

OTC Annual Meeting

June 11th, 2014

Baltimore, MD

Mobile Source Committee Update



Overview

- National Action Update
 - Tier 3
 - Ocean Going Vessels – Emission Control Area
- Aftermarket Model Rule
- Inventory Analysis
- Next Steps

Tier 3 Gasoline Vehicle and Fuel Standards

EPA finalized both vehicle emission standards and sulfur in fuel standards.

- Phase-in begins with MY2017
- Vehicle standards apply to all light and medium duty vehicles and some heavy duty vehicles
- Average sulfur in fuel lowered to 10ppm

Projected to lower ozone pollution by several ppb by 2030

This a major step forward for clean air in the OTR

Emission Control Areas (ECA)

- March 2014 IMO finalized that:
 - North American ECA would be implemented as scheduled
 - Implementation for “Super Yachts” will be delayed until 2021

- USEPA & International Maritime Organization (IMO) Action NO_x and SO₂ requirements proposed on ship near shore
 - 2010: Existing Engines – 15-20% NOX reductions
 - 2015: 1000 ppm Maximum Sulfur Fuel
 - **2016: New Engine Standards – Tier 3 (80% reduction)**

Provides Significant Air Quality Benefits in the OTR and throughout the Nation

An IMO member state recommended a five (5) year delay due to concerns with market availability of control technology

Aftermarket Catalyst Recommendation

USEPA's policy was set in 1986 and has not been updated to reflect improvements in technologies & emission standards

OTC submitted a recommendation for an updated catalyst program to USEPA in April, 2011



Emission Benefits of recommended program in OTR

	NO _x	NMHC	CO
Annual (tpy)	10,000	2,000	27,000
Daily (tpd)	30	6	74

Aftermarket Catalyst Model Rule

Based on regulations being implemented by New York and going in effect in 2015 in Maine

Model Rule

- Requires sale of aftermarket converters with an CARB Executive Order (EO)
- Requires CARB EO number to be visible from underside of car to allow for visual inspection
- Has optional language for allowing used converters to be installed on vehicles with OBD

Aftermarket Catalyst Guidance Doc

Goal is to provide a model for implementation
Guidance Document

- Overview of CARB converters
- Direction as to actions to take if no CARB converter is available
 - How the model rule interacts with OEM, Federal, and Used Converter sales
 - Flowchart to ease decision making

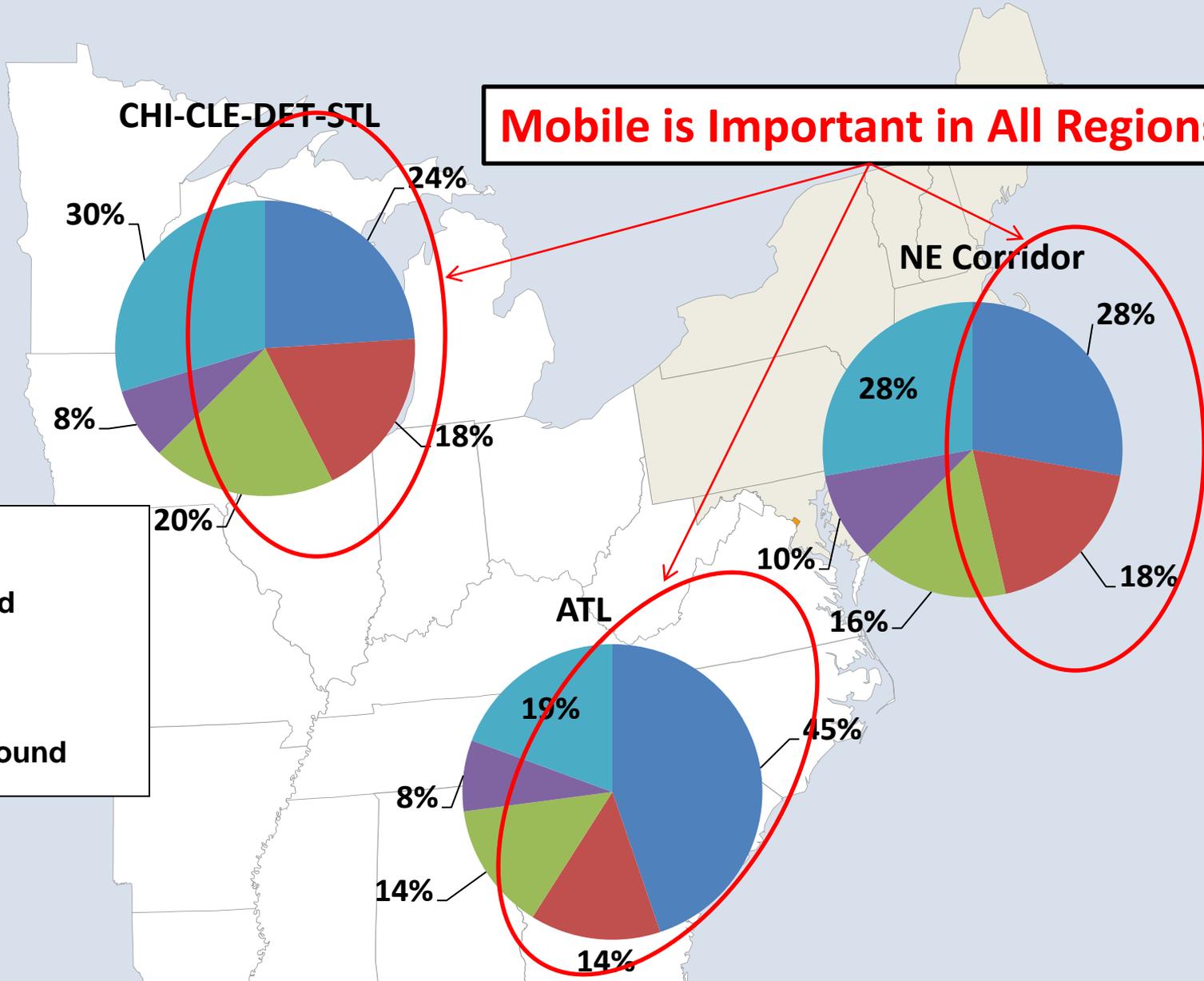
Aftermarket Catalyst Stakeholder Comments

