



# Opportunities for Collaboration to Reduce Mobile Source Emissions

**NACAA February 26, 2020**

Aftertreatment system removed...



...and replaced with a straight pipe



# Impact of Tampering -- Use of Defeat Devices



**In EPA enforcement cases alone...**

**500,000+ trucks have been deleted.**

**That's ~13% of all trucks.**

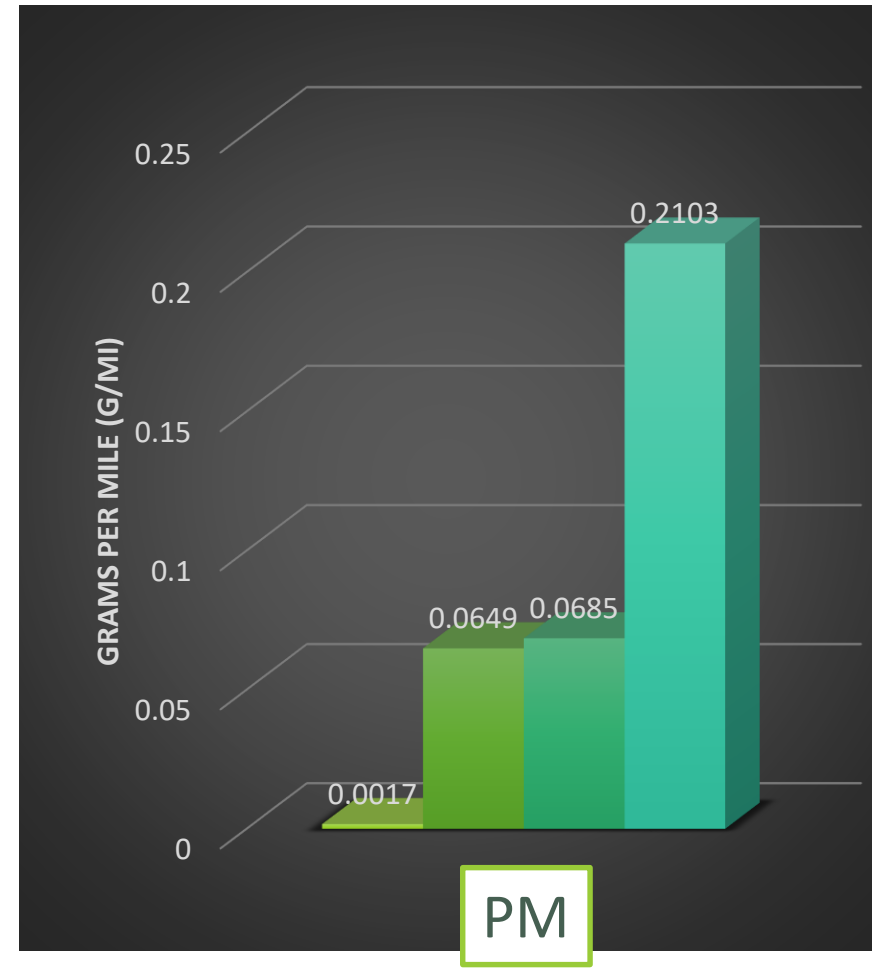
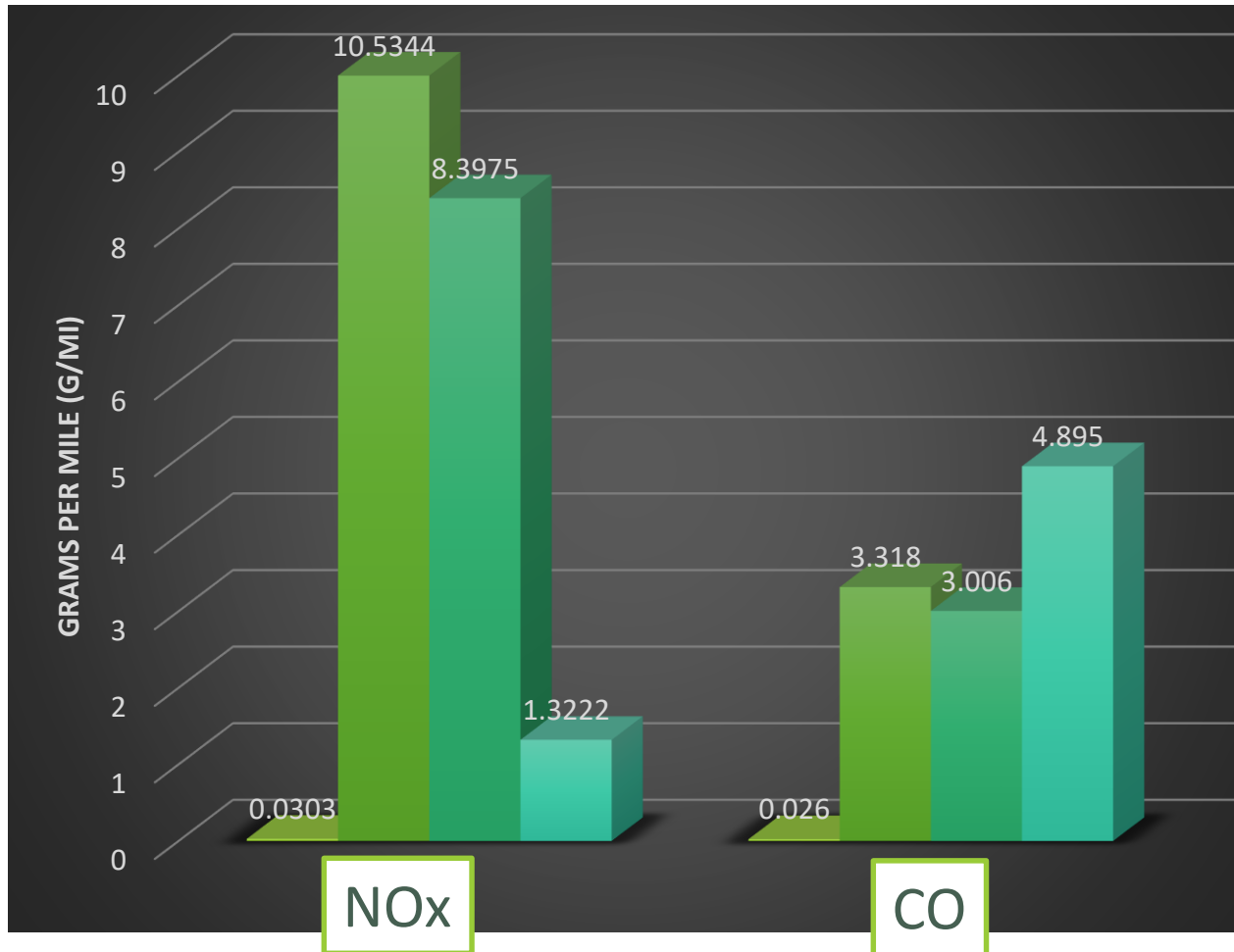
**500,000+ tons of excess NOx**

