

# Office of Transportation and Air Quality Update

Presentation for the National Association of Clean Air  
Agencies Fall Membership Meeting

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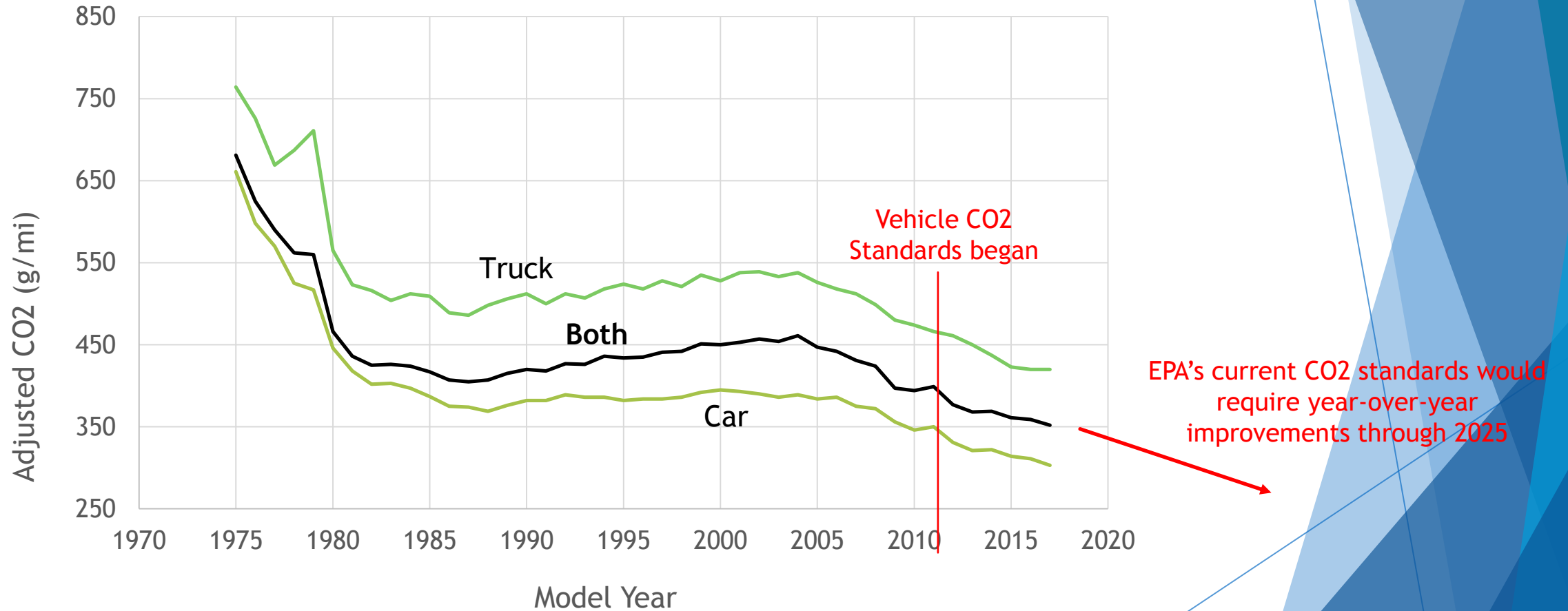
October, 2018

