

A large, faint watermark of the United States Environmental Protection Agency (EPA) logo is centered in the background. The logo features a stylized flower with three leaves and a circular seal containing the text "UNITED STATES ENVIRONMENTAL PROTECTION AGENCY".

**Leila Cook**  
Associate Director,  
Office of Transportation and Air Quality

2014 NACAA Fall  
Membership  
Meeting  
October 19-22, 2014



# Overview

- Fuel Economy Trends Report
- Regulatory Update
- MOVES2014 Update
- EPA Ports Initiative
- DERA Update



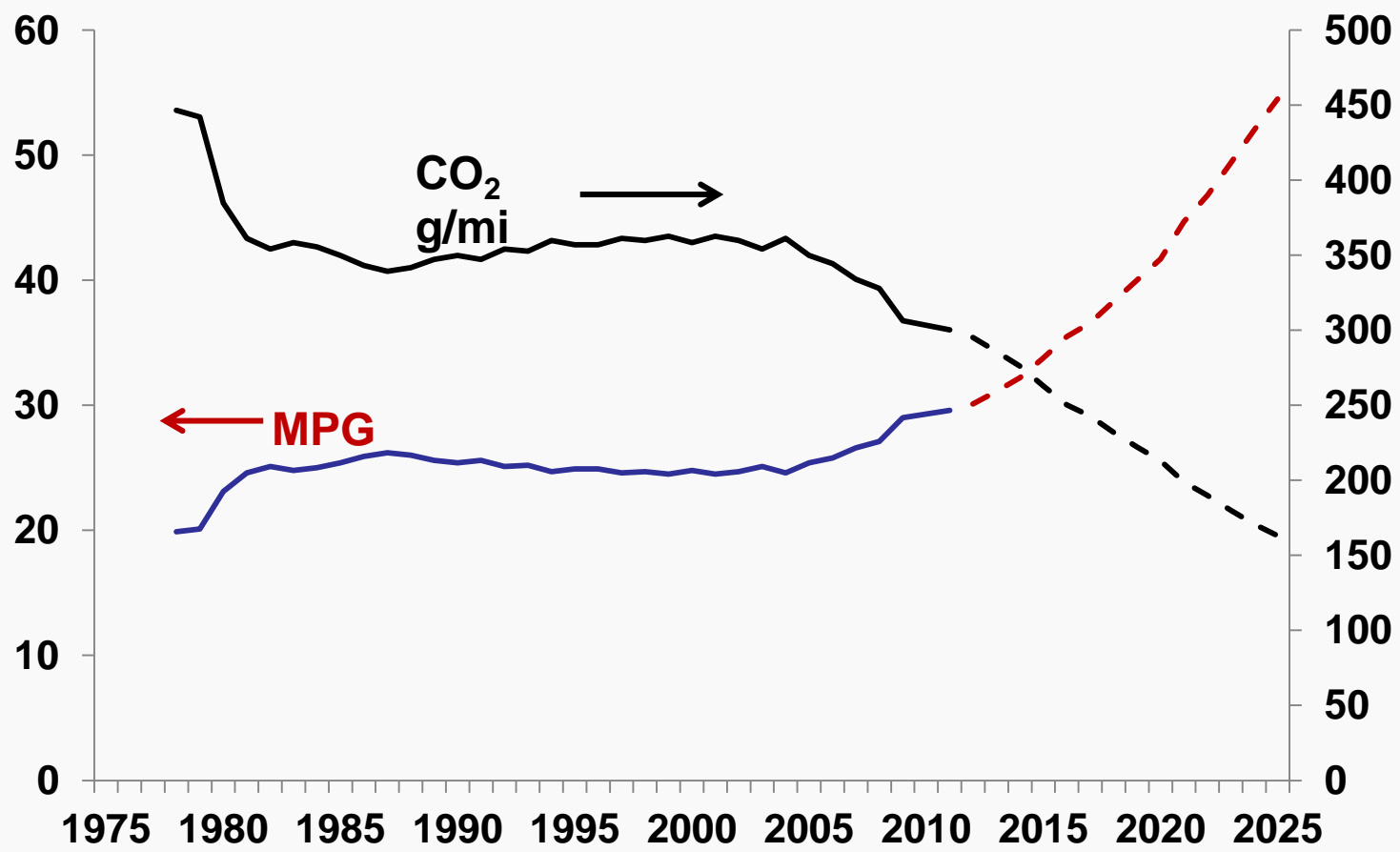
# Fuel Economy Trends Report

- Fuel Economy Week (October 6-10)
  - Webinar on Fuel Economy with press