**Air quality impact equivalent to  
adding 9 million more trucks to our roads,  
doubling truck sales over the past decade.**

# EPA Tuner Emissions Tests

## 2011 Ford F-250 6.7Powerstroke

- First test: stock
- Second and Third test: EGR electronically disabled by tuner. DOC, DPF, and SCR replaced with straight pipe and disabled by tuner in calibration.
- Fourth Test: EGR not disabled electronically by tuner. DOC, DPF, and SCR replaced with straight pipe and disabled by tuner in calibration.



# A Conservative Approach to Estimating the Impact of Aftermarket Defeat Devices Indicates Tampering is a Material Issue for Air Quality

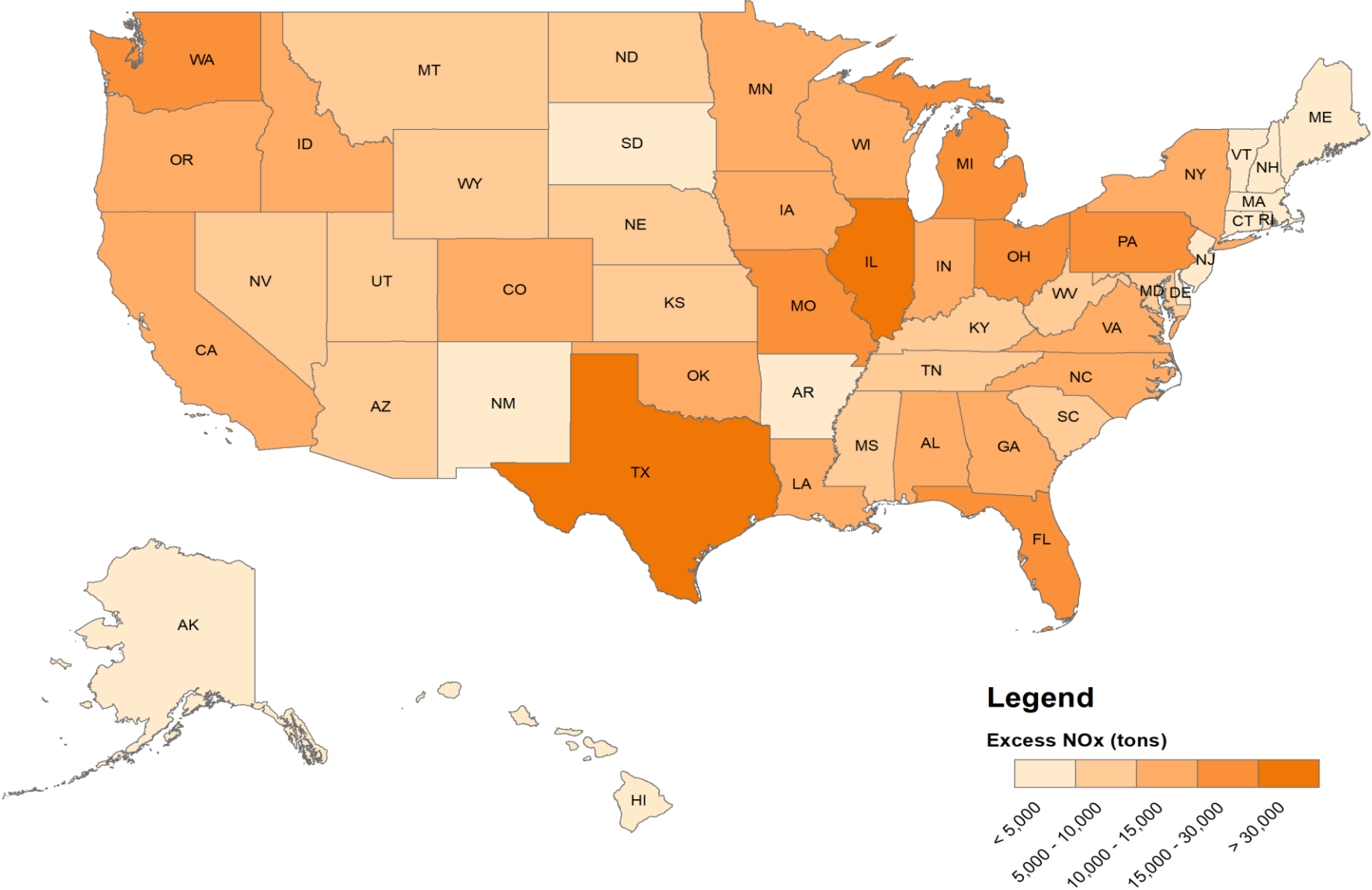
- Quantify tampering and excess emissions from case work
  - For the purpose of this analysis, “tampered” refers to diesel-powered vehicles that are completely deleted of all emission control devices (DOCs, DPFs, SCRs, NACs, and EGR). [Example Tuner](#)
  - The work did not include less egregious tampering methods such as modifying engine calibrations for additional power, torque, and/or fuel economy while leaving emission control devices in place and operational.
  - 95% of the available data is for class 2b, and 3 diesel vehicles (8,500 – 14,000lbs)
  - AED’s *Defeat Device and Tampering Excess Emissions Calculator (DDTTool)* was used to estimate excess emissions.

