

## EPA Announces the “Clean Trucks Plan”

**H**eavy-duty trucks and buses continue to contribute significantly to air pollution at the local, regional, and national level, often disproportionately affecting communities of color and low-income populations.

To ensure the progress needed on cleaning trucks and buses and to harness improvements in vehicle technologies, EPA will issue two major regulations over the next three years—the “Clean Trucks Plan” that will result in decreasing emissions from new heavy-duty vehicles, including long-haul tractors, buses, commercial delivery trucks, and many other types of trucks. These new rules will be major steps towards improving air quality and addressing the climate crisis.

### EPA’s Clean Trucks Plan

The Agency is working on the following actions over the next three years.

By December 2022, EPA will propose and finalize new stringent emissions standards to reduce nitrogen oxides (NO<sub>x</sub>) pollution from trucks starting in model year 2027. This action will include an update of current greenhouse gas (GHG) standards to capture market shifts to zero-emission technologies in certain segments of the heavy-duty vehicle sector.

EPA is also working on new stringent GHG emissions standards for heavy-duty engines and vehicles starting as soon as model year 2030.

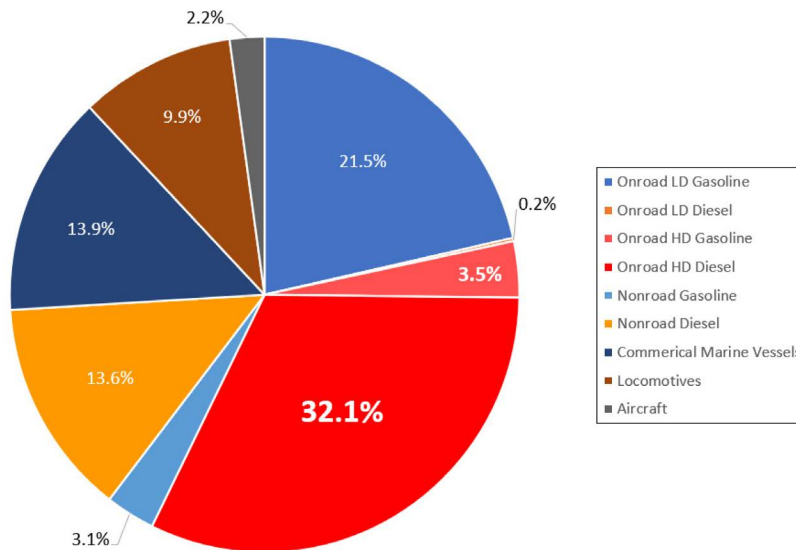
Taken together, these new multi-pollutant standards will improve public health in our communities and set the U.S. on a course to achieve ambitious levels of GHG emissions reductions from commercial highway transportation over the long term.

EPA looks forward to working with all stakeholders as we move forward with these plans.

## Air Quality and Health Impacts of Heavy-Duty Vehicles

Pollution from heavy-duty trucks contributes to poor air quality and health across the country, especially in overburdened and underserved communities. Heavy-duty vehicles are the largest contributor (about 32%) to mobile source emissions of NO<sub>x</sub>, which react in the atmosphere to form ozone and particulate matter (PM). These pollutants are linked to respiratory and/or cardiovascular problems and other adverse health impacts that lead to increased medication use, hospital admissions, emergency department visits, and premature deaths.

**Mobile Source NO<sub>x</sub> (2017)**



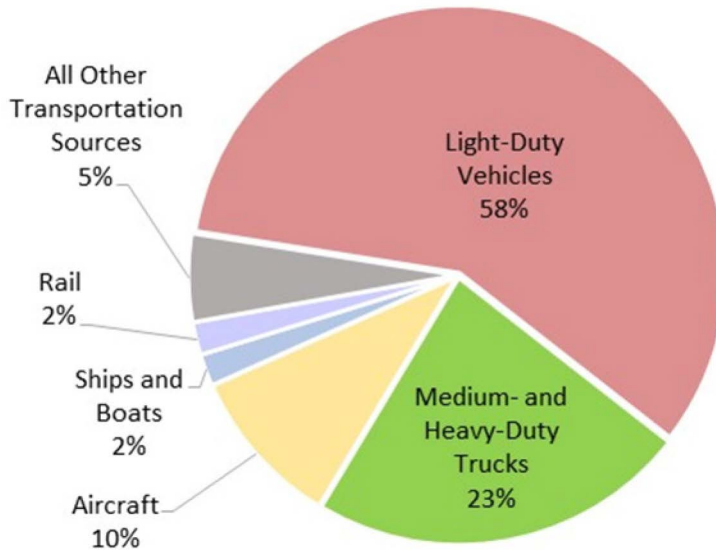
Sources: MOVES3 for onroad and nonroad and 2017 National Emissions Inventory (NEI) for all other mobile sectors.