# Outline of topics

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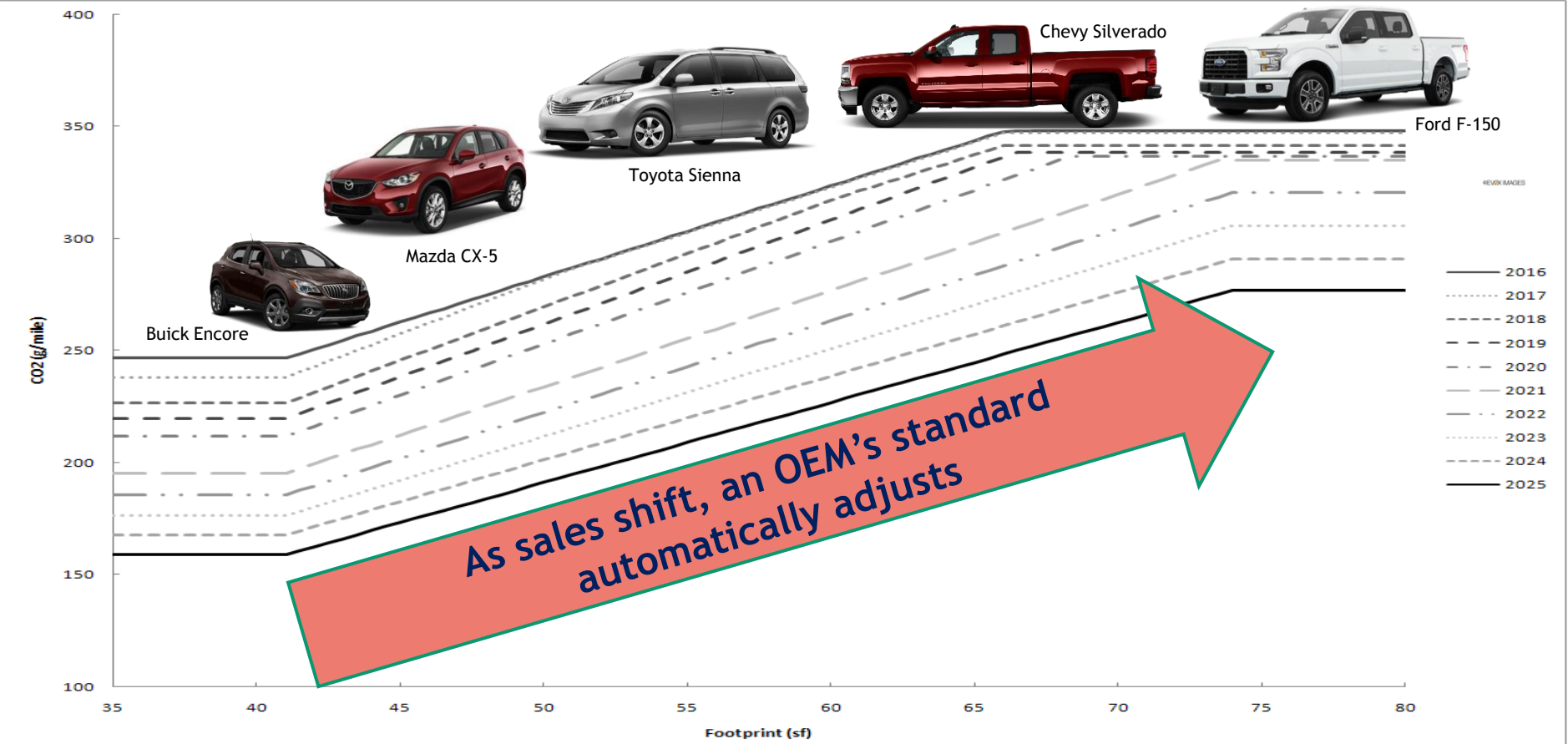
- ▶ Regulatory Update
  - ▶ Greenhouse Gas Standards for Cars and Light Trucks / SAFE rule
  - ▶ Heavy Duty NOx Petitions
  - ▶ Renewable Fuel Standards / E15 Update
  - ▶ Fuels Regulatory Streamlining
- ▶ State Programs Updates
  - ▶ MOVES updates
  - ▶ State requests to change fuel programs
- ▶ National Ports Initiative
- ▶ DERA
- ▶ VW Settlement Implementation Updates

# Light-duty Vehicle CO2 Emission Rates



# Standards based on Vehicle Size (“Footprint”)

## CO<sub>2</sub> Footprint Target Curves for Trucks (Separate footprint curve for Cars)



As sales shift from cars to SUVs/trucks, an OEM's standard becomes less stringent