# Assumptions

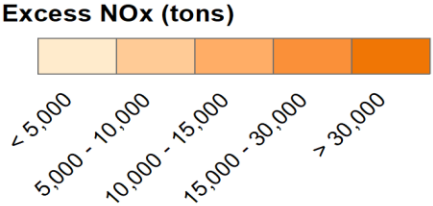
**Underlying assumption:** Each delete tuning product manufactured/sold results in one vehicle tampered on the road. Assumed no delete tuners are scrapped or otherwise not used.

- Case experience has shown tuning devices are almost always locked to a single vehicle.
- Customers purchased the tuner for its delete capabilities. Delete tuners often retail at a significantly higher per unit price than non-delete tuners.
- Delete tuners are not recalled when cases are resolved.

# Excess NOx From Diesel Vehicles Deleted Between 2009 and 2019

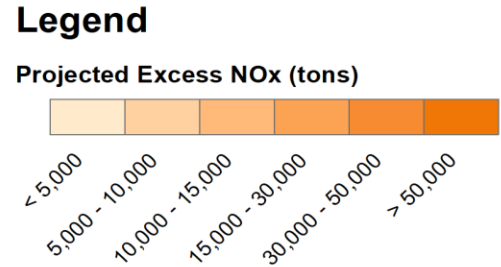
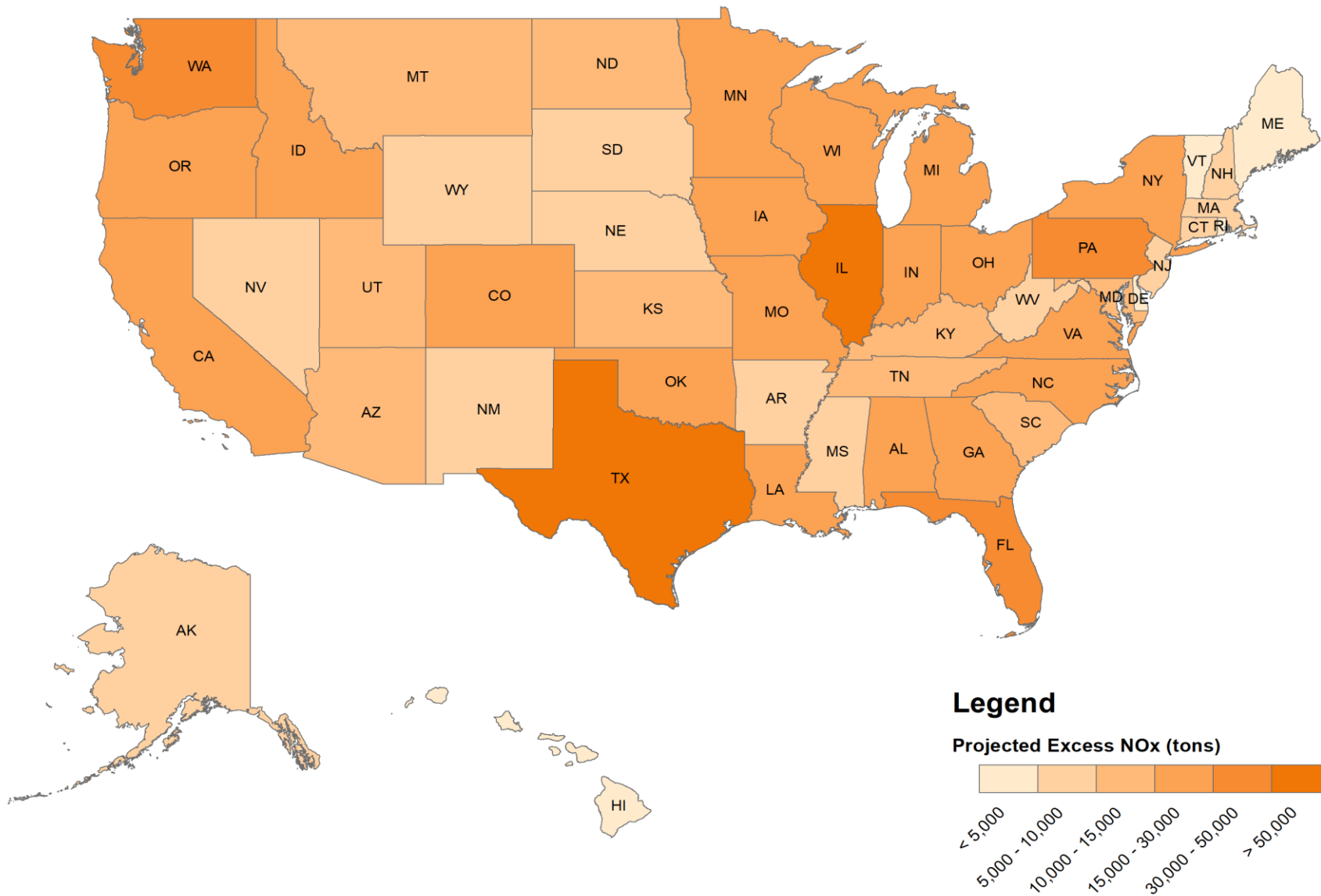


