Maryland
Department of
the Environment

Advanced Clean Trucks

June 12, 2023 AQCAC Meeting

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New Vehicle Emission Regulations

- The Clean Trucks Act of 2023 requires the Department to adopt California's Advanced Clean Trucks (ACT) Program by the end of the year.

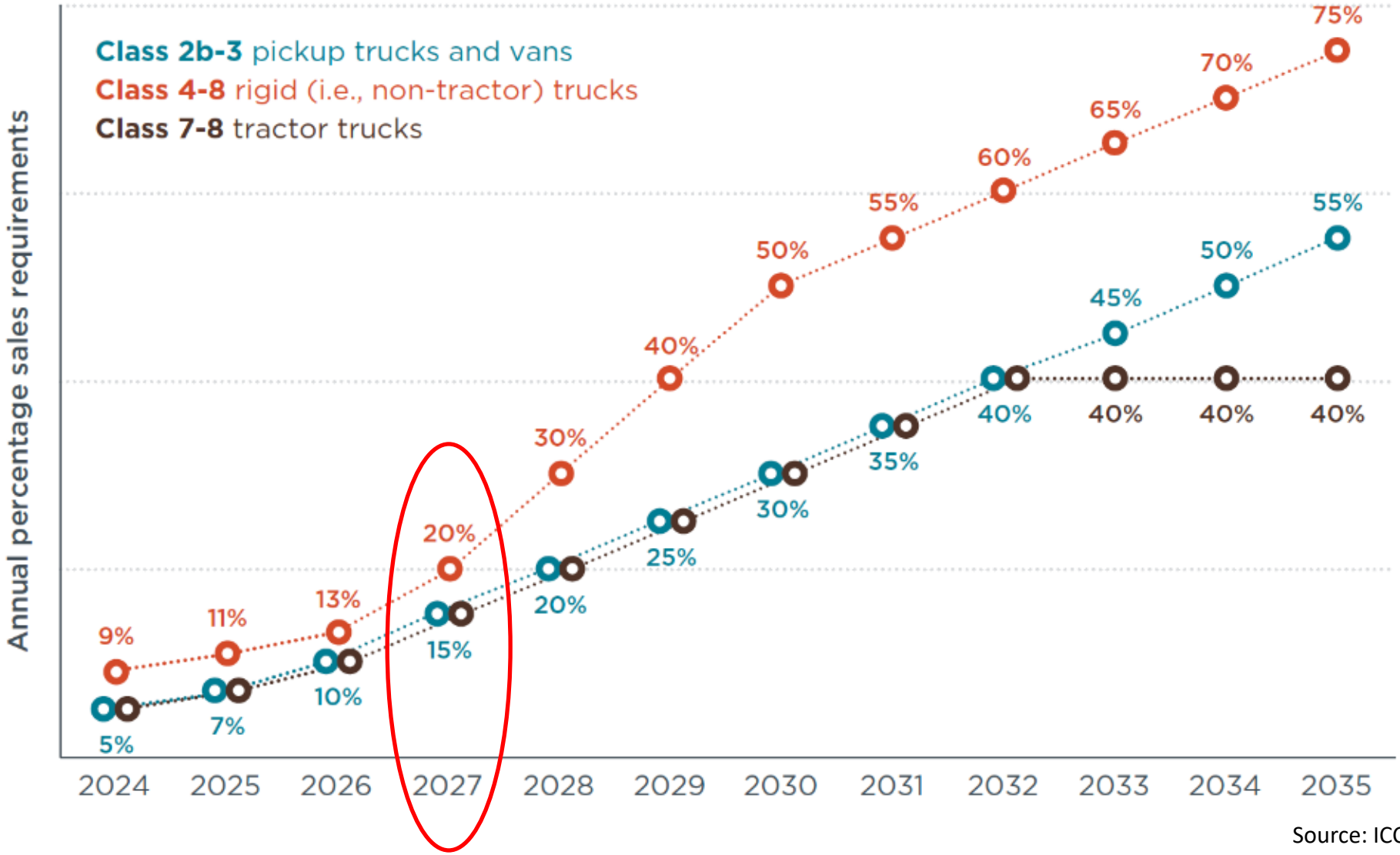
- ACT is one of California's vehicle emission regulations.
  - California is the only state authorized to set vehicle emission standards
  - Section 177 of the Clean Air Act allows other states to adopt California's standards if they are identical