2025 Projection: ~50 mpg compliance = ~36 mpg real-world

# Midterm Evaluation Process

- ▶ In the **2012** rule finalizing standards for the model year (MY) 2017-2025 standards, EPA committed to conduct a Midterm Evaluation to determine whether the standards for MY 2022-2025 remained appropriate
- ▶ **January 2017:** Former EPA Administrator McCarthy made a determination that the 2022-2025 standards remained appropriate
  - ▶ Following public comment on a July 2016 Draft Technical Assessment Report issued by EPA/NHTSA/California Air Resources Board and a November 2016 EPA Proposed Determination.
- ▶ **March 2017:** EPA announced the Agency would reconsider the Final Determination
- ▶ **August-September 2017:** EPA held a public comment period/hearing to gather updated data and information to inform the Reconsideration
- ▶ **April 2018:** Former EPA Administrator Pruitt determined that the MY2022-2025 standards are not appropriate, and announced that EPA and NHTSA would work<sub>5</sub> in partnership to initiate a notice and comment rulemaking to set appropriate standards

# Highlights of Light-duty Vehicle GHG/CAFE SAFE Proposal

- ▶ EPA and NHTSA jointly released the Safer Affordable Fuel-Efficient (SAFE) proposal on August 2, 2018.
  - ▶ Published in the Federal Register on August 24, 2018
- ▶ The proposed alternative would reduce the stringency of the CO<sub>2</sub> vehicle standards for MY2021-2026 to the level of the MY2020 standards.
  - ▶ Beginning in MY 2021, EPA proposes to eliminate the option for manufacturers to apply credits for air conditioning refrigerant leakage toward tailpipe CO<sub>2</sub> compliance.
  - ▶ Similarly, EPA proposes to eliminate manufacturers' flexibility options to either use CO<sub>2</sub>-equivalent credits to meet methane and nitrous oxide emissions standards, or to fold in methane and nitrous oxide emissions (on a CO<sub>2</sub>-equivalent basis) into their CO<sub>2</sub> fleet average
- ▶ EPA is also proposing to withdraw the Clean Air Act waiver for California's GHG and zero emissions vehicle (ZEV) program, which was approved in January 2013, for MY2021-2025 vehicles.
- ▶ The agencies are taking comment on a wide range of alternative stringencies (next slide)

# Regulatory Alternatives for Public Comment

Alternative	Change in stringency	A/C efficiency and off-cycle provisions	CO <sub>2</sub> Equivalent AC Refrigerant Leakage, Nitrous Oxide and Methane Emissions Included for Compliance?
Baseline/ No-Action	MY 2021 standards remain in place; MYs 2022-2025 augural CAFE standards are finalized and GHG standards remain unchanged; MY 2026 standards are set at MY 2025 levels	No change	Yes, for all MYs <sup>1</sup>
1 (Proposed)	Existing standards through MY 2020, then 0%/year increases for both passenger cars and light trucks, for MYs 2021-2026	No change	No, beginning in MY 2021 <sup>2</sup>
2	Existing standards through MY 2020, then 0.5%/year increases for both passenger cars and light trucks, for MYs 2021-2026	No change	No, beginning in MY 2021
3	Existing standards through MY 2020, then 0.5%/year increases for both passenger cars and light trucks, for MYs 2021-2026	Phase out these adjustments over MYs 2022-2026	No, beginning in MY 2021
4	Existing standards through MY 2020, then 1%/year increases for passenger cars and 2%/year increases for light trucks, for MYs 2021-2026	No change	No, beginning in MY 2021
5	Existing standards through MY 2021, then 1%/year increases for passenger cars and 2%/year increases for light trucks, for MYs 2022-2026	No change	No, beginning in MY 2022
6	Existing standards through MY 2020, then 2%/year increases for passenger cars and 3%/year increases for light trucks, for MYs 2021-2026	No change	No, beginning in MY 2021
7	Existing standards through MY 2020, then 2%/year increases for passenger cars and 3%/year increases for light trucks, for MYs 2021-2026	Phase out these adjustments over MYs 2022-2026	No, beginning in MY 2021

Existing EPA CO<sub>2</sub> standards average ~4.7%/year stringency increase from MY2020-2025