### Legend

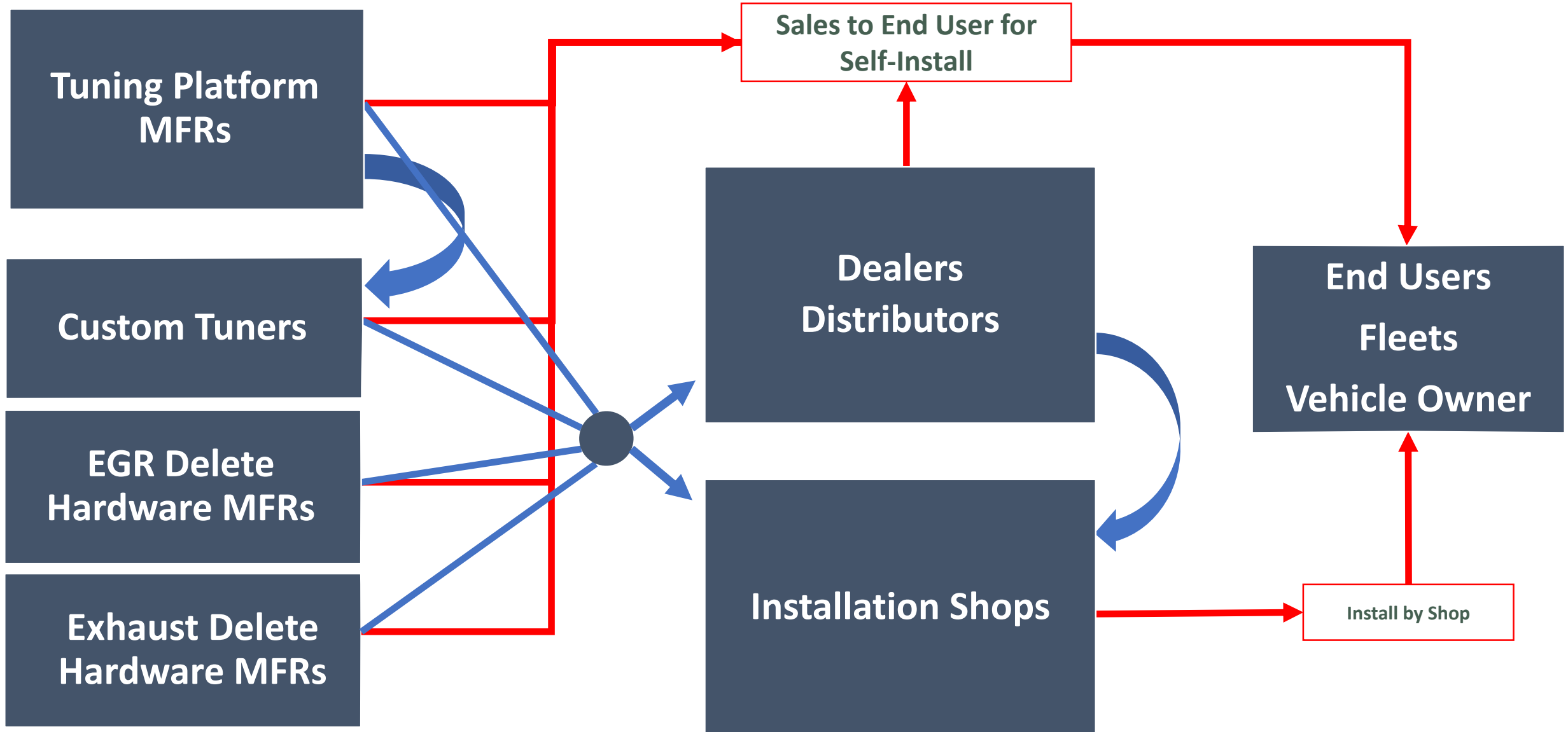




# Projected Excess NOx from Diesel Vehicles Deleted Between 2020 and 2030



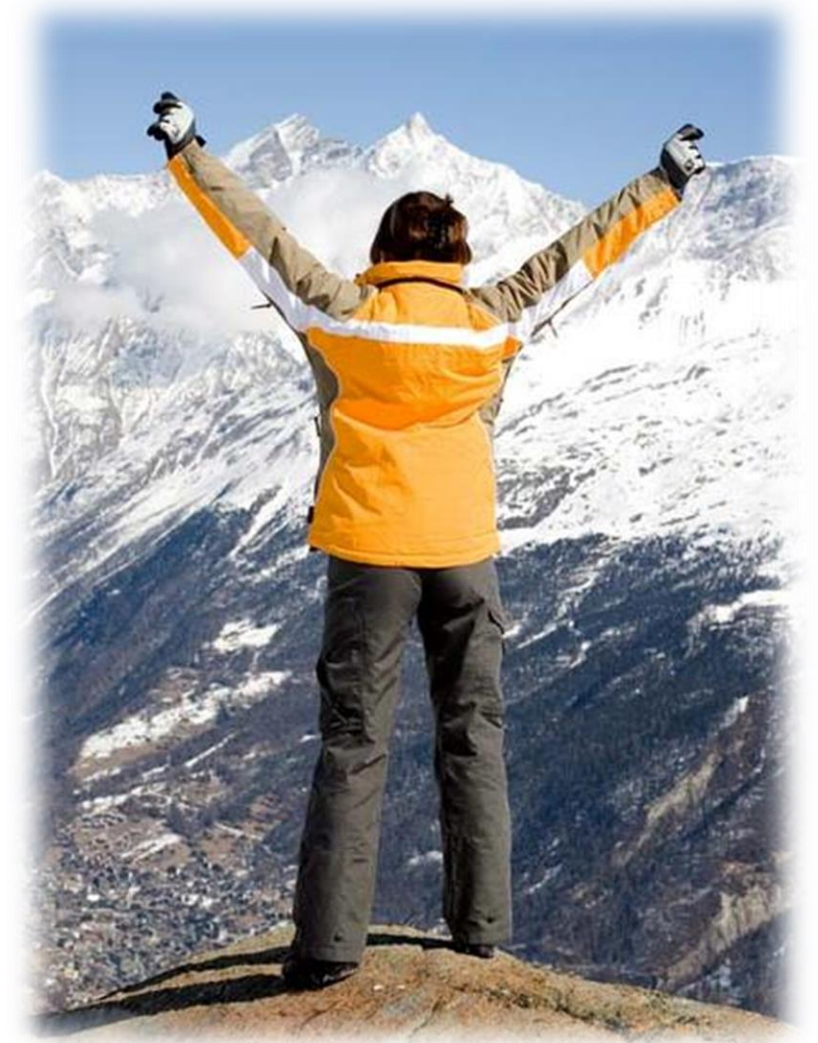
# Defeat Device Industry Overview



# States May Hold Key to Success: Curtail Demand

States can curtail the demand for tampering and aftermarket defeat devices

- ✓ Education and outreach (encourage tips)
- ✓ Preventing registration of tampered vehicles
- ✓ Deterring vehicle dealers from buying/selling tampered vehicles for resale
- ✓ Enforcement against those who tamper, including commercial fleets and maintenance shops



# State Enforcement Authority

- Enforcement of the CAA prohibitions on tampering and aftermarket defeat devices is not delegated to the states.
- But many states have laws:
  - ✓ Prohibiting tampering
  - ✓ Prohibiting operating tampered vehicles
  - ✓ Prohibiting dealers from selling tampered vehicles
- Note preemption provisions and savings clause in CAA § 209
- Authority to inspect and investigate would be based in state law
- State enforcement in federal court? Little precedent, but potential avenues:
