



Connecticut Department of Energy and Environmental Protection



Multi-State Medium & Heavy Duty Zero Emission Vehicle Initiative

September 10, 2020
SIPRAC



Connecticut Department of Energy and Environmental Protection

MHD ZEV MOU – July 14, 2020



MULTI-STATE MEDIUM- AND HEAVY-DUTY ZERO EMISSION VEHICLE

MEMORANDUM OF UNDERSTANDING

WHEREAS, the Signatory States and the District of Columbia¹ recognize the importance of state leadership and coordinated state action to ensure national progress in the effort to reduce greenhouse gas (GHG) emissions and stabilize global warming;

WHEREAS, the Signatory States have statutory obligations or otherwise seek to significantly reduce statewide GHG emissions by 2050, consistent with science-based targets;

WHEREAS, transportation is now the nation's largest source of GHG emissions, and, after light-duty vehicles, medium- and heavy-duty trucks are the next largest source of transportation sector GHG emissions;

WHEREAS, the Signatory States have a statutory obligation to provide their citizens with air quality that complies with national health-based air quality standards, which are required to be protective of health and the environment with an adequate margin of safety;

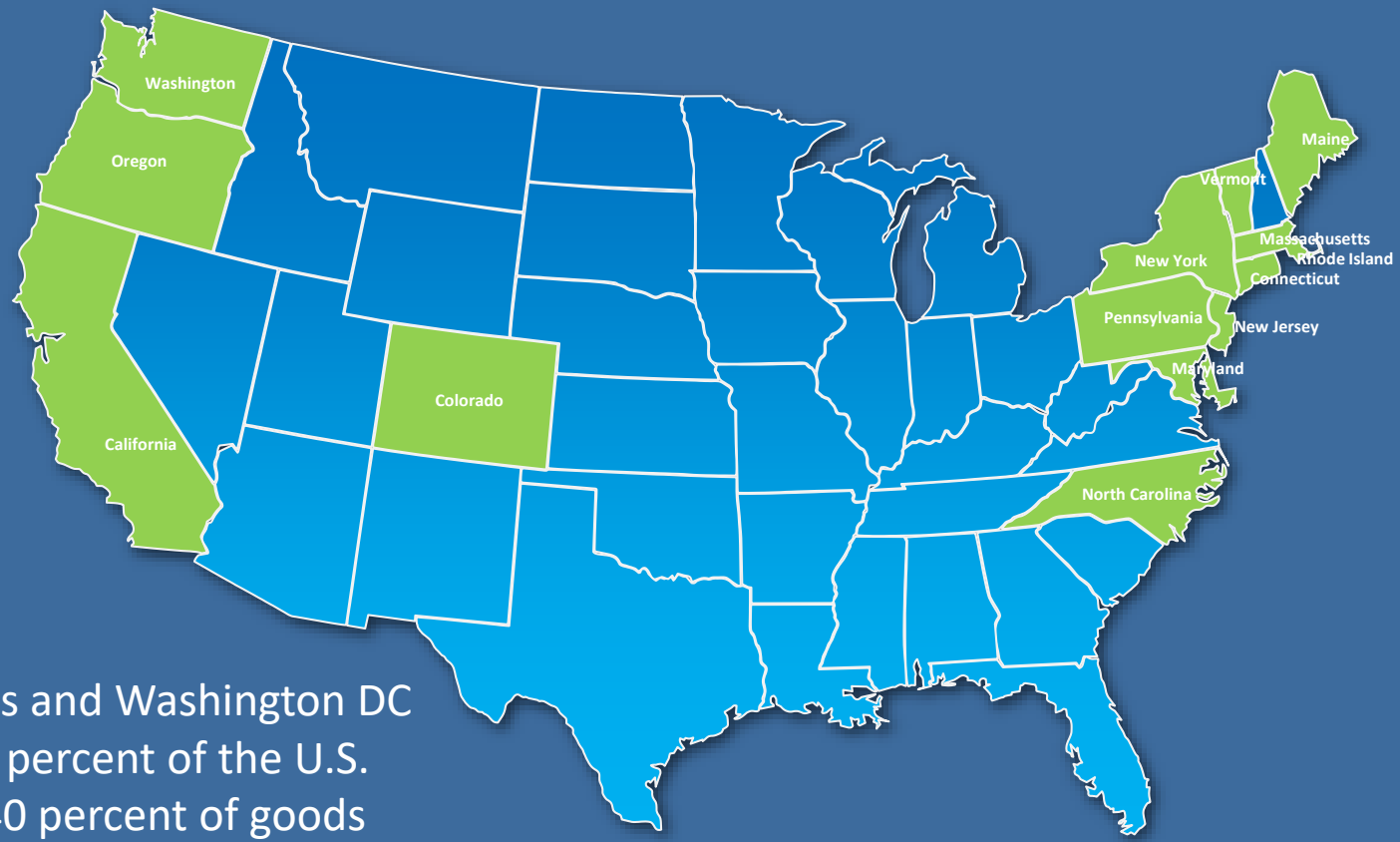
WHEREAS, fossil fuel related emissions from medium- and heavy-duty vehicles (MHDVs) are a major source of nitrogen oxides (NOx), particulate matter, and toxic air emissions, which are preventing many densely populated areas from achieving compliance with federal ambient air quality standards;