# Major Projected Impacts of SAFE Proposal for GHG Program

	Projected Impact
Reduction in Vehicle Cost (MY2029)	\$2,300/vehicle
Increase in Fuel Costs (MY2029, 3% DR)	\$1,850/vehicle
Reduction in Crash Fatalities (lifetime of MY2029)	1,000
Increased Vehicle Sales (MY2029)	170,000
Reduction in Regulatory Costs (MY2029)	\$50 billion
Reduction in Automotive Employment (MY2029)	64,000
Increase in US petroleum consumption (CY2029)	1/2 million bpd
Increase in CO <sub>2</sub> emissions (CY2029)	83 MMT

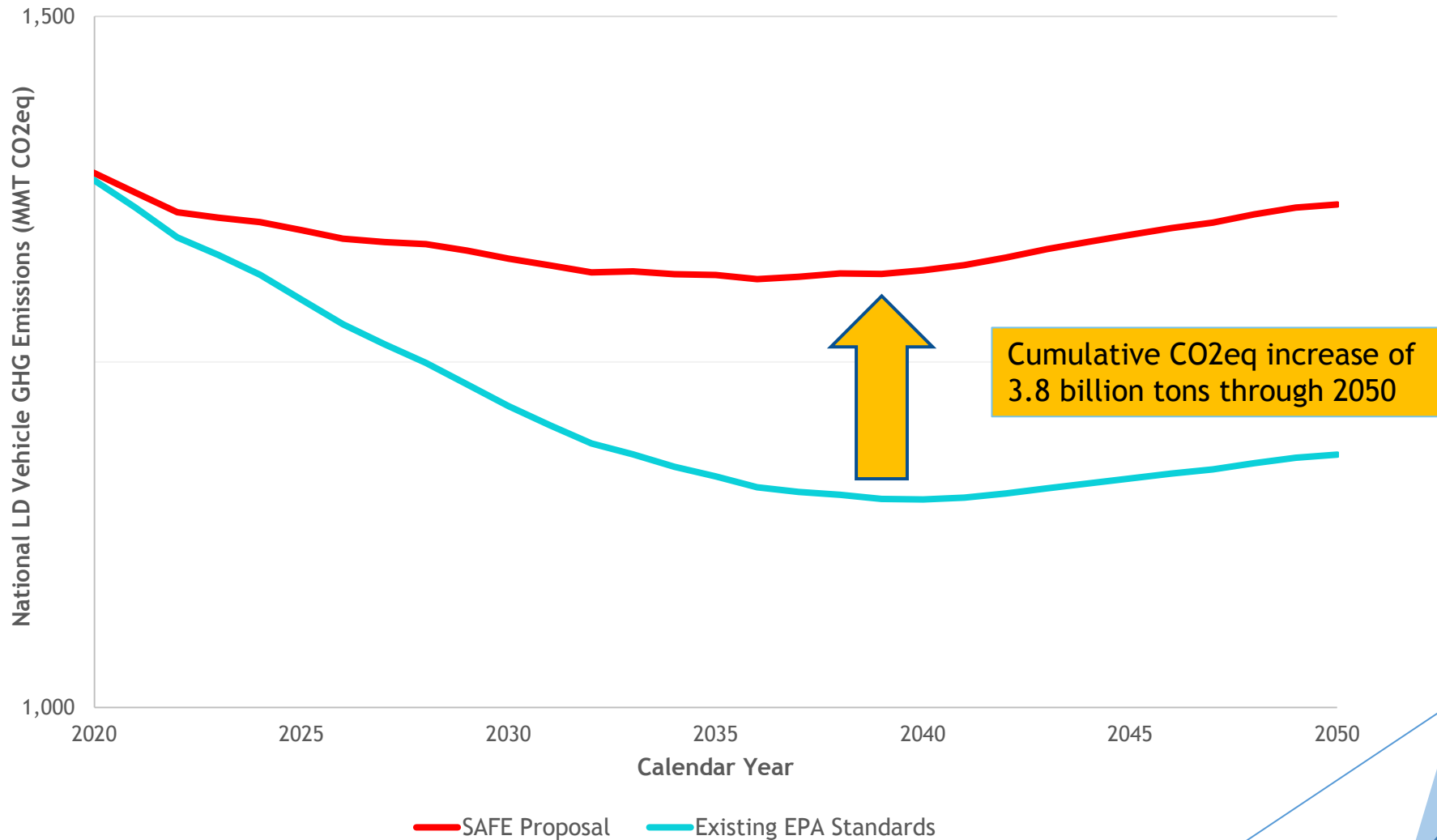
## MY Lifetimes through MY2029

Total Costs	-\$830 billion
Total Benefits	-\$540 billion
Net Benefits	\$290 billion



