
ACC II
Informational Item
May 2020

Workshops
Beginning
Summer/Fall 2020

Preliminary Proposal
Winter 2021

Proposed Regulation
Spring 2021

Staff Report
Fall 2021

Board Hearing
December 2021

THANK YOU