- The regulation would take affect for the 2027 Model Year. The Clean Air Act requires two MY lead time for vehicle manufacturers.
  - Adopting through Incorporation by Reference the same way Clean Cars Program was adopted.

California ACT

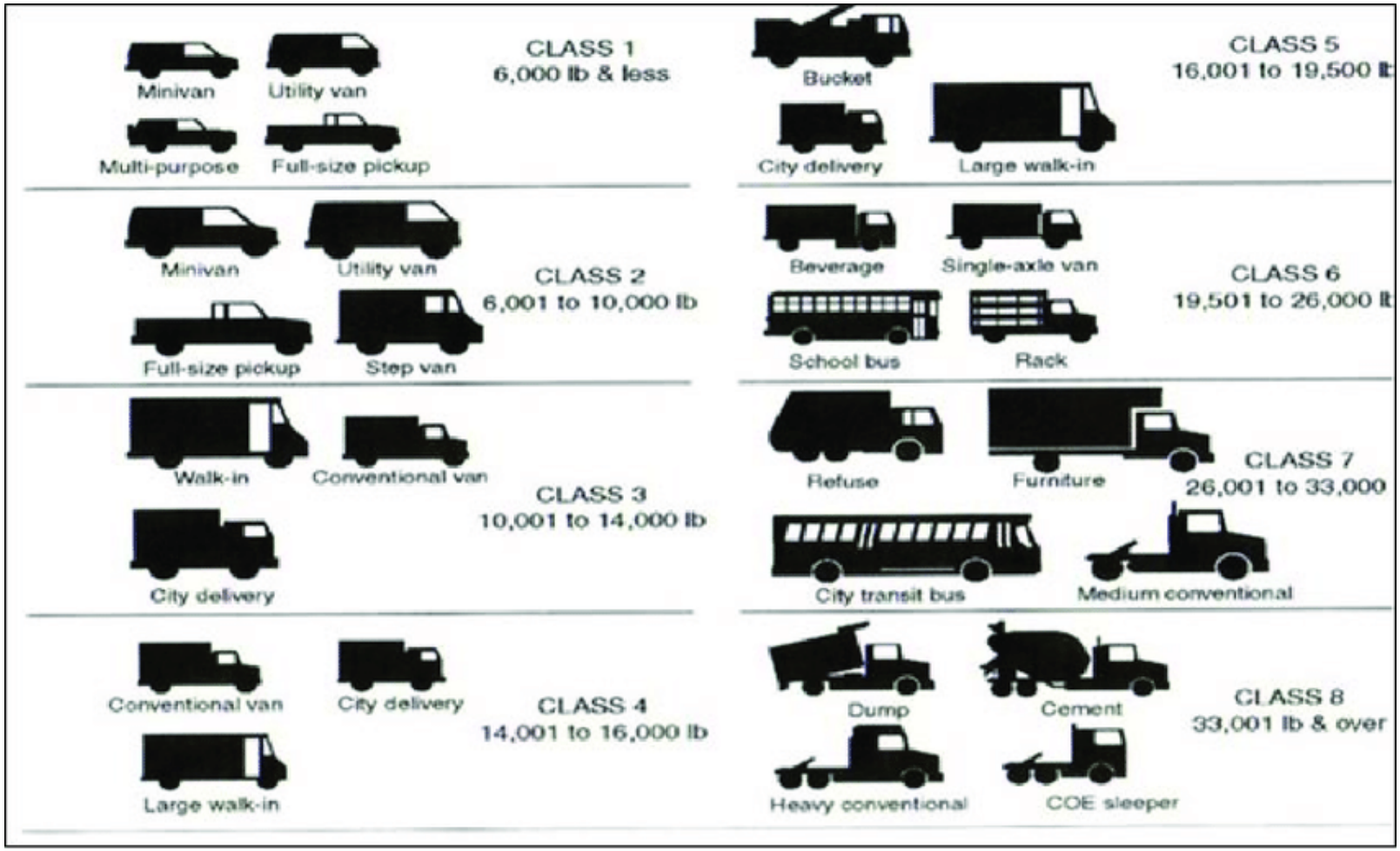
- The Advanced Clean Truck (ACT) Regulation requires a growing percentage of medium- and heavy-duty vehicle sold to be zero emission.
  - Vehicles with a GVWR over 8,500 lbs.
  - Class 2b – Class 8 vehicles.
- ZEV sales are phased-in beginning in MY 2024 (2027 for MD) and increase through MY 2035, remaining constant thereafter.
- Similar credit, banking, and trading program as light-duty manufacturers have under the Advanced Clean Car.