# Light-duty Vehicle GHG Emission Inventories

Annual U.S. Light-Duty Vehicle GHG Emissions (MMT CO<sub>2</sub>eq)



Note - includes upstream GHG emissions from petroleum extraction, refining, transportation

# Request for Comment on Enhanced Flexibilities Alternative

- ▶ EPA is seeking comment on a variety of “enhanced flexibilities” to broaden the pathways available to manufacturers in meeting a given level of stringency of the standards
  - ▶ Advanced technology incentives
  - ▶ Hybrid incentives
  - ▶ Off-cycle emissions credits
  - ▶ Connected/autonomous vehicle incentives
  - ▶ Emission credit life extension
  - ▶ Natural gas vehicle incentives
  - ▶ High octane gasoline fuel blends

# Enhanced Flexibility Scenarios Illustrated in NPRM

Effect of Different Example Flexibilities in Reducing Program Stringency  
Compared to the Current EPA Standards (which average 4.7% per year stringency increase from MY2020-2025)

Example Enhanced Flexibility Scenarios	Average Year-over-Year Reduction in CO2 for MYs 2020-2025
<b>No Action Alternative</b> (the existing EPA standards)	<b>4.7% per year</b>
<b>Example Enhanced Flexibility A:</b> EPA extends the 0 g/mi factor and a multiplier of 2x for BEVs, and BEV sales achieve a level of 3% of new vehicle sales.	<b>4.0% per year</b>
<b>Example Enhanced Flexibility B:</b> EPA extends the 0 g/mi factor and a multiplier of 4.5x for BEVs, and BEV sales achieve a level of 3% of new vehicle sales.	<b>2.8% per year</b>
<b>Example Enhanced Flexibility C:</b> EPA extends the 0 g/mi factor and a multiplier of 4.5x for BEVs, and BEV sales achieve a level of 6% of new vehicle sales, mild hybrid light-trucks receive a 10g/mi credit and achieve 20% new sales, strong hybrid light-trucks receive a 20g/mi credit and achieve a 10% new sales level.	<b>0.8% per year</b>
<b>Alternative 1 (EPA proposal)</b>	<b>0 % per year</b>

# Public hearings and comment period

- ▶ EPA and NHTSA held 3 public hearings
  - ▶ September 24: Fresno, CA
  - ▶ September 25: Dearborn, MI
  - ▶ September 26: Pittsburgh, PA
- ▶ The public comment period closes on October 26, 2018
- ▶ EPA looks forward to assessing the public comments
- ▶ <https://www.epa.gov/regulations-emissions-vehicles-and-engines/safer-affordable-fuel-efficient-safe-vehicles-proposed>

# NOx Standards for Heavy Duty Trucks and Buses

- ▶ In 2016, 20 organizations petitioned EPA to develop revised emissions standards for Heavy Duty NOx.
- ▶ EPA responded that we would continue technical work to inform a potential future rule.
- ▶ 30 companies and trade associations have told us they support a revised 50-state standard.
- ▶ NOx emissions from heavy duty trucks make up 1/3 of mobile source NOx emissions in 2025.

# Renewable Fuels and E15 Update

- ▶ Final 2019 Renewable Fuel Volumes Standards on track for November 30, 2018
- ▶ The “Reset Rule” - statutorily required ‘reset’ of required renewable fuel volumes - to be proposed in early 2019
- ▶ October 9, 2018: President directed EPA to initiate a new rule
  - ▶ Modify fuels regulations to allow gasoline blended with up to 15 percent ethanol (E15) to take advantage of the 1-psi Reid Vapor Pressure (RVP) waiver that currently applies to E10 during the summer months.
  - ▶ Change certain elements of the renewable identification number (RIN) compliance system under the RFS program to improve both RIN market transparency and overall functioning of the RIN market.

