

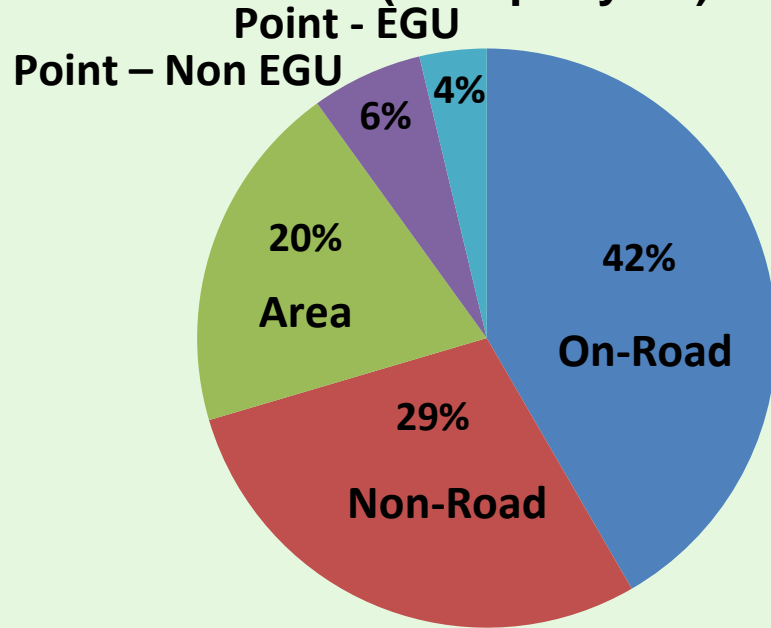
# Clean Air Council

## January 10, 2018

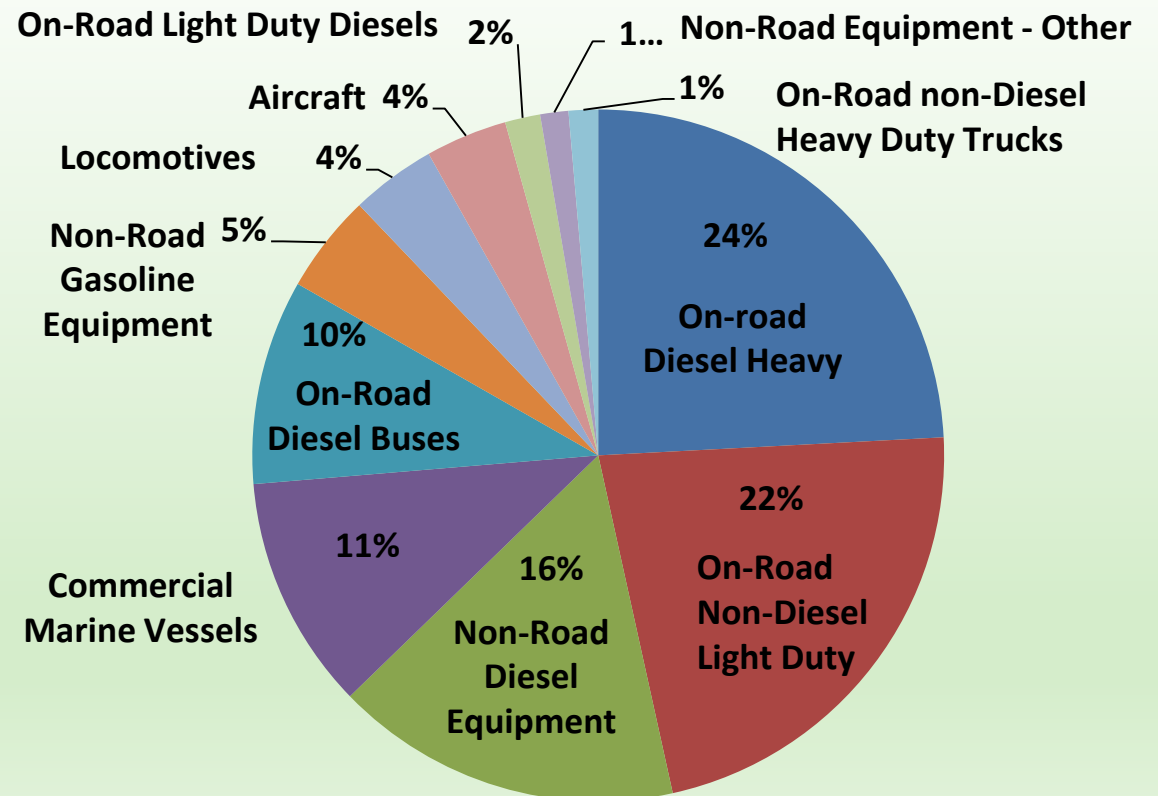
NJDEP Bureau of Mobile Source