  - Action under CAA § 113 to enforce State Implementation Plan (provided the state law is incorporated into the SIP)
  - Citizen Suit under CAA § 304, to enforce SIP or prohibited acts in CAA § 203



# Texas Administrative Code

## Title 30, Part 1, Chapter 114, Subchapter B, Rule §114.20

- Any person owning or operating any motor vehicle or motor vehicle engine on which is installed or incorporated a system or device used to control emissions from the motor vehicle in compliance with federal motor vehicle rules shall maintain the system or device in good operable condition and shall use it at all times that the motor vehicle or motor vehicle engine is operated.
- ...
- (c) No person may sell, offer for sale, lease, or offer to lease in the State of Texas any motor vehicle unless all of the following conditions are met:
  - (1) The motor vehicle shall be equipped with either the control systems or devices that were originally a part of the motor vehicle or motor vehicle engine or an alternate control system or device as designated in subsection (b) of this section.
  - (2) The control systems or devices required in paragraph (1) of this subsection shall be in good operable condition.
  - (3) A notice of the prohibition and requirements of this subsection shall be displayed at all commercial motor vehicle sales facilities, vehicle consignment lots, and other businesses in Texas which sell, offer for sale, lease, or offer to lease more than three used vehicles per year. The notice shall be displayed in a conspicuous and prominent location near each customer entrance way and in each sales or lease office. The notice shall read, "State law prohibits any person from selling, offering for sale, leasing, or offering to lease any vehicle not equipped with all emission control systems or devices in good operable condition. Violators are subject to penalties under the TCAA of up to \$25,000 per violation." This notice shall be no smaller than 8 inches by 10 inches (20.32 cm by 25.4 cm) and shall be clearly visible to all customers.

# Report Violations

- ✓ [tampering@epa.gov](mailto:tampering@epa.gov)
- ✓ EPA's Report a Violation system:  
<https://www.epa.gov/enforcement/report-environmental-violations>