Received Formal Comments from Stakeholders

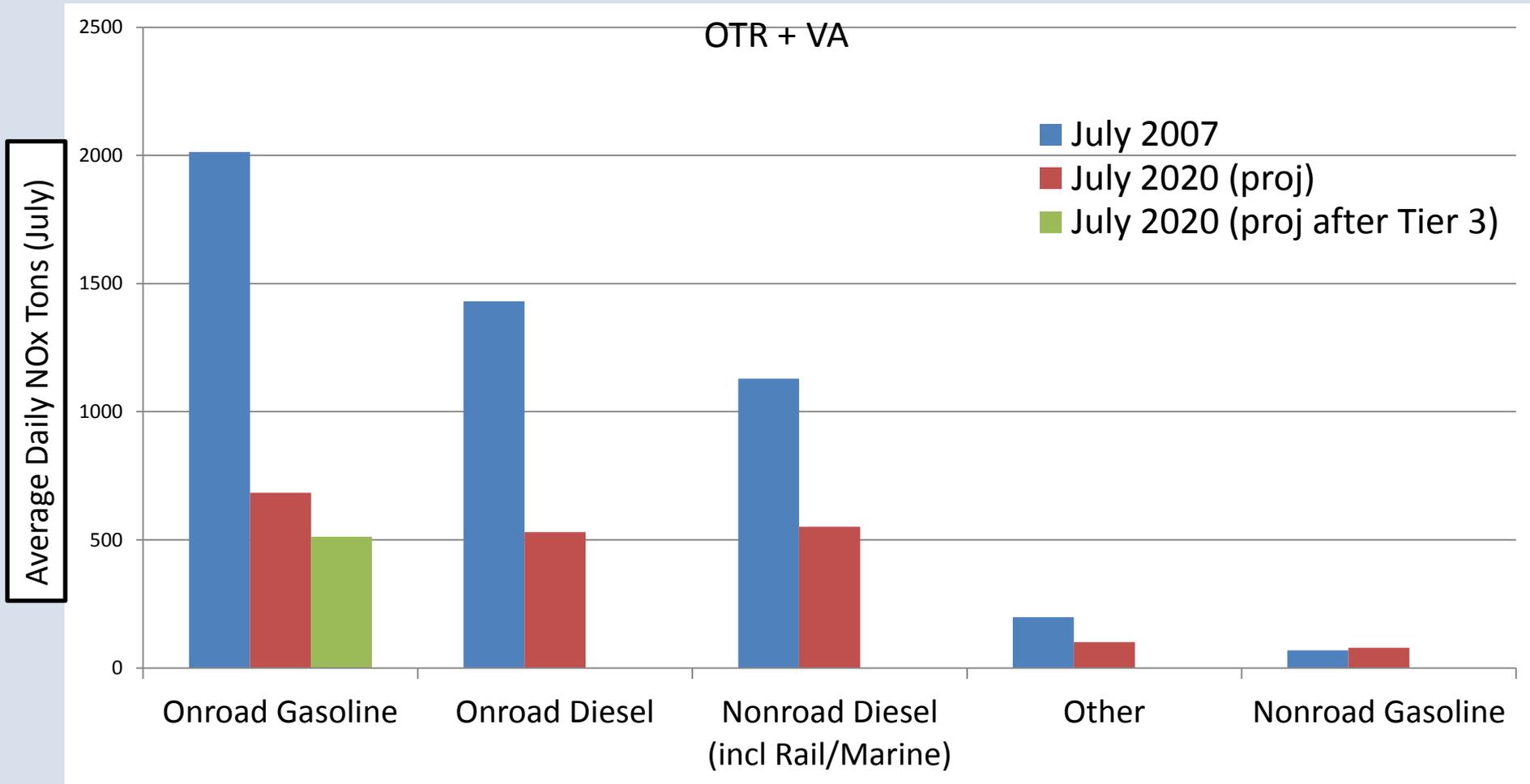
- Prefer A federal program
- Used converters should not be allowed
- Concern about the fleet make up in the OTR and how requiring CARB converters on Federal vehicles would function