In addition, pollution from trucks directly affects people who live near roads and other areas of high truck activity like ports. Populations who live, work, or go to school near high-traffic roadways experience higher rates of numerous adverse health effects, and there is substantial evidence that people who live or attend school near major roadways are more likely to be low-income or people of color. NO<sub>x</sub> pollution from heavy-duty vehicles also impairs visibility and causes damage to terrestrial and aquatic ecosystems.

## Heavy-Duty Vehicles and Climate Change

Transportation is the largest source of GHG emissions in the United States, making up 29 percent of all emissions. Within the transportation sector, heavy-duty vehicles are the second-largest contributor, at 23 percent. Reducing GHG emissions is a critical step in reducing the probability of impacts from climate change, including heat waves, drought, sea level rise, extreme climate and weather events, coastal flooding, and wildfires. Some populations may be especially vulnerable to damages associated with climate change, such as the very young, the elderly, low-income people, the disabled, people of color, and indigenous populations.

## Mobile Source GHGs (2019)



Source: “Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019,” EPA 430-R-21-005.

EPA previously took action to reduce GHG emissions from heavy-duty trucks with its Phase 1 and Phase 2 GHG standards. The Phase 2 standards began in model year 2021, with two additional steps of increasing stringency that will take effect in model years 2024 and 2027. The Phase 2 program promotes a new generation of cleaner, more fuel-efficient gasoline and diesel trucks.

## Opportunities for Significant Emissions Reductions from Heavy Duty Trucks: The Clean Trucks Plan

By December 2022, EPA will finalize a new standard for NO<sub>x</sub> emissions from heavy duty trucks starting with model year 2027. In this action, the agency will also explore updates to the Phase 2 GHG standards for certain heavy-duty fleets that are rapidly shifting toward zero-emission technologies.

EPA last revised the NO<sub>x</sub> standards for on-highway heavy-duty trucks and engines in 2001—more than 20 years ago. Although those standards achieved important NO<sub>x</sub> reductions, new technologies available today can help achieve the additional reductions we need to improve air quality and health in our communities.

Many state and local agencies across the country have asked the EPA to issue regulations that further reduce NO<sub>x</sub> emissions from heavy-duty trucks in order to protect the health of their communities. Such reductions are a critical part of many areas’ strategies to attain and maintain the health-based air quality standards, and to ensure that all communities benefit from improvements in air quality.

One area where technologies can improve emission outcomes relates to trucks operating at what are known as “low loads.” EPA’s analysis of trucking emissions has shown that current NO<sub>x</sub> controls are not effective under certain low-load operating conditions, such as when trucks idle, move

slowly, or operate in stop-and-go traffic. Emission control technologies that can help reduce NO<sub>x</sub> emissions under low-load conditions now exist, and they represent one area where EPA intends to focus as it develops a new NO<sub>x</sub> regulation.

Beyond such low-load NO<sub>x</sub> reduction technologies, the trucking sector has also seen advances in zero-emission technologies. In recent years, zero-emission heavy-duty trucks have begun entering the market in volumes that were not foreseen when EPA began the Phase 2 GHG program. Many of these zero-emission technologies are available today, and the number of products available, as well as production volumes, are expected to accelerate in the next few years. EPA will assess the impact that these zero-emission technologies will have on the overall effectiveness of the Phase 2 program and whether targeted adjustments to GHG standards in 2027 may be warranted.

Beyond 2027, heavy-duty truck manufacturers are already signaling a large-scale migration from gasoline and diesel engines to zero-emission technologies in their products. EPA is also working on revising GHG standards for all heavy-duty vehicles and engines. These standards would begin as soon as model year 2030.

## **For More Information**

For more information on these actions, please contact the U.S. Environmental Protection Agency, Office of Transportation and Air Quality through our webpage at: <https://www.epa.gov/transportation-air-pollution-and-climate-change/forms/contact-us-about-transportation-air-pollution>.