# 2017 Projected NOx Emissions in New Jersey (tons per year)

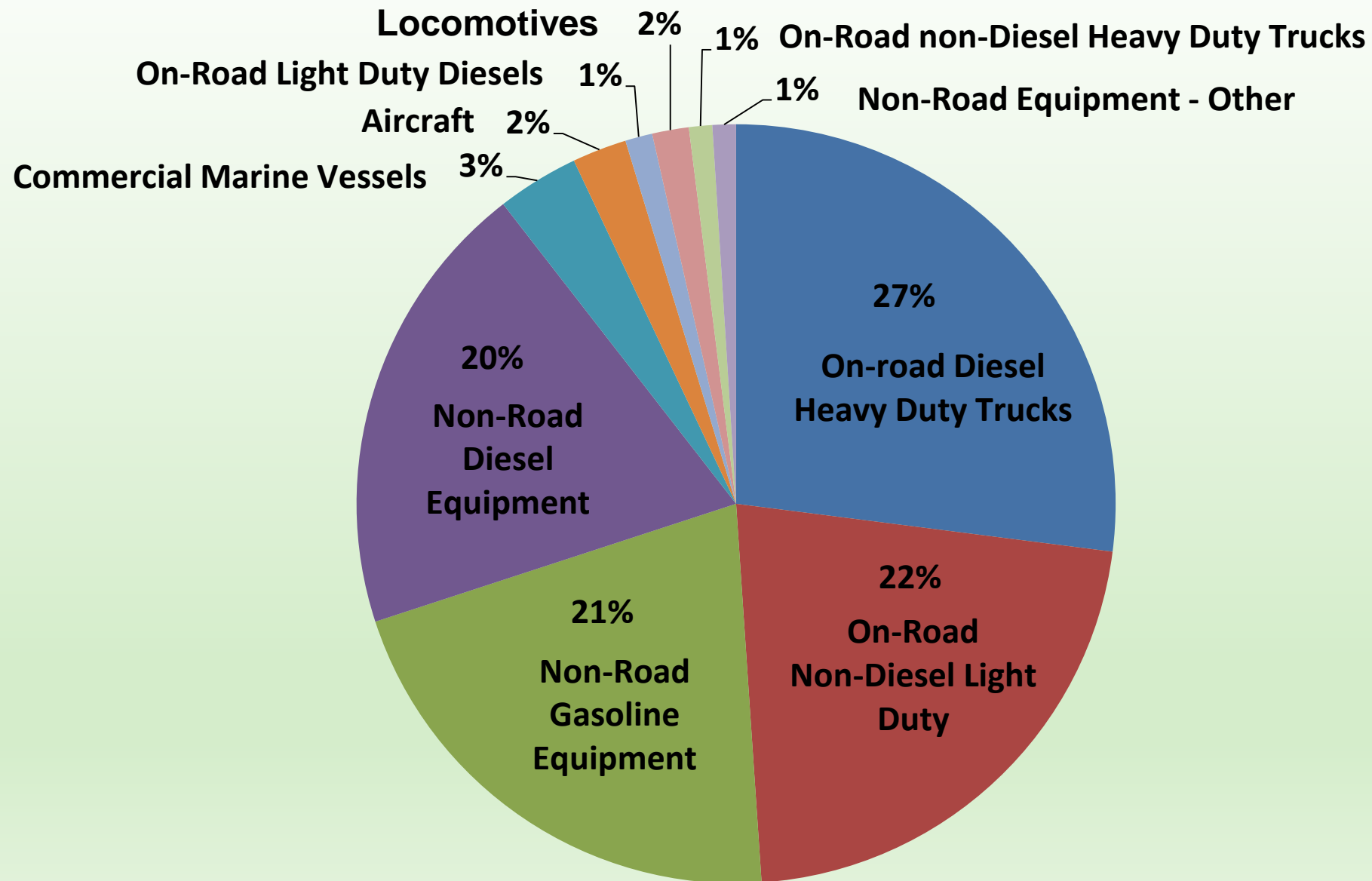
2017 Projected NOx Emissions in New Jersey  
(tons per year)