2011 USEPA Analysis for 2016: Percent Contribution Based on US Emissions

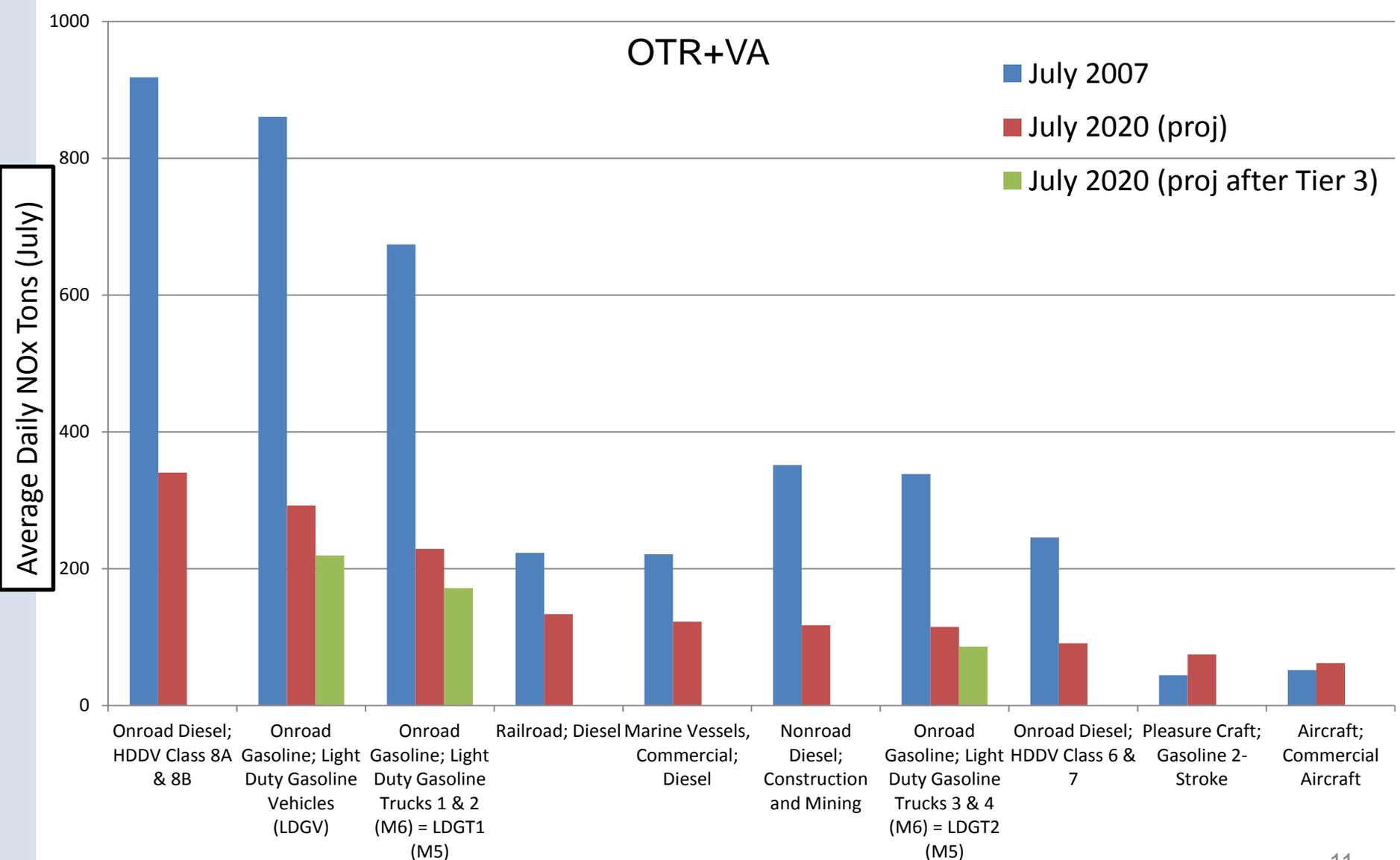
Mobile is Important in All Regions!