Advanced Clean Truck (ACT) Program



Source: ICCT

Medium/Heavy-Duty Trucks

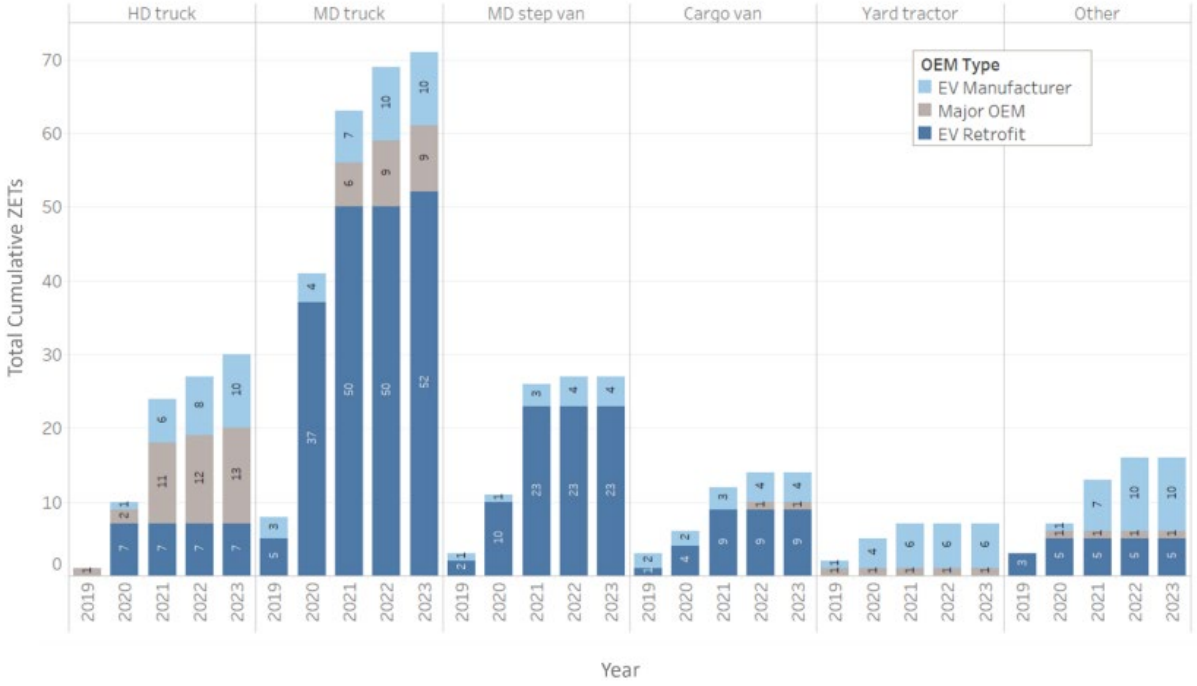


Source: Researchgate.net

ZEV Truck Availability

- According to a CALSTART report there were 20 models of Class 2b-8 ZETs available in 2019.
  - By 2021 that number rose to 145 models and is expected to rise to 165 by the end of 2023.