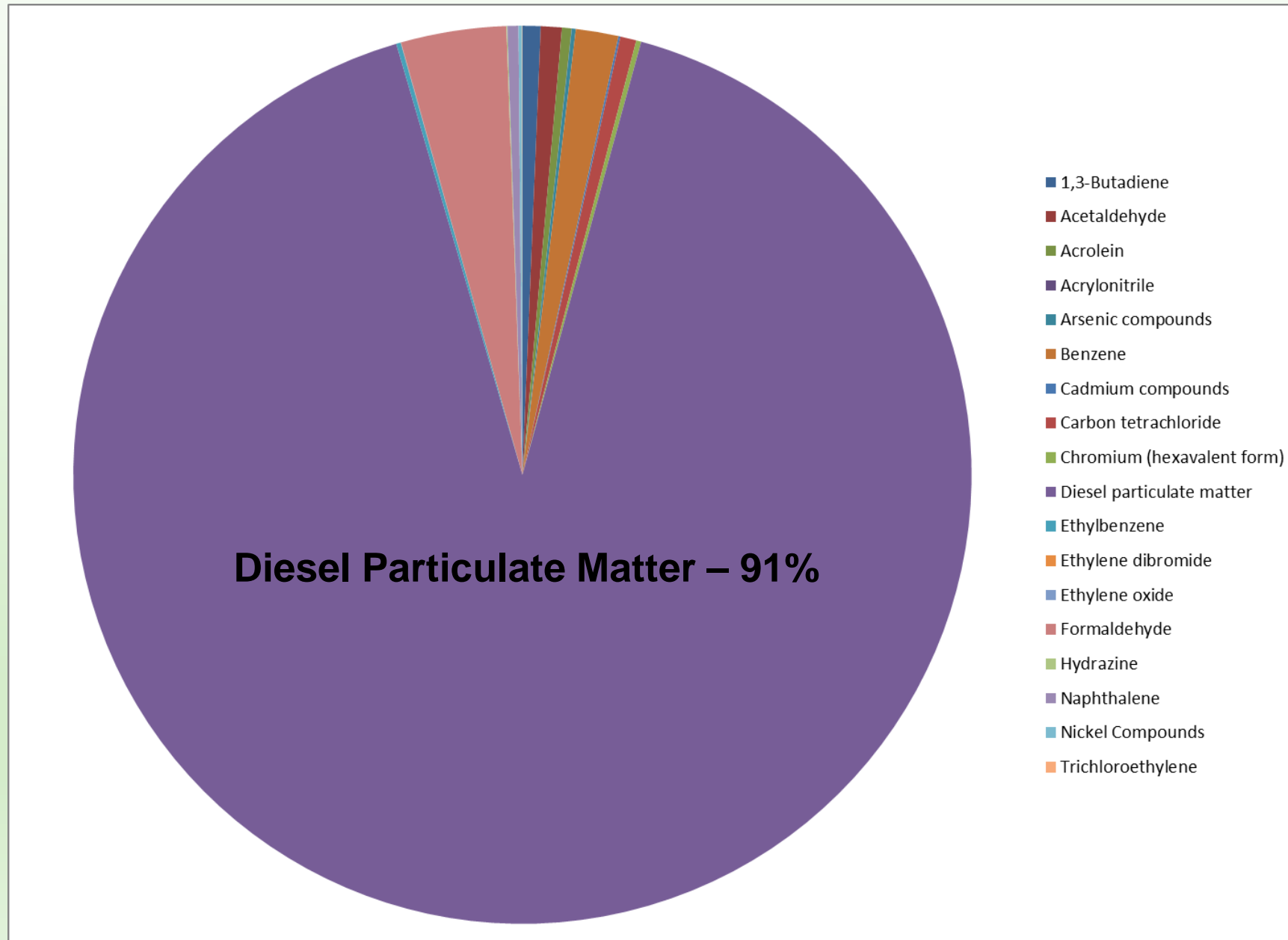
2017 Projected Mobile NOx Emissions in New Jersey (tons per year)