Average Daily July NOx Emissions



Average Daily July NOx Emissions



Onroad Inventory Project

Analyzed 2020 emissions for a mix of suburban and urban counties on the I-95 corridor

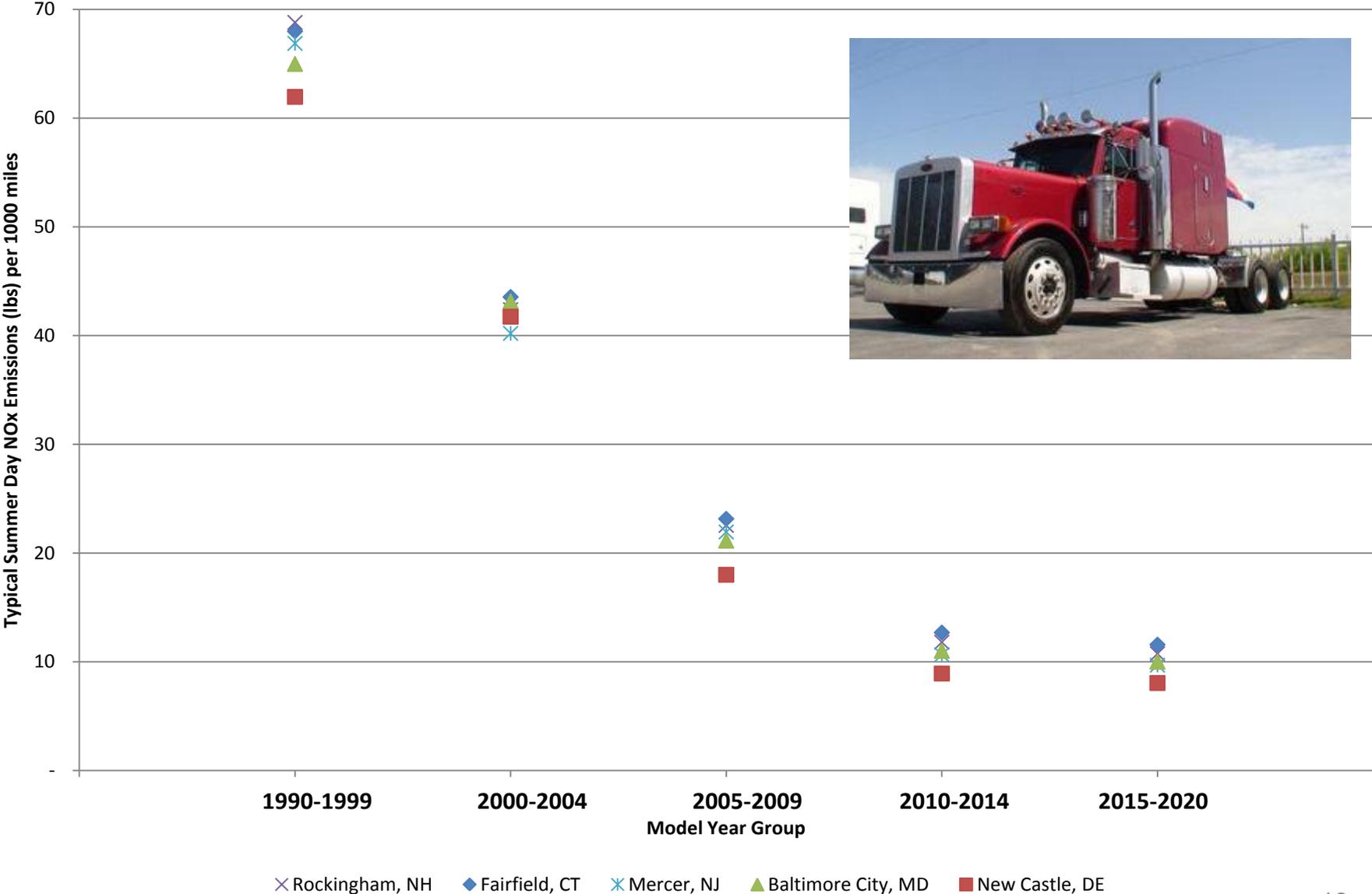
- Baltimore City, MD
- New Castle, DE
- Mercer, NJ
- Fairfield, CT
- Rockingham, NH