Figure 3: ZETI Model Availability in the United States (2019-2023)

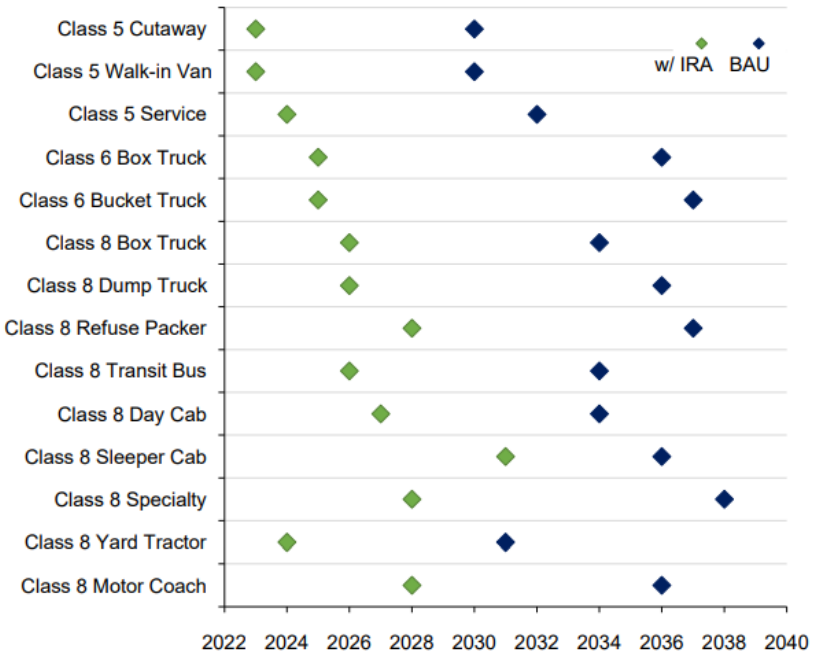


https://calstart.org/wp-content/uploads/2022/02/ZIO-ZETs-Report_Updated-Final-II.pdf