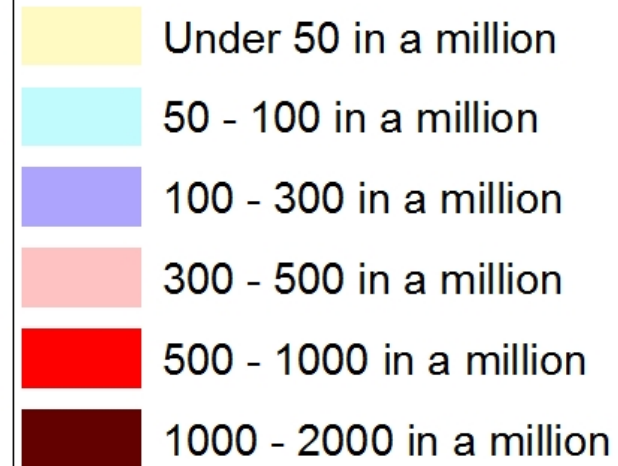
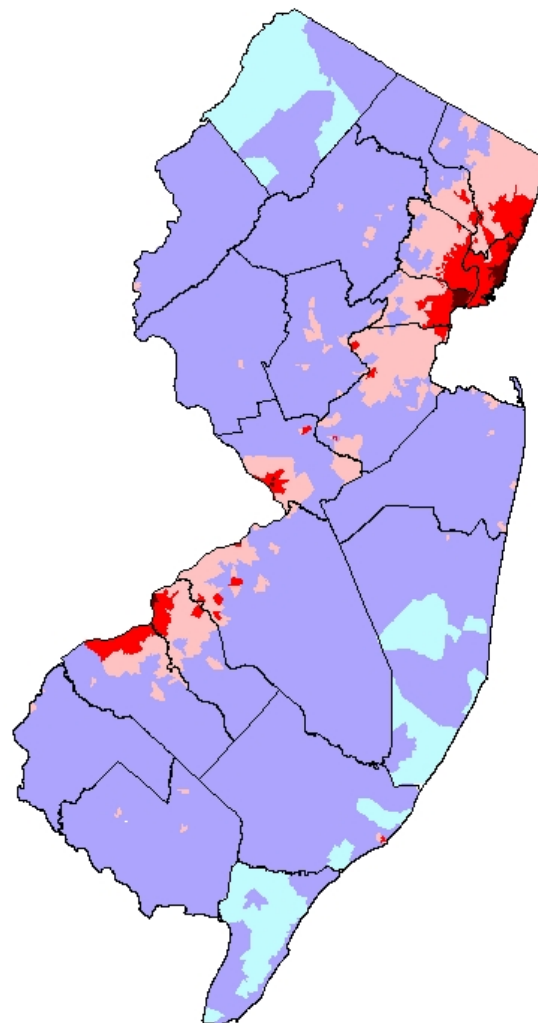
# 2017 Projected Mobile PM<sub>2.5</sub> Emissions in New Jersey (tons per year)



# New Jersey Chemicals of Concern and the Associated Risk Contribution



## 2011 Predicted Health Risk from Diesel Particulate in New Jersey\*



Maximum predicted risk  
is 1,981 in a million

### Source Contribution

On-Road - 37%  
Nonroad - 63%

\*Based on the 2011 National-scale  
Air Toxics Assessment (NATA)

# Successful on road innovative strategies

- **Enhanced Inspection & Maintenance Programs**

- All gasoline vehicles are inspected
- Diesel vehicles under 8500 lbs or over 18,000 lbs are inspected
- All commercial vehicles inspected

2.3 M vehicles annually

15 TPD VOC+Nox benefit

- **Anti-idling promotion**

- **Mandatory Retrofit Program – 10 yr program as a result of the Diesel Law**

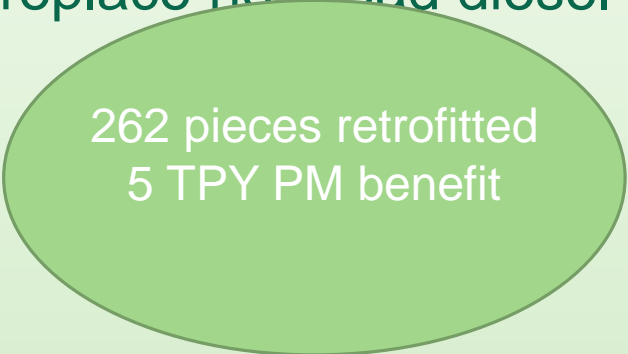
- School buses
- Solid waste vehicles
- Municipally owned diesel vehicles