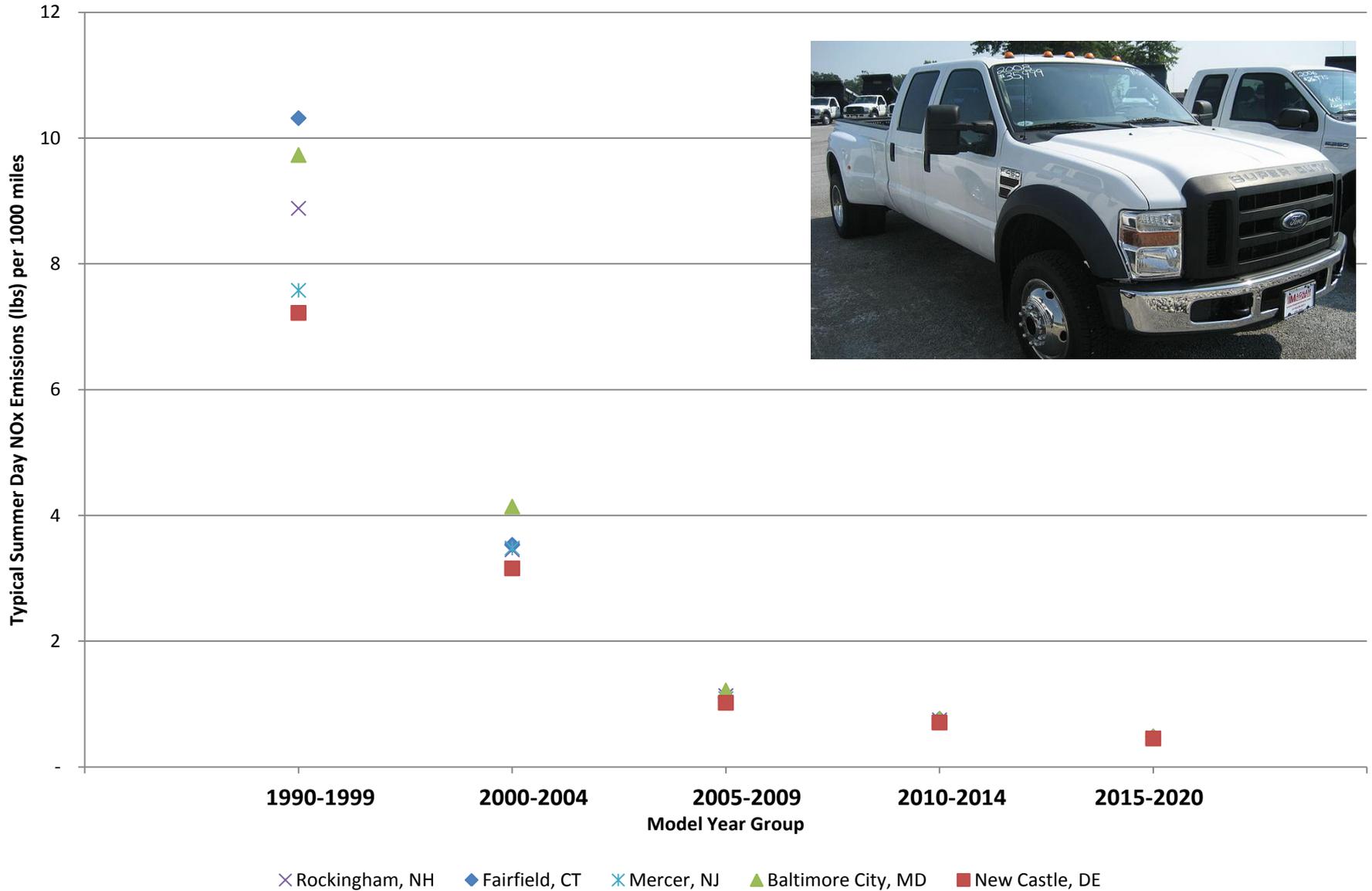
Focused on emissions from:

