

AIR RESOURCES BOARD SYMPOSIUM ON CALIFORNIA'S DEVELOPMENT OF ITS PHASE 2 GREENHOUSE GAS EMISSION STANDARDS FOR ON-ROAD HEAVY-DUTY VEHICLES

April 22, 2015
9:00 am – 5:30 pm

South Coast Air Quality Management District, Auditorium
21865 Copley Drive Diamond Bar, California

Note: This symposium will be webcast; the webcast link is at:
<http://www.aqmd.gov/home/library/webcasts>.

Questions can be submitted during the webcast to Phase2@arb.ca.gov.
Staff will forward questions to the panels as time allows.

AGENDA

Symposium Overview

California has made substantial progress in reducing emissions from all mobile sources, with many vehicles sold today being over 90 percent cleaner than those sold just a decade ago. However, despite this progress, these vehicles and equipment remain major contributors to statewide emissions of oxides of nitrogen (NOx), greenhouse gases (GHG), and diesel particulate matter (diesel PM). Compared to today's levels, a 90 percent reduction in NOx emissions by 2031 will be necessary to achieve compliance with the current federal ozone standards, and an 80 percent reduction in GHG emissions by 2050 will be necessary to meet California climate targets. Significant improvements in efficiency and the use of renewable fuels are also needed to meet the Governor's 2030 petroleum reduction target of 50 percent. Additionally, continued reductions in diesel PM and air toxics are necessary to reduce localized health risks and protect public health. Achieving each of these goals will require a transition to zero and near-zero emission technologies in all mobile sources.

Today's objective is to foster an open discussion on reducing GHG emissions from on-road heavy-duty vehicles prior to the U.S. Environmental Protection Agency's and the National Highway Traffic Safety Administration's release of proposed federal Phase 2 standards, expected in the spring of 2015. California has been cooperatively working with both federal agencies in the development of the federal Phase 2 standards. A critical component for California is the need to ensure that the State maintains its progress in achieving NOx reductions necessary to achieve federal air quality targets. Today's discussion will include an assessment of technology options, their emission reduction potential, and their associated costs, and will help to inform California's consideration of its Phase 2 program, expected in late 2016 or 2017.

9:00 – 9:10 Welcome and Opening Remarks

- **Dr. Alberto Ayala, Deputy Executive Officer – ARB**

9:10 – 11:00 California's Climate Challenges: Reducing GHG Emissions from the Heavy-Duty Vehicle Sector While Making Progress on NOx

Presentations and Discussion

- **Moderated by Henry Hogo**
Assistant Deputy Executive Officer, Mobile Source Division, Science and Technology Advancement – South Coast Air Quality Management District

California Perspective – The Regulatory Environment and Trucking Industry

- **Inder Atwal, Air Pollution Specialist – ARB**

California Perspective – The Need for Further GHG Emission Reductions

- **Cory Parmer, Air Resources Engineer – ARB**

NESCAUM on Section 177 States' Perspective

- **Dr. Paul Miller, Deputy Director and Chief Scientist – Northeast States for Coordinated Air Use Management**

U.S. Department of Energy: SuperTruck Program

- **Roland Gravel, Technology Development Manager – U.S. Department of Energy**

Session Wrap-up

11:00 – 12:25 Phase 2 Advanced GHG Technologies for Engines, Powertrains, and Vehicles
Presentations and Discussion

ARB Technology Assessments

- **Moderated by Kim Heroy-Rogalski, P.E.**
Manager, Strategic Planning and Development Section – ARB

Engine/Powerplant Optimization and Vehicle/Trailer Efficiency

- **Alex Santos, Staff Air Pollution Specialist – ARB**

Heavy-Duty Hybrid Vehicles

- **Robert Nguyen, Staff Air Pollution Specialist – ARB**

Session Wrap-up

Non-Governmental Organization Perspectives

- **Moderated by Erik White**
Chief, Mobile Source Control Division – ARB

Union of Concerned Scientists

- **Don Anair, Research and Deputy Director – UCS**

International Council on Clean Transportation

- **Dr. Nic Lutsey, Program Director – ICCT**

NGO session will continue after lunch

12:25 – 1:15 **Break for Lunch**

1:15 – 4:15 **Phase 2 Advanced GHG Technologies for Engines, Powertrains, and Vehicles**
(continued)

Non-Governmental Organization Perspectives (continued)

CALSTART

- Bill Van Amburg, Senior Vice President – CALSTART

Session Wrap-up

Engine and Vehicle Manufacturer Perspectives

- Moderated by Michael W. Carter
Chief, Mobile Source Regulatory Development Branch – ARB

Truck and Engine Manufacturers Association

- Timothy A. Blubaugh, Executive Vice President – EMA

Cummins, Inc.

- Dr. Wayne Eckerle, Vice President of Corporate Research and Technology – Cummins

Volvo Group Truck Technology North America

- Anthony Greszler, Vice President of Government and Industry Relations – Volvo

Daimler Trucks North America

- Dr. David Kayes, Executive Engineer, Compliance and Regulatory Affairs Department – DTNA

Ford Motor Company

- Cynthia Williams, Associate Director, Sustainability Environment and Safety Engineering – Ford

AJW, Inc. representing Advanced Engine Systems Institute

- Christopher J. Hessler, Founding Partner – AJW, Inc.

Wabash National Corporation

- Gus Sumcad, Director of Engineering – Wabash

Session Wrap-up

4:15 – 4:25 **Break**

4:25 – 5:10 **Trucking Fleet Experiences: Implementing Advanced Technologies Today**
Presentations and Discussion

- Moderated by Stephan Lemieux

Manager, On-Road Heavy-Duty Diesel Section – ARB

Mesilla Valley Transportation

- Jose Figueroa, Recruiting and Retention Manager – MVT
- Nestor Vidaurri Jr., Service and Programs Administrator – MVT

Rain For Rent

- Samuel Kingston, Corporate Fleet Manager – Rain for Rent

Session Wrap-up

5:10 – 5:20 Next Steps and Symposium Wrap-Up

- Kim Heroy-Rogalski, P.E.,
Manager, Strategic Planning and Development Section – ARB

5:20 – 5:30 Closing Remarks

- Dr. Alberto Ayala, Deputy Executive Officer – ARB

END at 5:30