WHEREAS, emissions from MHDVs are a widely acknowledged, but unaddressed, environmental justice problem that directly and disproportionately impacts disadvantaged communities located near freight corridors, ports and distribution centers;

- Builds off success of 2013 8 state ZEV MOU and subsequent Action Plans for light-duty vehicles.
- Commits signatories to work together to foster a self-sustaining market for zero emission medium- and heavy-duty vehicles.
- Consistent with CT's Global Warming Solutions Act, calls for 30% of new truck and bus sales to be zero-emission by 2030 and 100% by 2050.
- Emphasizes need to accelerate deployment of zero-emission trucks and buses in disadvantaged communities.
- Directs development and implementation of a MHD ZEV Action Plan.
- <https://portal.ct.gov/DEEP/Air/Mobile-Sources/EVConnecticut/EVConnecticut---CTs-EV-Commitment>



15 Signatory States & WDC



The 15 signatory states and Washington DC account for almost 50 percent of the U.S. economy and nearly 40 percent of goods moved by truck (by value).

Analysis <https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1#reqid=70&step=1&isuri=1>;
FHWA Freight Analysis Framework <https://faf.ornl.gov/faf4/Extraction1.aspx>



Why Connecticut Joined

- Electrifying the MHDV sector is essential to meeting our climate and air quality goals
 - Connecticut continues to project ozone nonattainment
 - After LDV sector, MHDV sector is next largest source of transportation related emissions in Connecticut
 - Goods movement is a growth sector and MHDV diesel emissions contribute to poor air quality that disproportionately harms the health of those in low-income communities and communities of color that are often located near trucking corridors and distribution hubs
 - By 2030, MHD ZEVs are projected to achieve total cost of ownership parity with diesel/gasoline counterparts
 - Many large commercial fleets (Amazon, DHL, IKEA) have made public commitments to electrify their fleets
 - This effort is consistent with Connecticut's deployment of VW funding



Next Steps

- The Multi-State ZEV Task Force will conduct stakeholder outreach and develop a draft multi-state Action Plan considering:
 - Incentives for vehicles and infrastructure;
 - Utility actions to support infrastructure build out and beneficial rate design;
 - Measures to increase the use of zero emission trucks/delivery vans in densely populated areas;
 - Innovative financing models and new funding sources;
 - Actions to encourage fleet purchases; and
 - Uniform standards and data collection requirements.
- Timeline in the MHD ZEV MOU calls for development of a draft Action Plan within six months (e.g., early 2021)
 - NESCAUM and MJ Bradley & Associates are assisting with plan development with state and utility engagement, respectively






