



Overview of Executive Order 271 and the Advanced Clean Trucks Rule

In October of 2022, NC Governor Cooper issued [Executive Order 271](#), which aims to accelerate our state's clean energy economy through the transition to zero-emission medium and heavy-duty vehicles such as commercial trucks, vans, and buses. Among the many vital things highlighted in the order, such as advancing approaches to environmental justice and health equity, it also tasks the NC Department of Environmental Quality (NCDEQ) to work with stakeholders and develop a program called the Advanced Clean Trucks or ACT rule. This regulation will require manufacturers to sell an increased percentage of zero-emission medium and heavy-duty vehicles over time.

This is especially important for our North Carolina communities most impacted by the sources of emissions associated with medium and heavy-duty diesel vehicles, which contribute to the largest share of transportation-related [emissions in our state](#). Air pollution from these vehicles powered by diesel engines can lead to significant negative health impacts, especially for children and at-risk individuals. This exposure disproportionately impacts BIPOC (Black, Indigenous, People of Color) and low-income communities living near trucking corridors, warehouses, fleet hubs, and other distribution centers.

As part of the rulemaking process for this program, NCDEQ is collaborating with local governments, environmental justice organizations, underserved communities, automobile manufacturers, motor fleet owners, electric utilities, the NC Utilities Commission, public health experts, environmental organizations, and other

interested stakeholders in developing the proposed rule and the associated regulatory impact analysis.

An informational session, along with community public hearings, will be held:

Information Session Webinar - January 9, 2023 | 3-4 pm | [Attend Here](#)

Charlotte Public Hearing - January 13, 2023 | 9-11 am | [Register Here](#)

Burlington Public Hearing - January 23, 2023 | 4-6 pm | [Register Here](#)

Pembroke Public Hearing - January 25, 2023 | 1-3 pm | [Register Here](#)

Virtual Public Hearing - February 21, 2023 | 1-2:30 pm | [Join Here](#)

Points to Share for Supporting Strong Standards for Pollution and the Advanced Clean Trucks Rule

- **The burning of fossil fuels in our transportation sector** remains the greatest source of greenhouse gas emissions (GHG) in both the [US](#) and [NC](#) and is the greatest threat to both our climate and health.
- Zero-emission vehicles (ZEV) have no tailpipe emissions. When compared to diesel vehicles, they are two to five times more energy efficient. Transitioning to ZEVs will reduce dependence on petroleum, and reduce GHG emissions substantially.
- Medium and heavy-duty (MHD) vehicles with fossil fuel-burning internal combustion engines make up 3.2% of NC's registered vehicles but emit 26% of [nitrogen oxides](#) (NOx) and 32% of [particulate matter](#) (PM), putting our health at risk.
 - **Health Risks of Exposure to Nitrogen Oxide (NOx):** Nitrogen oxides irritate airways in the human respiratory system, and prolonged exposure to high levels can cause asthma and increase the likelihood of developing respiratory infections. Children, as well as individuals living with underlying health conditions, and the elderly are especially susceptible to the effects of this pollutant.
 - **Health Risks of Exposure to Particulate Matter (PM):** There is no "safe" or tolerable level of PM for the human body. These particles are so small

that they can enter your lungs and damage them or even your bloodstream.