Purchase Incentives

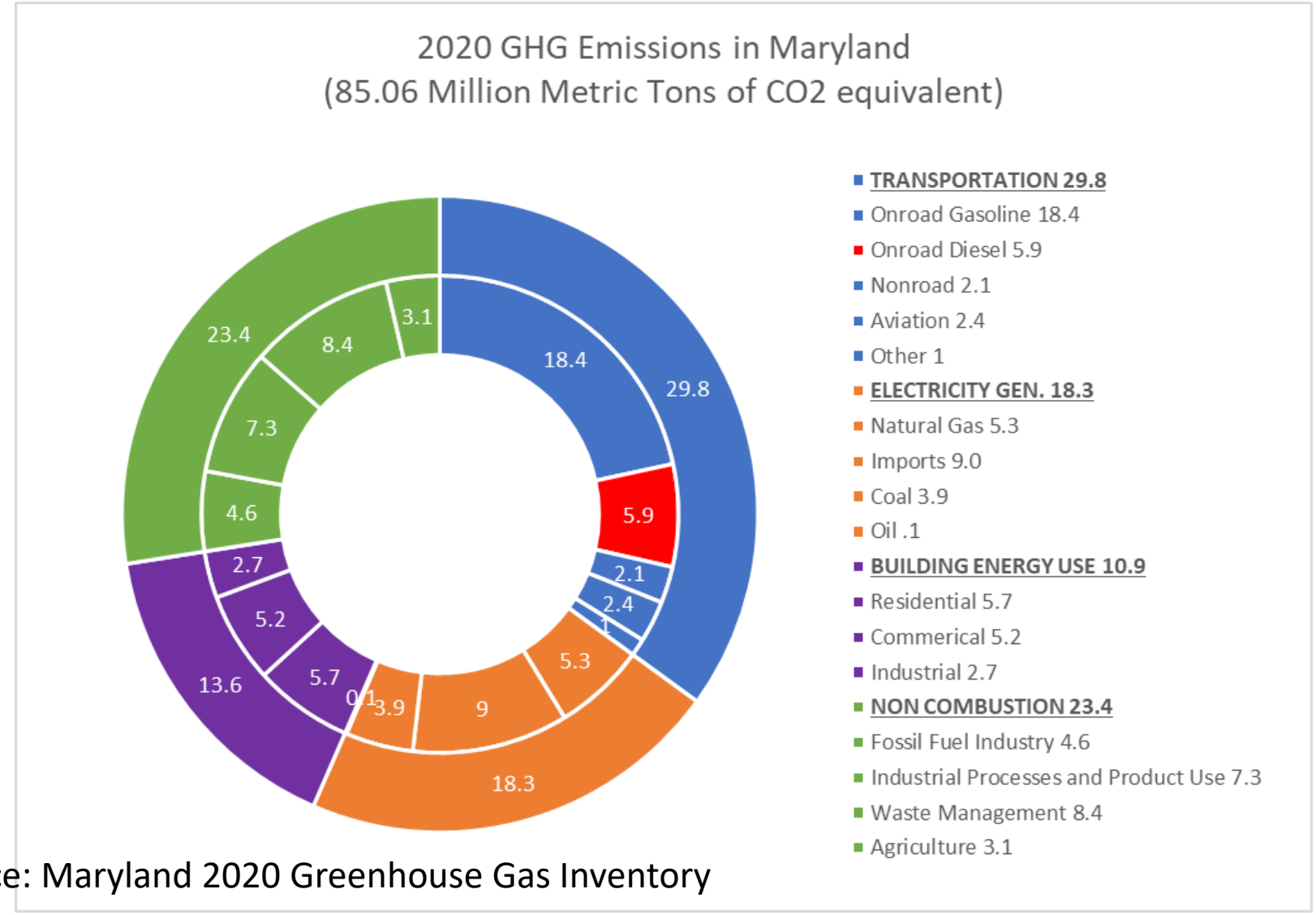
- Federal IRA Tax Credit for Qualified Commercial Clean Vehicles is smaller of:
  - 30% of vehicle price;
  - Incremental cost vs. diesel; or
  - $40,000.
  - Additional credits for charging
- Maryland: grants for 75% of incremental cost ($10M avail per year)

Figure 1. Year purchase price parity is achieved for a range of types of ZEVs compared to internal combustion vehicles for business-as-usual and with the IRA