# Fuels Regulatory Streamlining

- ▶ We have begun a rule to streamline EPA's existing gasoline, diesel, and other fuels regulations of 40 CFR Part 80 by:
  - ▶ Deleting expired provisions
  - ▶ Consolidating redundant provisions
  - ▶ Consolidating the various reg provisions of EPA's gasoline programs
  - ▶ Improve their applicability to today's more diverse fuel marketplace
- ▶ This is NOT an effort to weaken or rollback standards

# Fuels Regulatory Streamlining (cont.)

- ▶ This effort will improve environmental performance at a lower cost for EPA and stakeholders, and would:
  - ▶ Improve the fungibility of fuels (saving consumers at the pump)
  - ▶ Improve EPA's oversight of fuel quality
  - ▶ Create a more straightforward way for RVP relaxation and RFG program opt-in/opt-out processes
- ▶ Aspects that will remain unchanged:
  - ▶ Applicable standards (e.g., sulfur, benzene, etc.)
  - ▶ Legacy standards required by the CAA (e.g., lead levels in gasoline)
  - ▶ RFS



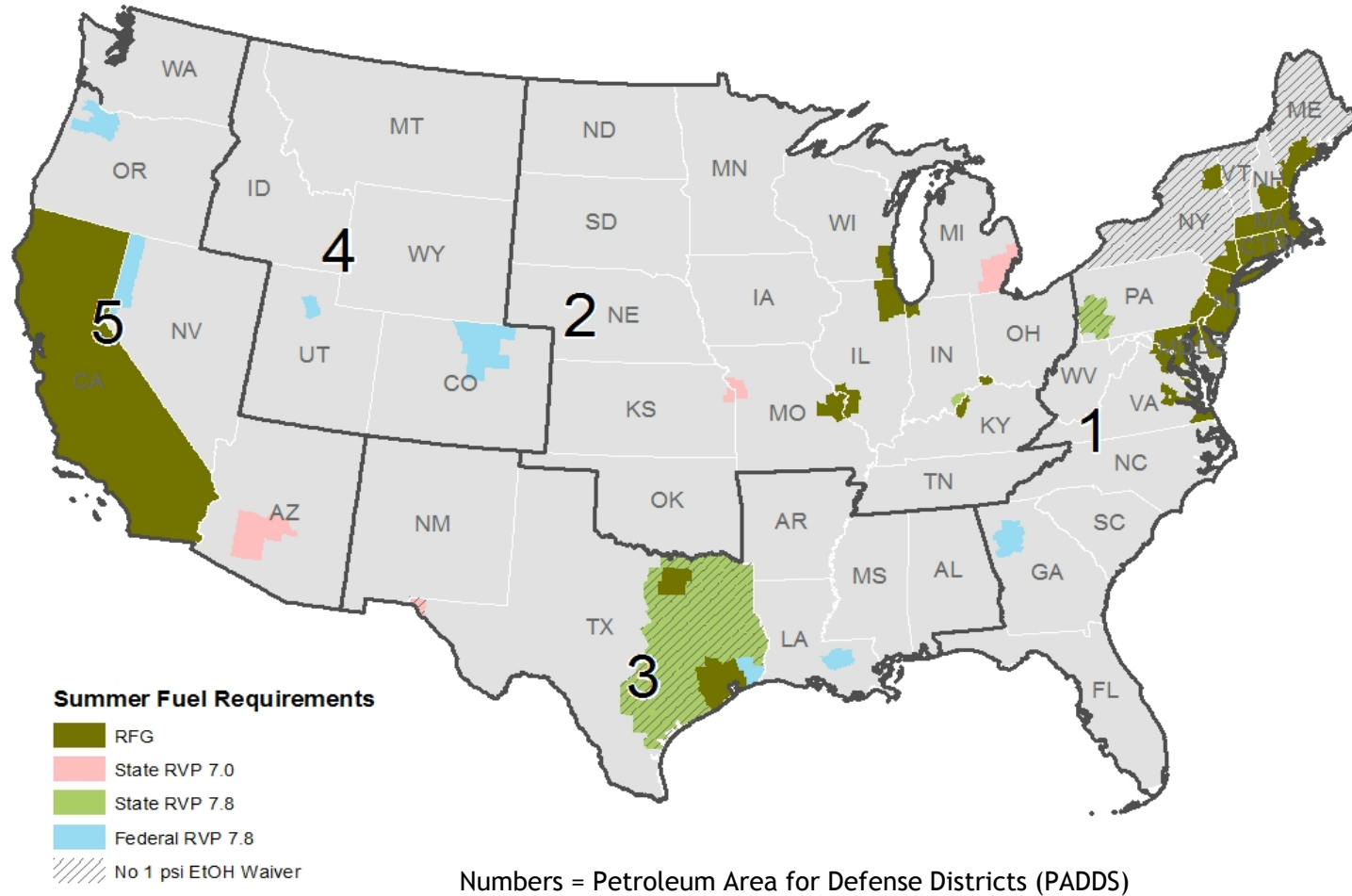
# Fuels Regulatory Streamlining (cont.)