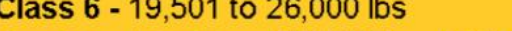
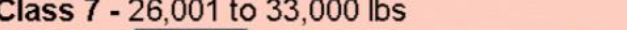
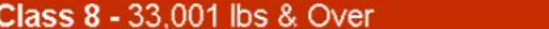
Stay informed! Sign up on [EVConnecticut](#) to receive updates



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Additional Information

- Covered Truck Classifications
 - Based on Gross Vehicle Weight Rating (GVWR)
 - Class 2 subdivided into:
 - Class 2a (GVWR 6,001- 8,500 lbs., and
 - Class 2b (GVWR of 8,501- 10,000)
 - MHDVs cover class 2b-8

Class 1 - 6,000 lbs & Less  Minivan Cargo Van SUV Pickup Truck
Class 2 - 6,001 to 10,000 lbs  Minivan Cargo Van Full-Size Pickup Step Van
Class 3 - 10,001 to 14,000 lbs  Walk-in Box Truck City Delivery Heavy-Duty Pickup
Class 4 - 14,001 to 16,000 lbs  Large Walk-in Box Truck City Delivery
Class 5 - 16,001 to 19,500 lbs  Bucket Truck Large Walk-in City Delivery
Class 6 - 19,501 to 26,000 lbs  Beverage Truck Single-Axle School Bus Rack Truck
Class 7 - 26,001 to 33,000 lbs  Refuse Furniture City Transit Bus Truck Tractor
Class 8 - 33,001 lbs & Over  Cement Truck Truck Tractor Dump Truck Sleeper



Determining MOU Goals

Establishing a Baseline for Sales

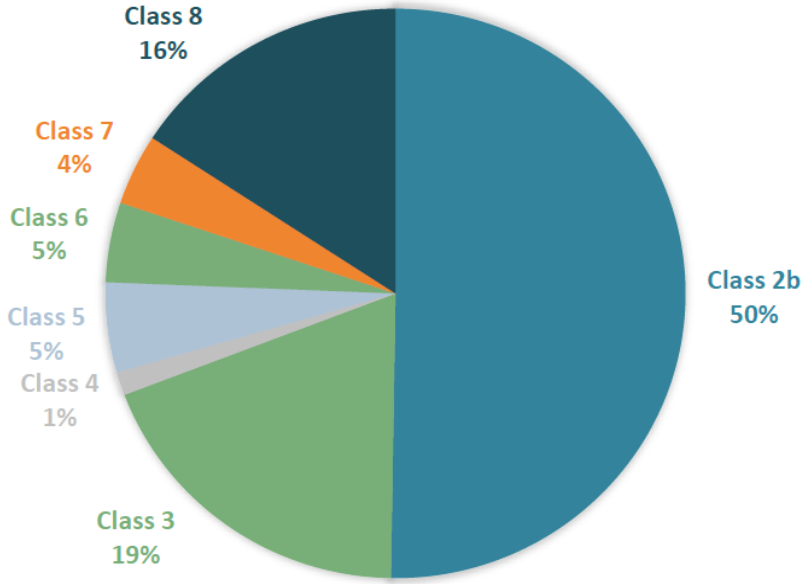
- In 2018, national new retail sales of Class 2b-Class 8 vehicles totaled roughly 1,588,000.
- Class 2b vehicles dominated sales (50%), followed by Class 3 (19%) and Class 8 (16%).

Source: Transportation Energy Data Book: Edition 38 (Jan. 2020), available at <https://tedb.ornl.gov/>; Class 2b vehicles sales extrapolated based on Energy Information Administration, *Annual Energy Outlook 2019*.