  - Trends Report (released October 8<sup>th</sup>)
    - Analysis of detailed automotive data collected since 1975 by EPA for CAFE, GHG rules
    - New vehicles achieved an all-time high fuel economy in 2013 – avg. 24.1 mpg
    - <http://www.epa.gov/otaq/fetrends.htm>
- Administrator press call to release the Trends report
- Vehicle Technology Showcase at NVFEL



# Relationship Between GHG Emissions and MPG

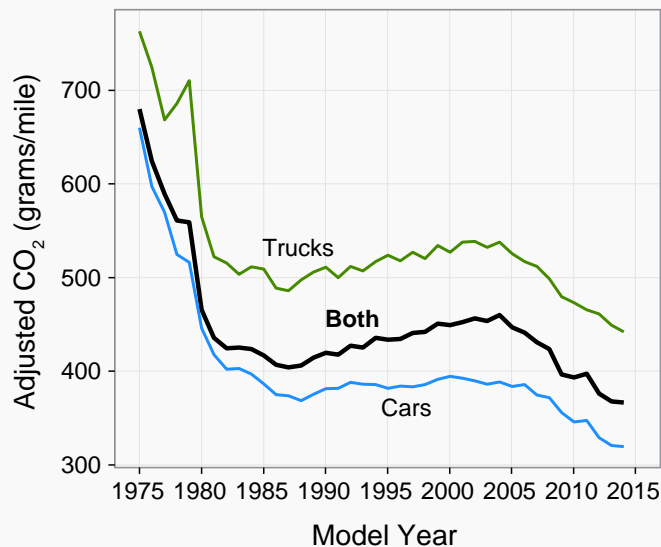
(2 cycle compliance: CAFE 1978-2011, GHG 2012-2025)



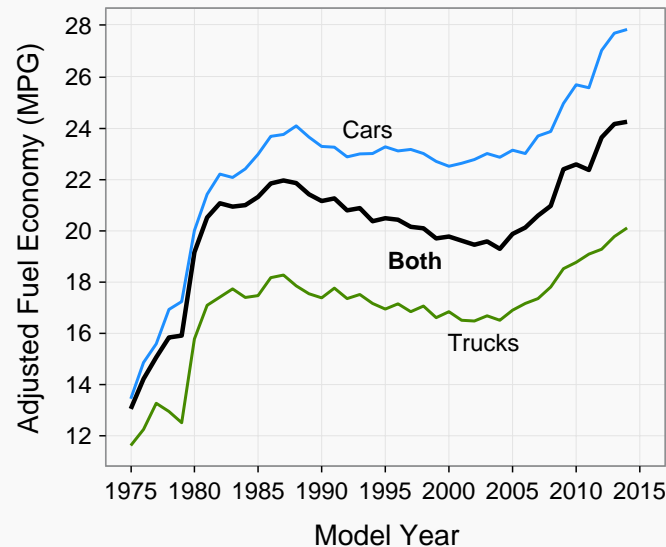


# Average vehicle CO<sub>2</sub> emissions rate and fuel economy achieved record levels in MY 2013 and have improved in 8 of the last 9 years