Over 14K retrofits  
78 TPY PM benefit

# Successful non-road innovative strategies

- **Clean Construction Program**

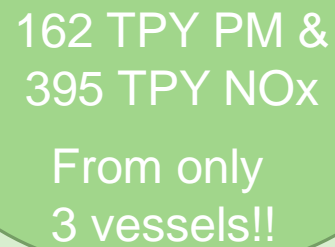
- Uses federal grant money to retrofit/repower/replace non road diesel equipment
- Executive Order 60
  - 175 retrofits on construction equipment



262 pieces retrofitted  
5 TPY PM benefit

- **Marine vessel repowers**

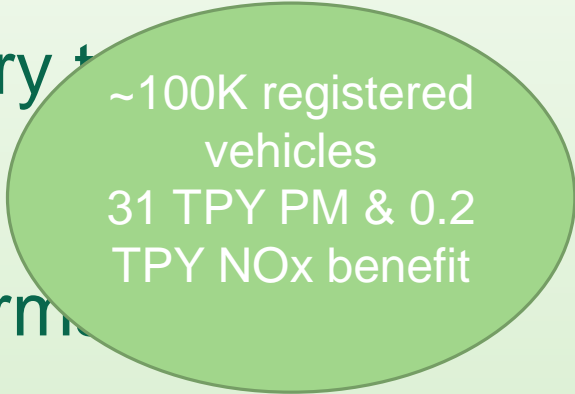
- 3 passenger ferry repowers



162 TPY PM &  
395 TPY NO<sub>x</sub>  
From only  
3 vessels!!

# Opportunities

- On-Road Vehicle Inspection
  - Close the gap and inspect pick-up & local delivery trucks
  - Identify gross emitters w/ remote sensing
  - Step up Anti-tampering and ensure certified aftermarkets
- Off-Road Equipment
  - Construction fleet turnover
  - Model CARB program for newer engines



~100K registered  
vehicles  
31 TPY PM & 0.2  
TPY NOx benefit



# Opportunities

- Marine
  - Vessel repower
  - Model CARB fuel requirements to lower PM, NOx, and SO4
- Locomotives
  - Idle reduction
  - Collaborate w/ NJ Transit on low aromatic fuel (similar to CARB)
- Electrification of gasoline/diesel
  - School and shuttle busses
  - Port equipment
  - Medium/Heavy EVs – market driven

# Focus on Electric Vehicles



Photo from Workhorse



Photo from Stevenson Crane Service



Photo from Workhorse



Photo from Zeromotorcycles

# Focus on Electric Vehicles

1. Chief obstacles to EV adoption
2. Current & upcoming EV initiatives in NJ
3. Seven opportunities to spur EV market penetration
  - a. Underway. DEP has resources to implement
  - b. Stretch goals. Would benefit from CAC guidance

# Chief Obstacles to EV Adoption

- **Affordability gap:** Today's initial costs are still too high for mainstream consumers.
- **Range anxiety:** Lack of sufficient public and private charging infrastructure.
- **Insufficient consumer awareness:** People are not aware of the benefits and availability of EVs.

# Current EV Initiatives in NJ

## Regulation, Incentives, Education & Awareness

- Zero Emission Vehicle (ZEV) rules
- It Pay\$ to Plug In: Workplace charging grant
- Sales tax exemption
- HOV lane access, toll discounts
- Streamlined permitting for home charging
- Recognition program for workplace charging
- Website: [www.drivegreen.nj.gov](http://www.drivegreen.nj.gov)

## Strategic planning

- Statewide and regional collaborations
- Federal EV corridor designations
- BPU stakeholder process

# Upcoming EV Initiatives in NJ

## Upcoming EV initiatives

- Federal grants – public charging
- VW settlement: “Appendix D”
- VW settlement: Electrify America investment
- Potential state fleet procurement and aggregate purchasing
- Pending legislation



# Seven Opportunities to Spur EV Market Penetration

**UNDERWAY.** DEP has good resources to guide these efforts.

1. Set state goals for EV adoption, including for the state fleet.  
Set state goals for charging infrastructure.
2. Fund/expand *It Pay\$ to Plug In*: charging station grant program.
3. Expand education and outreach efforts.  
Implement a Ride & Drive campaign.

# Seven Opportunities to Spur EV Market Penetration

## **STRETCH GOALS.** DEP would benefit from CAC's guidance.

4. Establish an EV purchase rebate program.
5. Ensure EV-ready buildings (existing & new construction).
6. Ensure EV access for residents without garages.
  - apartments/condos (“multi-unit dwellings” aka MUD)
  - urban charging
  - mobility solutions for people who don't own cars
7. Strategize about medium- and heavy-duty vehicles.