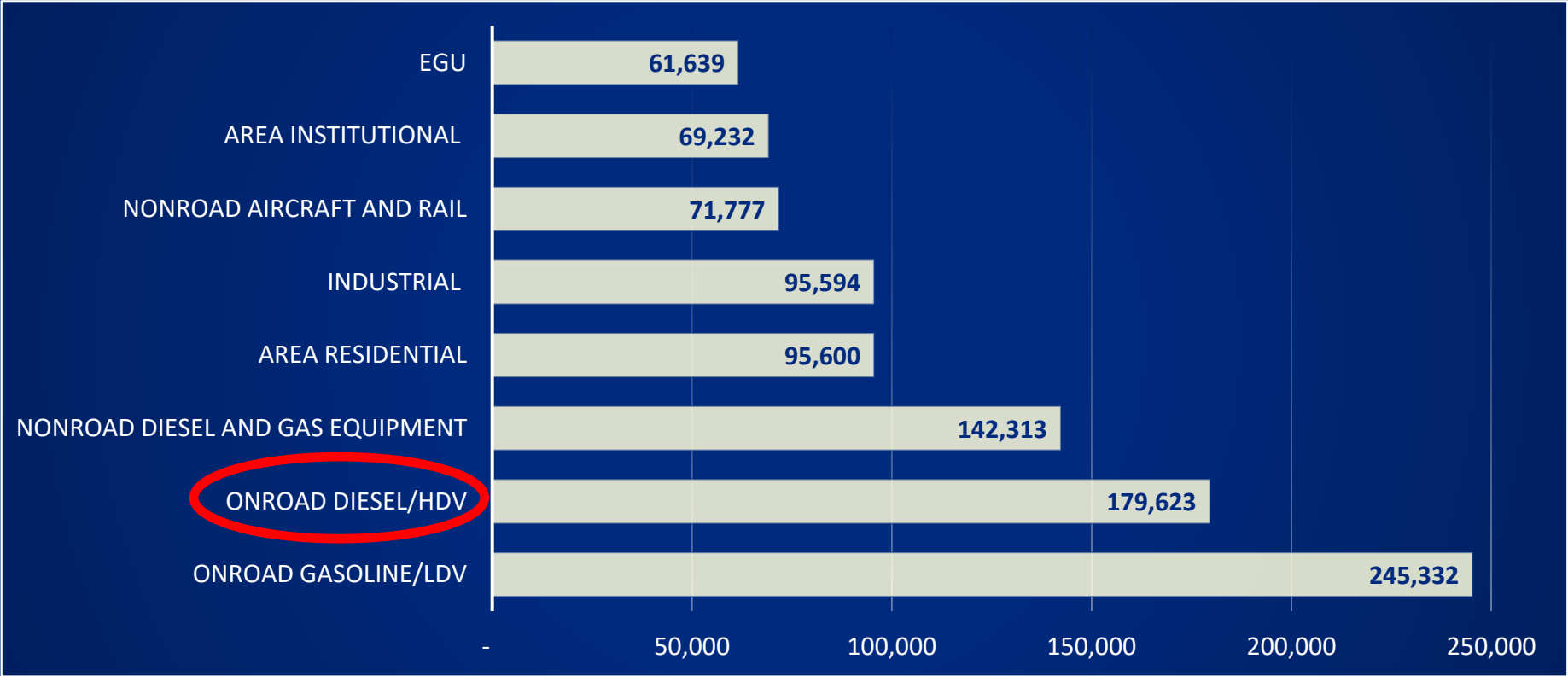
New U.S. Retail Sales in 2018 by Vehicle Class

Class 2b	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Total
798000	301000	21000	81000	72000	64000	251000	1,588,000