### Adjusted CO<sub>2</sub> for MY 1975-2014



### Adjusted Fuel Economy for MY 1975-2014

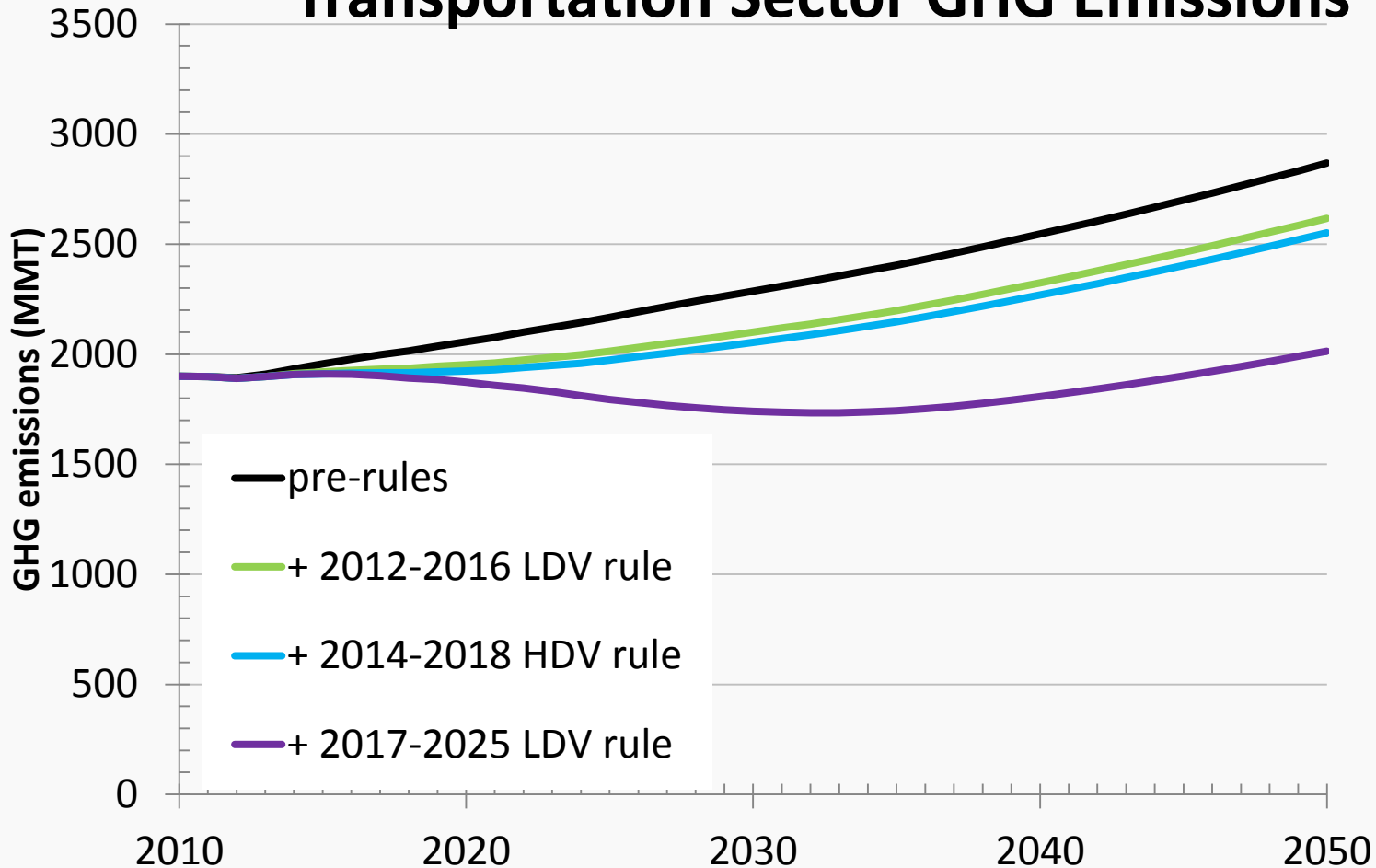


Adjusted CO<sub>2</sub> and fuel economy values reflect real world performance and are not comparable to automaker standards compliance levels. Adjusted CO<sub>2</sub> values are, on average, about 25% higher than the unadjusted, laboratory CO<sub>2</sub> values that form the starting point for GHG standards compliance, and adjusted fuel economy values are about 20% lower, on average, than unadjusted fuel economy values that form the starting point for CAFE standards compliance.