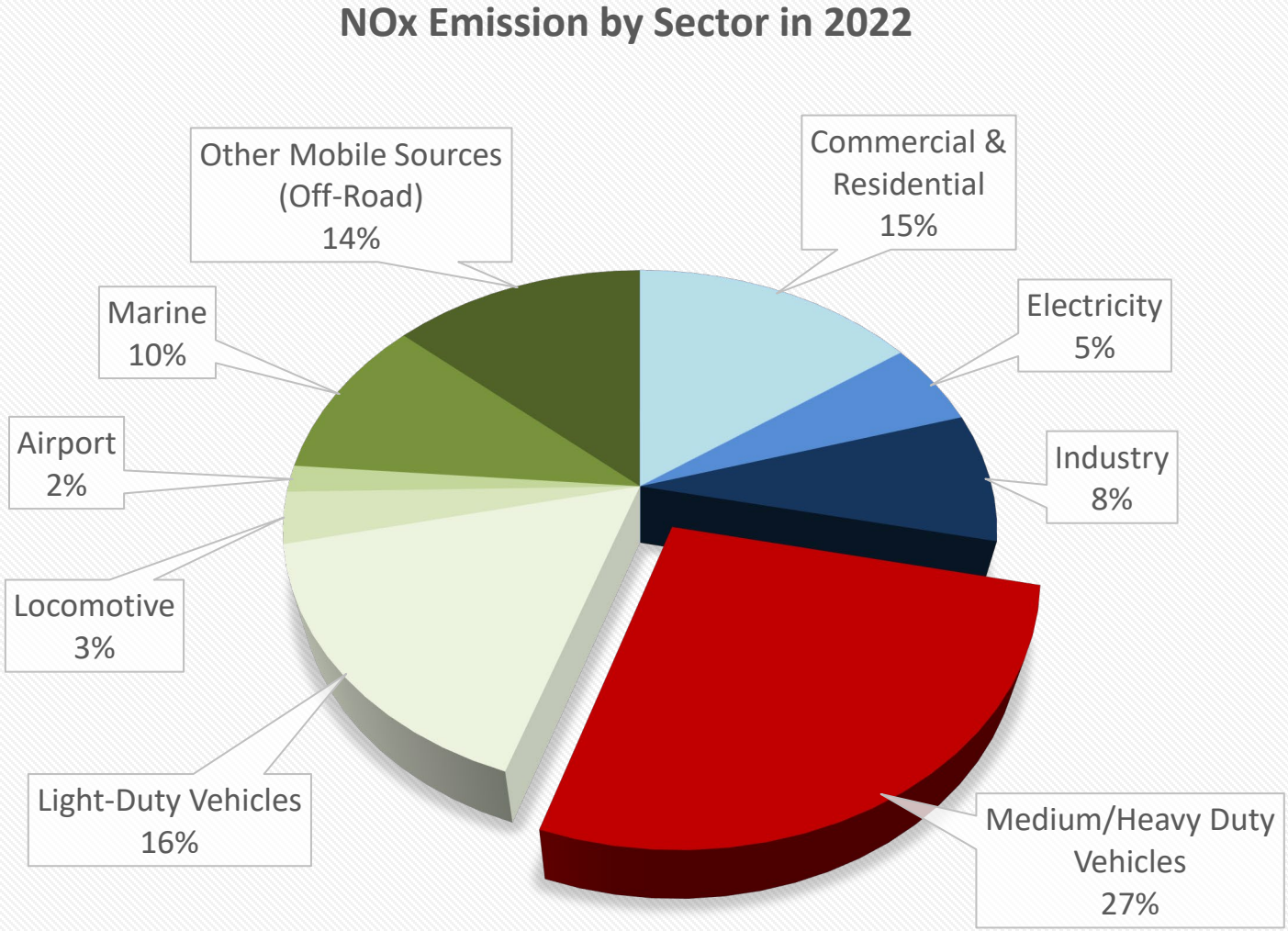
ERM, 2023, *Inflation Reduction Act Supplemental Assessment: Analysis of Alternative Medium- and Heavy-Duty Zero-Emissions Vehicle Business-as-usual scenarios*. www.erm.com/contentassets/154d08e0d0674752925cd82c66b3e2b1/edf-zev-baseline-technical-memo-addendum.pdf

Greenhouse Gas Emission in Maryland



Source: Maryland 2020 Greenhouse Gas Inventory

Air Quality Impacts



COMAR 26.11.43

- MDE proposes to adopt a new chapter in COMAR 26.11.43 Advanced Clean Trucks Program
- The new chapter covers the implementing ACT regulations as well as the Incorporated by Reference documents in 26.11.43.02
- MDE proposes to allow manufacturers to earn early compliance credits beginning with the 2026 MY.
  - This will help encourage manufacturers to place zero emission trucks in Maryland a year earlier, improving overall emission benefits of the program.

Next Steps

This Fall: Adopt implementing regulations by end of year to meet Clean Trucks Act of 2023 requirement and Clean Air Act 2yr lead-time requirement.

Next Year: *Needs Assessment and Deployment Plan*

- Required by *Clean Trucks Act of 2023*
- MDE, MDOT, DGS, MEA, and PSC will assess: fueling/charging demands & infrastructure; necessary fueling/charging stations; purchase incentives; state fleet transition.

Model Year 2027 (*calendar year 2026*): Regs effective

QUESTIONS?