- Starts/Running/Idling
- Vehicle Miles of Travel (VMT)
- Age of the Vehicle (control technology) – Model Year

Older Combo Long Haul Trucks Emit More Per Mile than Newer Ones

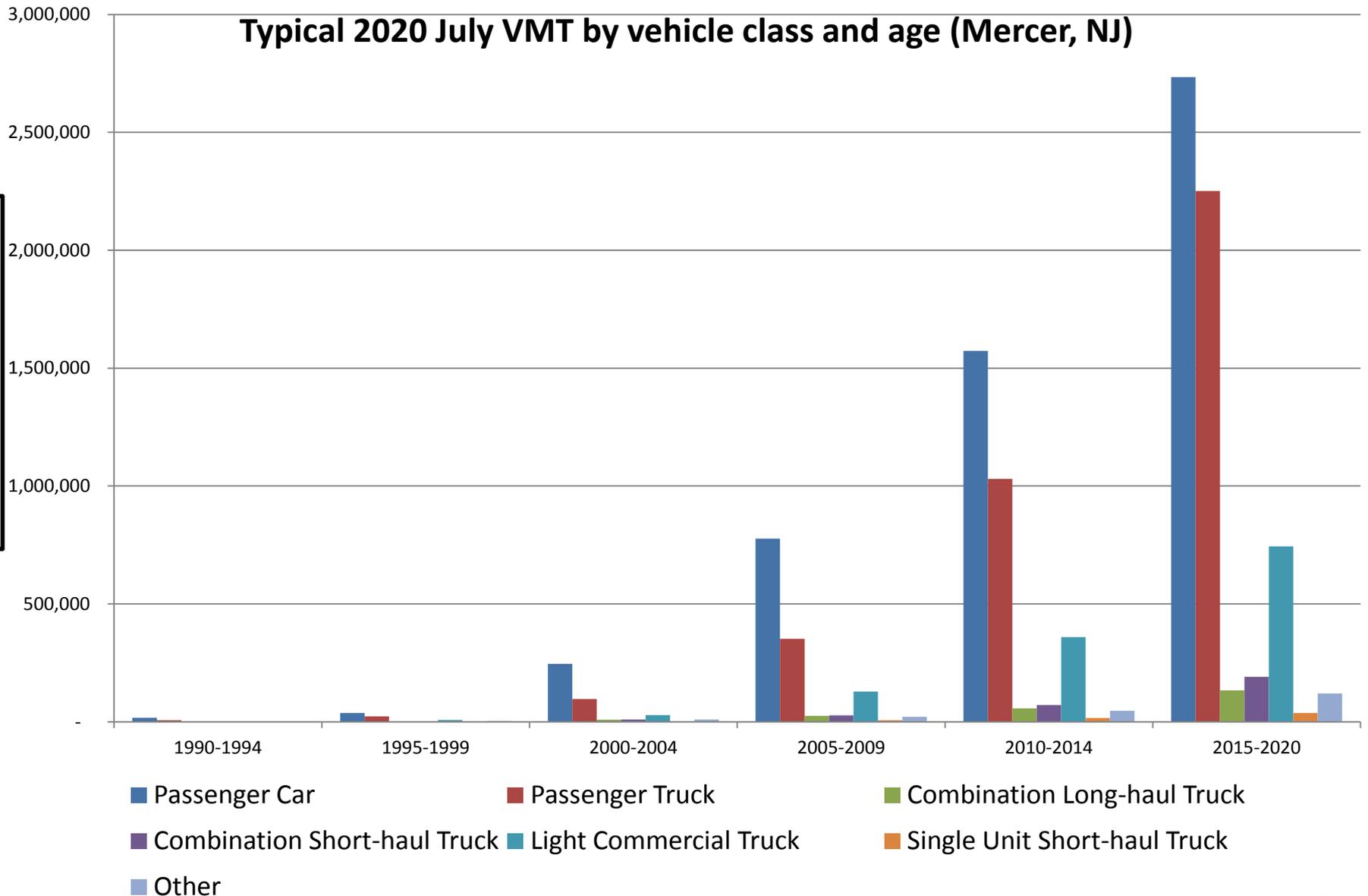


The Oldest Passenger Trucks Emit More Per Mile than Newer Ones



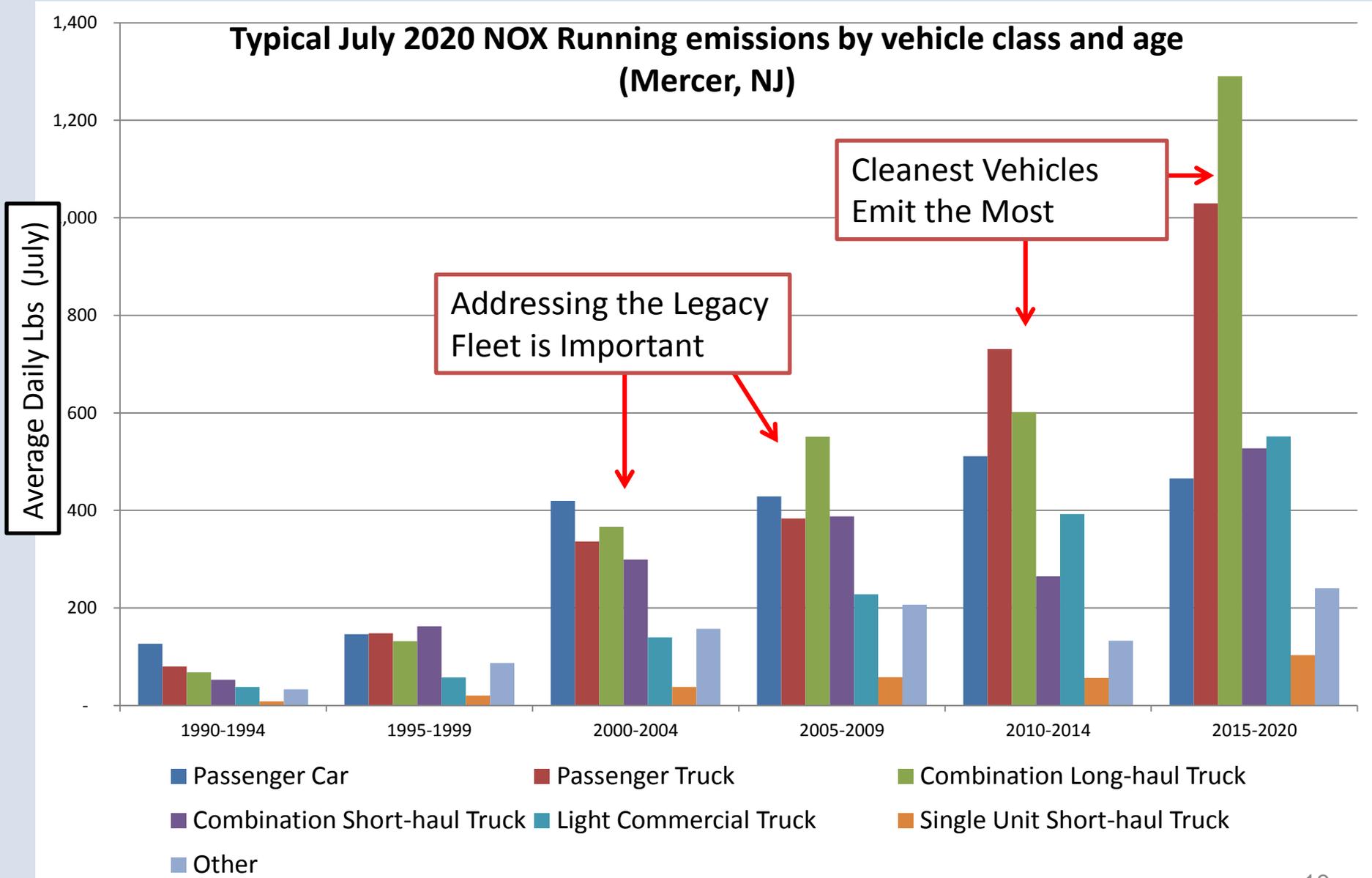
Newest Vehicles Are Used The Most

Average Daily VMT (July)