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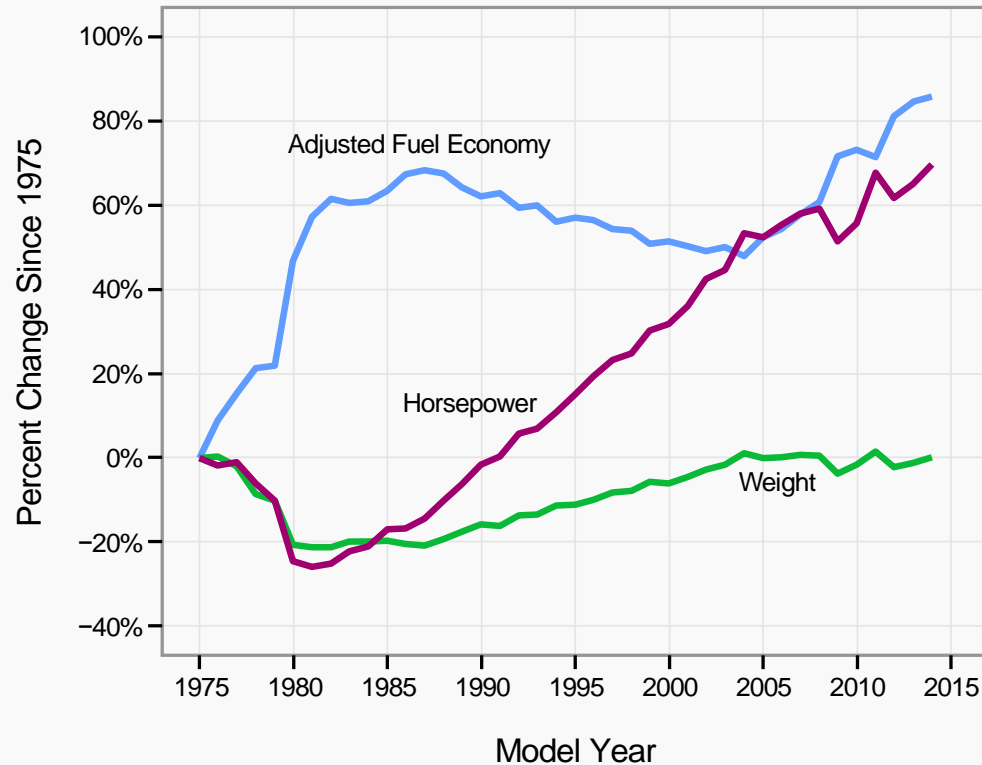
## Benefits of Recent Federal Rules on Transportation Sector GHG Emissions