- **Health Risks of Exposure to Ozone Pollution:** While ozone pollution is not directly emitted from trucks and buses, emissions interact with the atmosphere and sunlight to form ground-level ozone. Long-term exposure to ozone is linked to exacerbation of asthma symptoms, including more frequent asthma attacks, and is likely to be one of many causes of asthma development. Children are among the most vulnerable to ozone exposure due to their still-developing lungs.
- Four out of the top five [leading causes](#) of death in North Carolina - (1) Heart Disease, (2) Cancer, (3) COVID-19, and (4) Stroke - can be caused and/or exacerbated by exposure to transportation emissions.
- [Residential proximity](#) to motor vehicle traffic is associated with increased exposures to ambient noise, toxic gases, and particulate matter, including diesel particulates. Based on the available evidence, residential proximity at a distance of roughly 100–300 meters is related to poorer health outcomes.
- A disproportionate amount of communities that are located near highways and industrial areas with lots of truck and bus traffic, such as warehouses and depots, are communities of color and lower income, posing major environmental justice concerns.
- BIPOC communities (Black, Indigenous, People Of Color) at all income levels are more exposed to air pollution from medium and heavy-duty trucks. Adopting clean trucking regulations is critical to addressing health equity disparities across North Carolina.
- Air pollution from medium and heavy-duty vehicles with fossil fuel-burning internal combustion engines (ICE) also drives climate change, amplifying disparities in community health, access to healthcare, and poverty.

Talking Points for Charlotte Region

- Charlotte is an industrialized area with heavy traffic. Traffic volume in Mecklenburg County is 2.3 times higher compared to the state average and 1.3 times higher than the national average.
- The American Lung Association's 2022 'State of the Air' [report](#) concluded Charlotte has the second-worst ozone pollution in the Southeast.

- A 2021 [study](#) led by University of Virginia atmospheric chemist Dr. Sally Pusede found that in Charlotte, Black, Brown and Indigenous residents living in low-income neighborhoods breathe air containing 16% more toxic nitrogen dioxide than white residents living in high-income neighborhoods.
- Despite having a high traffic volume, air quality is improving and will only continue to improve with the adaptation and implementation of the Advanced Clean Truck Rule, ensuring fleets are electrified.

Traffic Volume* in Mecklenburg, North Carolina

	Mecklenburg (MK) County	North Carolina	United States
Traffic Volume	526	228	395

Average traffic volume per meter of major roadways in the county.
 In Mecklenburg County, North Carolina, traffic volume on major roadways averaged 526 vehicles per meter per day.
 Years of data used: 2019

Talking Points for Burlington Region

- Alamance County is one of the fastest growing areas for commercial activity, which includes: Walmart Distribution, Lidl Distribution, Chick-Fil-A Distribution, Amazon Distribution, Cambro, UPS (Mebane), and the new 119-Bypass/Overpass.
- As commercial hubs continue to be established and grow in Alamance County, there will be a significant increase in traffic emissions from medium and heavy-duty vehicles.
- The implementation of the Advanced Clean Trucks rule will help protect public health and the communities most at risk for the adverse health impacts associated with traffic emissions.

Traffic Volume* in Alamance, North Carolina

	Alamance (AL) County	North Carolina	United States
Traffic Volume	247	228	395

Average traffic volume per meter of major roadways in the county.
 In Alamance County, North Carolina, traffic volume on major roadways averaged 247 vehicles per meter per day.
 Years of data used: 2019

Talking Points for Pembroke Region

- The region has many local pollution issues due to the presence of industrial animal raising and feeding facilities (CAFOs) and lack of regulation in their waste management practices.
- While traffic volume in Robeson County (including Pembroke) is significantly lower than the state and national average, Robeson County is [ranked](#) as North Carolina's unhealthiest county with the worst health outcomes and worst health factors.
- Robeson County has a significantly high rate of premature mortality, surpassing the state and national average. Robeson County's leading causes of premature death include cancer (all-cause), heart disease, diabetes, and chronic lower respiratory diseases (including asthma). All of these causes of death can be exacerbated by air pollution from various area sources, including transportation.

Traffic Volume* in Robeson, North Carolina

	Robeson (RO) County	North Carolina	United States
Traffic Volume	72	228	395

Average traffic volume per meter of major roadways in the county.

In Robeson County, North Carolina, traffic volume on major roadways averaged 72 vehicles per meter per day.

Years of data used: 2019

Graphics to Share for Session Information

[Download Graphics for Social Media](#)

Additional Resources

[Fact Sheet: Health Impacts of PM2.5 and Ozone Pollution](#)

[Fact Sheet: COVID-19 and Air Pollution](#)