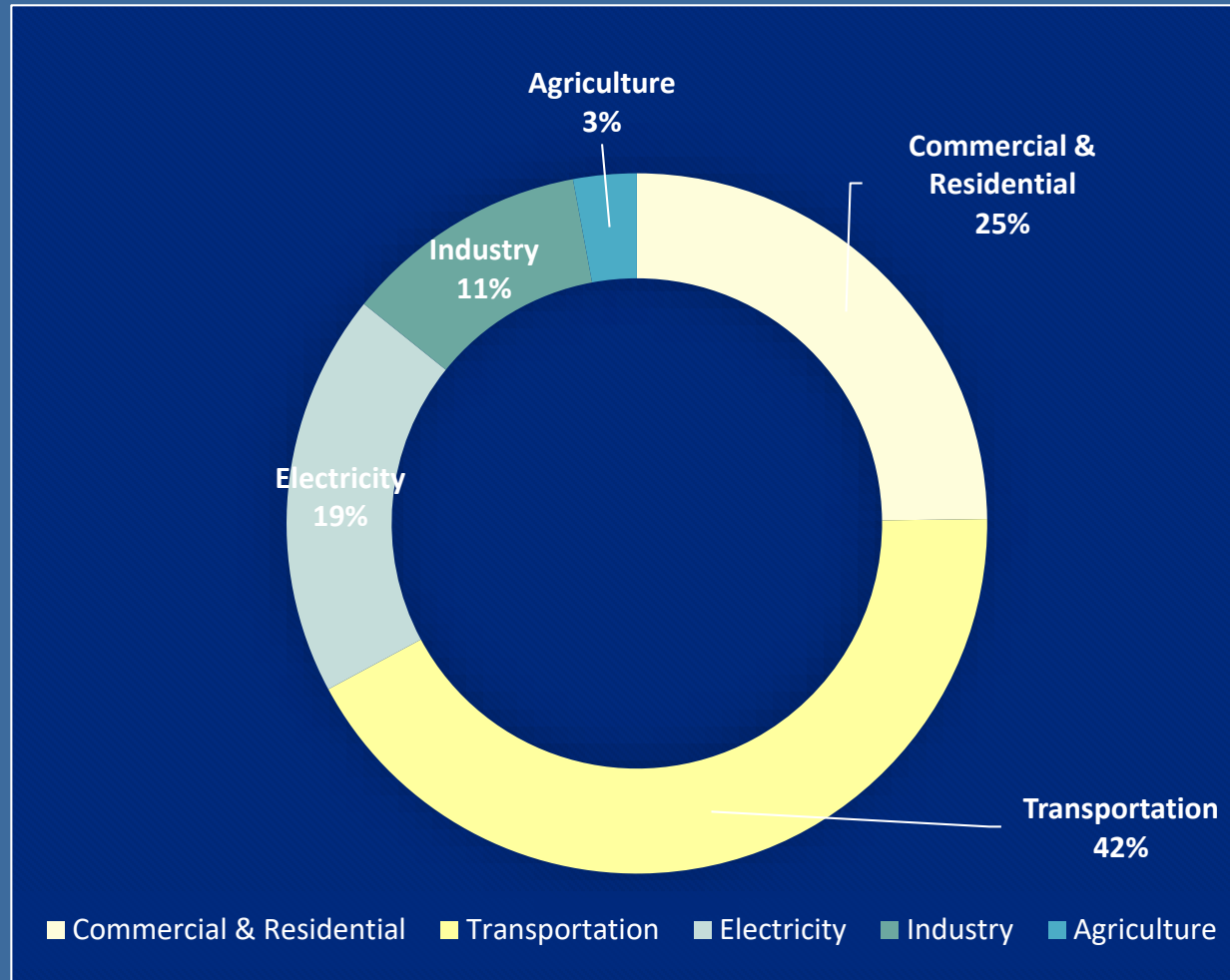
MHDV Market Share by Vehicle Class



2017 Mid-Atlantic/Northeast NOx Emissions (tons)



Northeast Greenhouse Gas Emissions

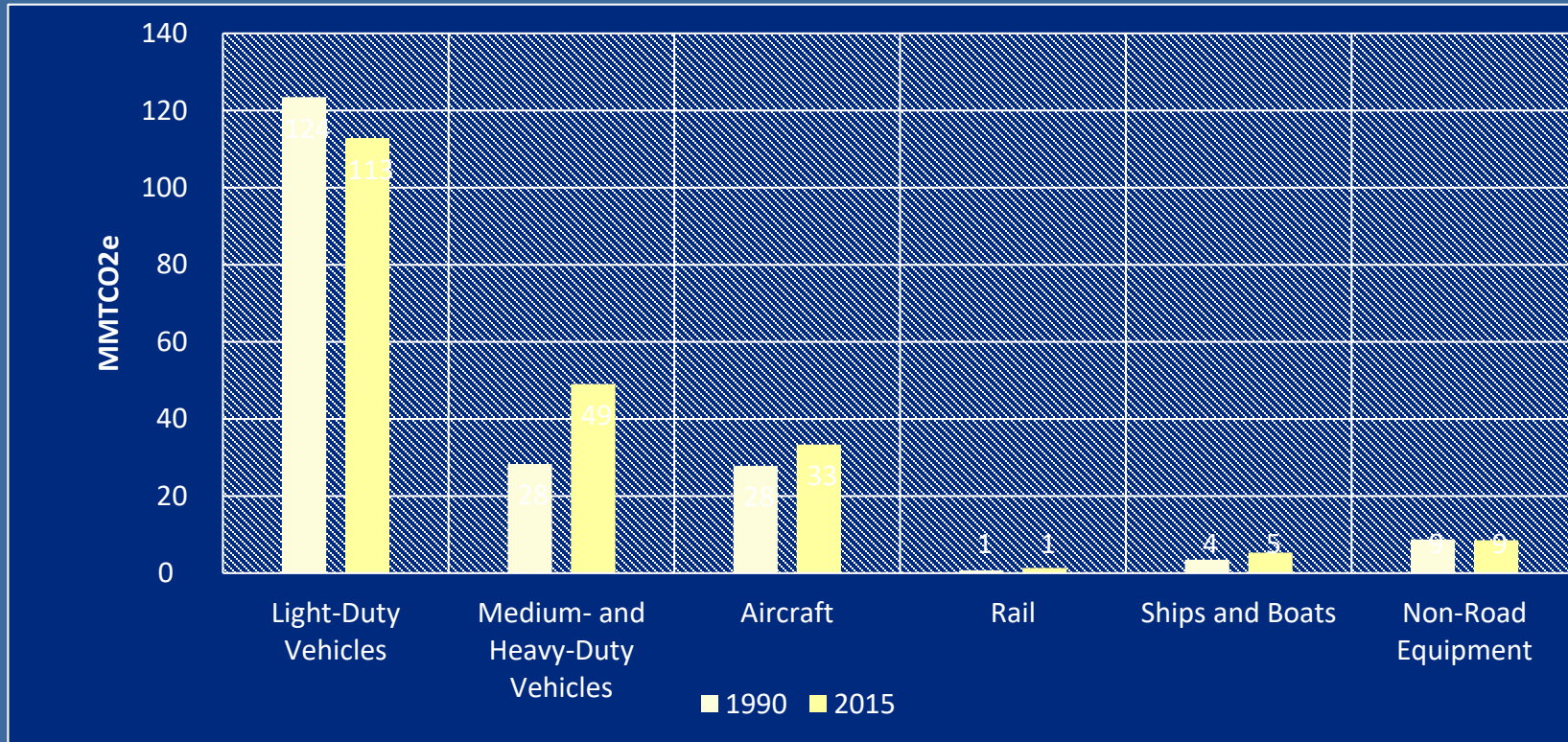


Source: State Inventory Tool - 2015



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Northeast Greenhouse Gas Emissions



Source: State Inventory Tool - 2015



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