# Vehicle weight trend is flat, and vehicle power trend is increasing more slowly

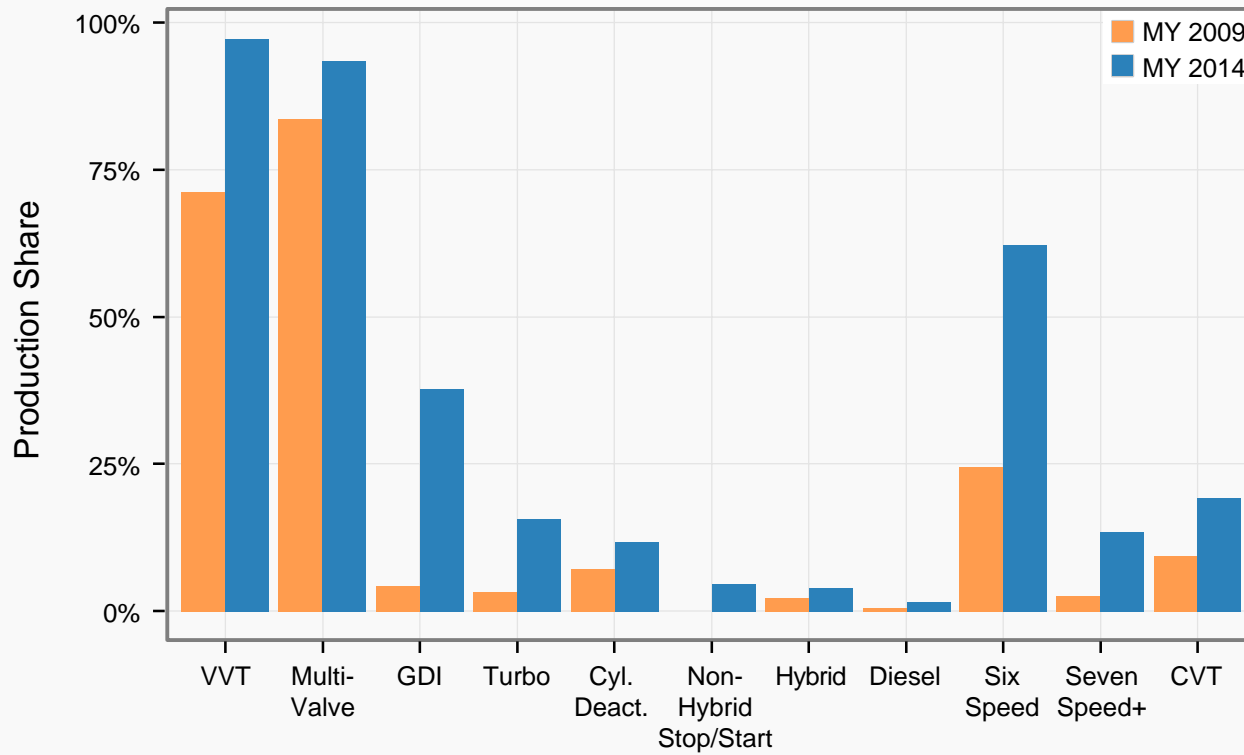
**Fleetwide Adjusted Fuel Economy, Weight, and Horsepower for MY 1975-2014**



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## Many new technologies are rapidly gaining market share

Technology Penetration Share for MY 2009 and MY 2014







# Regulatory Program Updates



# Update on Regulatory Activities

- Heavy-Duty GHG Phase 2 Standards
  - Extending heavy-duty GHG and fuel efficiency standards beyond model year 2018
  - Proposal in 2015
  - Criteria pollutant co-benefits expected
    - Phase 1 standards to reduce HC+NO<sub>x</sub> by over 250,000 tons in 2030
- Mid-Term Evaluation of Light-Duty GHG Standards
  - Evaluation of 2022-2025 light-duty standards due by April 2018
  - Currently developing technical assessment with NHTSA and CARB, to be released for public comment
- Aircraft GHGs
  - Proposed endangerment finding in April 2015
  - Initiates domestic process as groundwork for eventually adopting international standards



## Other Activities Underway

- Renewable Fuels Standards
- Lead Emissions from Piston-Engine Aircraft
  - Conducting analysis to evaluate endangerment
- Aircraft PM Standards
  - Ongoing work on development of international standards
- Ensuring successful and timely implementation of the Emission Control Area (ECA)
  - Beginning 1/1/2015, fuel sulfur content may not exceed 1,000 ppm



# Ongoing Investments

- Compliance
  - Ensuring our programs deliver the expected emission reductions
- Research and analysis to provide a sound scientific foundation for implementation and development of mobile source programs, including:
  - Nonroad population and activity
  - PM from light-duty vehicles and fuels
  - In-use emissions







# MOVES2014 Update



# MOVES2014

- Released July 2014
- First major update since MOVES2010 and its minor revisions, MOVES2010a and MOVES2010
- MOVES2014 Includes:
  - Tier 3 emission standards for vehicles and fuels
  - Heavy-duty engine and vehicle GHG regulations that phase in during model years 2014-2018
  - Second phase of light-duty vehicle GHG regulations that phase in for model years 2017-2025 cars and light trucks
  - NONROAD2008 model