- ▶ We welcome and encourage all stakeholder input:
  - ▶ We held a public workshop in May 2018, to engage all interested stakeholders
  - ▶ We released a discussion draft of the regulations online, and are currently reviewing stakeholder comments
- ▶ EPA intends to issue a proposed rule by the end of 2018 and a final rule by the end of 2019 - with the overall goal of a January 1, 2020 effective date

# MOVES Update

- ▶ MOVES2014b was released August 2018
- ▶ EPA providing training as needed
- ▶ Work on next version of MOVES continues

# Summer Fuel Programs



# Diesel Emissions Reduction Act (DERA Grant Program) Update

- **State Grant Program:** Grants are being awarded now to 49 states, DC, Puerto Rico, and American Samoa
- **National Grant Competition:** Estimated \$40M, opening ~ December 1, 2018
- **Tribal Grant Competition:** Estimated \$2M, open now, will close April 2019
- **School Bus Rebate Program:** Estimated \$9M, open now, will close November 6, 2018

# EPA Ports Initiative

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## **Funding**

Helping Ports Capitalize on Funding for Clean Technologies

## **Technical Resources**

Providing Tools to Help Identify Smart Infrastructure Investments

## **Collaboration**

Promoting Port-Community Collaboration for Effective Planning

## **Coordination**

Increasing Efficiency in Federal Government and Port Operations

## **Communications**

Creating a Knowledge Clearinghouse

# VW Mitigation Trust Update

- Trust Effective Date -- October 2, 2017
- All states, DC, Puerto Rico certified as beneficiaries. Some state mitigation plans now online.
- States must submit Beneficiary Mitigation Plans and then can request trust funds
  - Nevada first (for school buses and trucks)
- Twenty-seven tribes certified as beneficiaries during the first cycle of funding (tribes may certify in the remaining years)
- States and tribes can use VW mitigation funds as matching funds on their DERA grants (called “DERA Option”)
  - EPA’s role is assistance with the “DERA Option”

# VW Zero Emission Vehicle (ZEV) Investment

- ▶ Volkswagen required to invest \$2 billion over 10 years in four 30-month cycles
  - ▶ 1.2 billion National ZEV Investment; 800 million CA Investment
  - ▶ Investments must go towards charging infrastructure, brand-neutral education and awareness, and ZEV access (such as ride & drives, ZEVs in fleets)
- ▶ National ZEV Investment plan for the first 30-month cycle includes:
  - ▶ Network of 240 fast charging stations along highways using non-proprietary connectors
  - ▶ 300 community charging stations in eleven metro areas
- ▶ Recent announcements:
  - ▶ Plan to install chargers at 100+ Walmarts in 34 states (including CA)
  - ▶ Partnerships to place chargers at other retail, convenience, and refueling locations
  - ▶ Proposed cycle 2 plan for CA recently released; cycle 2 national plan under development

# Questions?