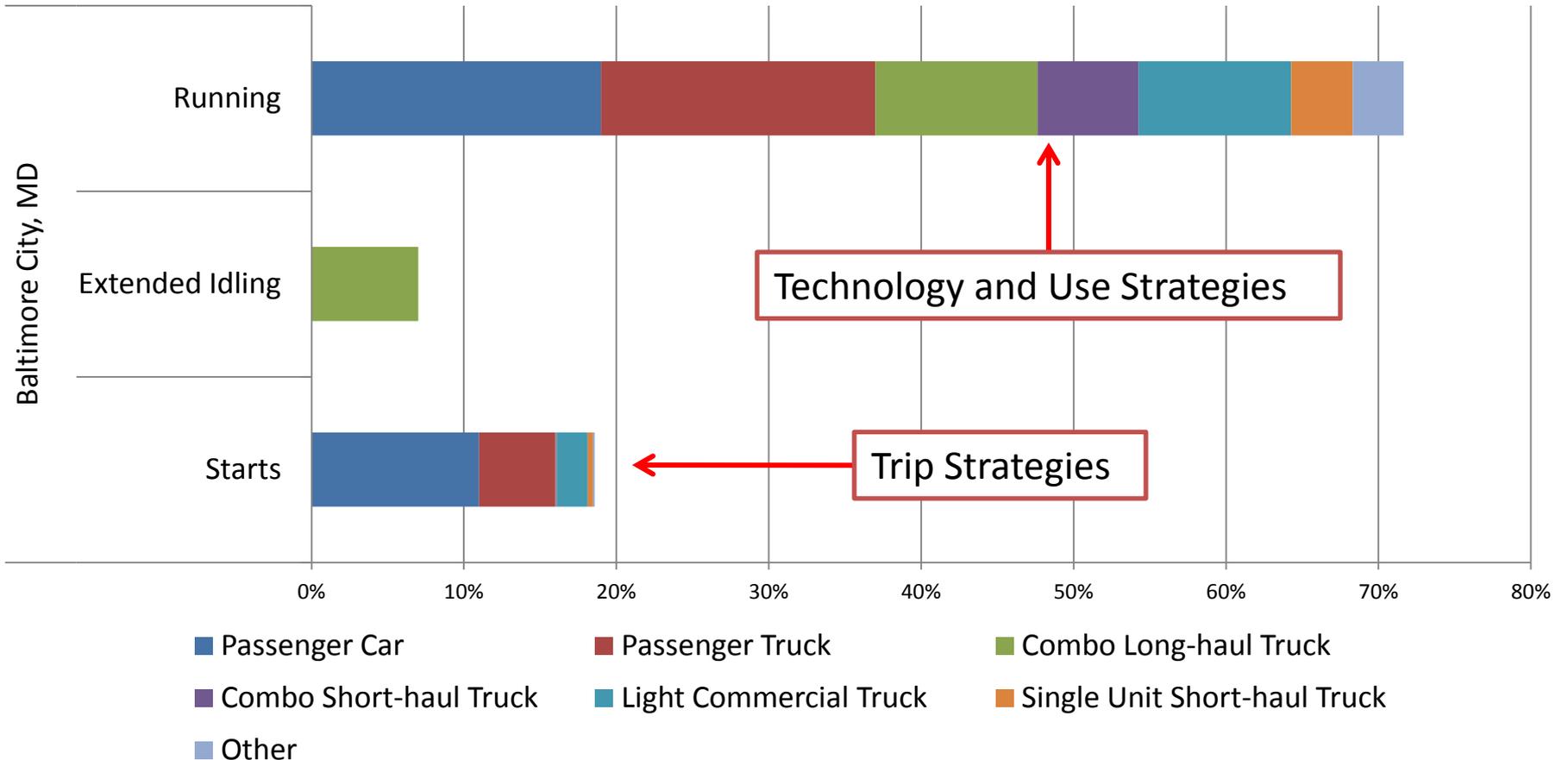
New and Legacy Fleet are Important

Typical July 2020 NOX Running emissions by vehicle class and age (Mercer, NJ)



Driving Emissions Dominate Mobile NOx

Percentage of NOx in Baltimore City at 8AM on a July Weekday



Emission Inventory Insights For the Future

- Key Categories –
 - Onroad Gasoline,
 - Onroad Diesel,
 - Nonroad Diesel
- Onroad
 - Newer Long Haul Trucks
 - Emit the most in aggregate despite having substantially lower emission rates
 - Newer Passenger Truck (SUVs)
 - Emit a lot in aggregate despite having substantially lower emission rates
 - Legacy Fleet
 - Reducing Trips – Passenger Cars & Trucks
- Nonroad
 - Marine
 - Rail
 - Construction
 - Pleasure Craft

Committee Charge

- Goal: To identify potential strategies for consideration at the 2014 Fall Meeting
- Strategies Include:
 1. Sectors of High Emission Reduction Potential
 - Heavy Duty Diesel Trucks
 - Passenger Vehicles
 - Movement of Goods
 - Construction Equipment
 - Pleasure craft
 2. Ports
 3. Diesel I/M & SIP Credit
 4. Compendium of State Actions and Programs
 5. Evaluation of Projections
 6. Additional Transportation Strategies