# Emission changes in MOVES2014

- We have analyzed local data provided by state agencies for 3 urban areas to show differences between model versions
  - Unique fleet mix, I/M program, fuels, temperatures, age distributions
  - Based on a single, core, urban county in each city, which may not completely reflect nonattainment area impacts
  - Includes national HPMS change
- Represents what a typical area might see for their own MOVES2014 modeling, but actual differences between MOVES2010b and MOVES2014 may vary based on other local model inputs
  - We can't reflect the full range of possible outcomes in these examples
- MOVES2010b vs. MOVES2014 trends are consistent with our expectations - in general, trending downward over time on all pollutants with variability and exceptions in specific areas
  - Tier 3, HD GHG phase 1, new data, new HPMS VMT



# Impact on SIPs and Conformity

- New control programs in MOVES2014 result in greater reductions in emissions over time, which should make it easier to demonstrate attainment
- Areas with SIP motor vehicle emission budgets based on MOVES2010b may have to redo those budgets to demonstrate conformity if MOVES2014 shows higher emissions
  - Example inventories indicate this may be necessary in some areas
- When a new model is released, our regulations provide a conformity grace period between 3-24 months
  - Grace period defines the period before MOVES2014 must be used for conformity
  - Grace period starts on publication date of FR notice of availability
- We are establishing a 2-year conformity grace period



## What Have We Updated Since July?

- MOVES2014 SIP and Conformity Policy Guidance
- MOVES2014 Questions and Answers
- MOVES2014 Overview for Experienced Users
- MOVES2014 emissions database for states that adopted California LEV standards
- Federal Register Notice of Availability
- MOVES2014 Installer—Planned October Release
  - MOVES2014 code, installer, user guide, user interface reference manual



# MOVES2014 October Release

- An updated version of MOVES2014 which fixes several issues raised by users
  - Improvements to the July release of the MOVES2014 installer resolve some unanticipated installation problems
  - Fixes a major problem with the new nonroad function in MOVES2014
  - Fixes several smaller problems with the onroad portion of MOVES2014
    - These problems apply to limited use cases and have minor impacts on results
- Recommend that all users install the October release as soon as possible
  - Release includes documentation to help users determine if fixes affect work already done with July release



# Federal Register Notice of Availability

- Notice published in FR on October 7, 2014
  - [www.gpo.gov/fdsys/pkg/FR-2014-10-07/pdf/2014-23258.pdf](http://www.gpo.gov/fdsys/pkg/FR-2014-10-07/pdf/2014-23258.pdf)
- FR notice announced:
  - MOVES2014 is now officially approved for SIP and conformity purposes
  - 2-year conformity grace period has started and ends on October 7, 2016



## Additional Guidance

- Technical Guidance
  - For developing inventories for criteria emissions
  - Draft is under internal review
  - Most guidance is unchanged – can continue to rely on MOVES2010 Technical Guidance until release
- PM and CO Hot-spot Guidance Documents
  - Drafts are under development
  - Can continue to rely on MOVES2010 Hot-spot Guidance documents until release



# Training and User Support

- MOVES2014 training webinars for experienced users presented twice already to over 300 users
  - Additional session scheduled for Oct. 22; more will be scheduled if needed
  - Another training webinar focused on experienced project-level users will be given Oct. 29
- Currently updating 2-Day Hands-On Course for New Users
  - Focus on users with no experience with MOVES2010
  - First session will be in Ann Arbor on December 2-3
  - Will schedule more in additional locations during 2015
- 3-Day PM Hot-spot Hands-On Course will also be updated after revised guidance is released
- Direct user support provided through [mobile@epa.gov](mailto:mobile@epa.gov) inbox
  - Have received over 800 questions since the release of MOVES2014
  - Most responded to within 1 to 5 days



# Ports Initiative & MSTRS





# National Conversation on Ports

Sept thru March - National Conversation Webinars - Listening sessions focused on perspectives of different port stakeholders

April - Ports Stakeholder Summit & follow on work

May - Workgroup Charge presented to MSTRS

August - MSTRS Ports Work Group - Continued stakeholder input

December - Next Face-to-face Ports Work Group meeting



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# Advancing the National Conversation: Summary Input

- Data & Tools - Increase in global trade may increase emissions and air quality impacts but quantification of impacts needs improvement
- Incentives like DERA achieve environmental performance improvements
  - While there is support for metrics, a simple recognition program will not drive change
- Ports are a node in the larger goods movement supply chain
  - All nodes have different business/management conditions- complexities need to be understood & considered
- Federal Policy: Intergovernmental Coordination is essential





# Charge for MSTRS Ports Initiative Workgroup

- EPA asked MSTRS for recommendations on:
  - Development of an EPA-led voluntary environmental port initiative
  - How to effectively measure air quality and GHG performance of ports and/or terminals within ports
- The workgroup should consider:
  - Past MSTRS and other recommendations
  - Existing port environmental improvement programs
  - Ports in the context of the broader transportation supply chain
  - Information from EPA's Ports Assessments as available



# MSTRS Ports Workgroup

NAME	TITLE	AFFILIATION
Lee Kindberg, Co-Chair	Director, Environment	MAERSK LINE/ Maersk Agency USA
Mike Geller, Co-Chair	OTAQ	U.S. EPA
Rick Cameron	Acting Managing Director, Environmental Affairs	Port of Long Beach
Amelia L. Pellegrin	Environmental Services Manager	Port of New Orleans
Kathy M. Broadwater	Deputy Executive Director	Maryland Port Administration
Heather L. Wood	Vice President, Government Affairs	Virginia Port Authority
Patrick Moore	Environmental Stewardship Manager	Port of Charleston
Susan Monteverde (ex-officio)	Vice President, Government Relations	American Association of Port Authorities
John Esposito	Vice President Environment	Ports America
Al Johnson	Director Environmental Health & Safety	Cargill
Marc Winocur	Director of International Transportation	Target
Elizabeth Fretheim	Director, Logistics Sustainability	Walmart
T.J. Tarabulski	Sr. Engineering Project Team Leader	Caterpillar
Joe Kubsh	Executive Director	Manufacturers of Emission Controls Association
John Lovenburg	Vice President, Environmental Operations	Burlington Northern Santa Fe Corporation
Elena Craft	Senior Health Scientist	Environmental Defense Fund
Gerry Coyle	VP Environmental & Sustainable Operations	Evans Delivery
Peg Hanna	Chief, Bureau of Mobile Sources	New Jersey Dept of Environmental Protection
Brian Barnes	Air Quality Standards and Assessment Section	South Carolina Dept of Health & Environ Control
Melissa Lin Perrella	Director of Western Air Quality and Environmental Justice	Natural Resources Defense Council
Erica Holloman	Project Coordinator of US EPA CARE Grant	Greater Southeast Development Corporation
Alyson Azzara	Marine Researcher	International Council on Clean Transportation
Bruce Anderson (ex-officio)	Principal	Starcrest Consulting Group LLC



# MSTRS Questions

## Scope

- What should be the scope of our efforts?
- Can we create a program that is flexible and can be extended to other media?

## Measurement

- What are appropriate environmental performance metrics?

## Solutions/Control Strategies

- What is the range of incentives?
- What are the barriers to technology deployment and can we remove them?

## Coordination

- How can we improve Federal coordination/access federal resources?
- How to better coordinate within EPA to maximize our impact?

## Community

- How do we promote productive port-community interaction?



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# **Diesel Emission Reduction Act (DERA)**



## Status: FY2014 - \$20M for DERA

- \$9M for National Regional Competitive RFP
  - 22 awards were made (~\$400K on average)
- \$1M for Tribal Competitive RFP
  - First year for separate tribal RFP
- ~\$4M State Program Grants
  - New, stricter requirements for State Program Grants (follow National RFP requirements)
- ~\$5M Ports RFP (open now)
- ~\$3M School Bus Rebates\* (open on Oct. 15)

\* Includes carryover funding from closed grants



# FY2015 and Beyond – Looking forward

- “Making a visible difference in communities across the country”
- Focusing on projects that are place-based and impacting the health of local communities
  - Vulnerable populations with disproportionate exposure to diesel exhaust
  - Children (school buses), ports, rail yards and freight
  - Focusing on engines/vehicles/equipment particularly resistant to turnover but long useful life (dray trucks as an example)
- Current DERA authorization goes through 2016