STUDY REVEALS IMPORTANCE OF DRIVING DOWN DIRTY DIESEL EMISSIONS IN EJ COMMUNITIES IN NEWARK AREA

Transportation is one of the largest contributors to local air pollution and the state’s greenhouse gas (GHG) emissions. Reducing emissions from this sector will be critical to improve air quality, especially within environmental justice (EJ) communities, i.e. communities Of Color and low-income communities, which frequently experience disproportionately high pollution burdens including elevated levels of air pollutants known to detrimentally impact human health. To better understand the equity implications of air pollution emissions the New Jersey Environmental Justice Alliance (NJEJA) commissioned a study, “Newark Community Impacts of Mobile Source Emissions”, of air pollution emissions from the transportation sector in the Newark area. The study examined air pollution emissions such as fine particulate matter (PM2.5), nitrogen oxides (NOx) black carbon (BC) and carbon dioxide (CO2). The study looked at the related emissions exposure from various mobile sources and non road sources including: cars, medium and heavy duty diesel trucks, buses, locomotives, ships, and port related sources such as cargo handling equipment as well as idling from trucks and buses. The study examined emissions impacts on particularly sensitive populations in close proximity to transportation infrastructure such as schools, senior centers, daycares and dialysis centers. Finally, the study explored the potential impacts that electrification would have in the study area. The report confirms some of the concerns that EJ communities express about disproportionate exposure to harmful transportation sector emissions. The findings show that:

1. Emissions of the most health harming air pollutants such as PM$_{2.5}$, BC, and NOx from non-roadway sources, particularly locomotives and port operations, have the highest air quality impact in the total study area, followed by medium- and heavy-duty vehicles. These sources far outweigh the emissions exposure from passenger vehicles and together contribute around 95 percent of the total emissions exposure modeled within the study area.

2. While the contribution of different sources varies within the study area, the highest burden can be found in locations close to high density truck and bus routes and locations close to port facilities and rail yards.

3. The analysis shows that while electrification of trucks and buses could be one path to reduce emissions of health harming air pollutants, electrification of these vehicles must be accompanied by a focus on emissions reductions from electric generating units co-located within the same community in order to ensure a reduction in overall local air pollution burden. Displacement of air pollution emissions to power plants due to electrification can be a significant factor in impact of local emissions under different electrification scenarios.

---

1. [https://www.nj.gov/dep/ages/occe-ghgei.html](https://www.nj.gov/dep/ages/occe-ghgei.html)
2. The study was conducted by MJ Bradley and Associates with funding from the Natural Resources Defense Council. The report was also released and reviewed in consultation with members of the Coalition for Healthy Ports members, specifically, Ironbound Community Corporation, Greenfaith, NJ Clean Water Action and New Jersey Environmental Justice Alliance.
Based on the findings of this study, when evaluating roadway transportation emissions sources, medium-and heavy-duty vehicles have an outsized impact on the harmful local pollutants that impact human health and contribute significantly to transportation sector GHG emissions. This analysis further found that reducing emissions from the medium- and heavy-duty vehicle sector would have meaningful and immediate impacts on air-quality within disproportionately burdened communities. The implications of the report findings are relevant for several ongoing discussions concerning air pollution, climate mitigation and EJ. In New Jersey and regionally (i.e. Transportation and Climate Initiative) much of the focus of transportation sector climate mitigation efforts have been on car electrification. This study highlights the importance of prioritizing dirtier segments of this sector such as the diesel trucks and buses as well as port related emissions that have the greatest detrimental health impact on EJ communities.

The investigation’s findings also indicate that developing climate mitigation policy that targets air pollution reduction and electrification can be complicated from an EJ perspective, at least partly due to the displacement of emissions to the power sector. Since so many of New Jersey’s existing power plants are located in EJ communities, already overburdened with multiple sources of pollution - shifting emissions from the tailpipe to the power sector could have localized impacts. Development of climate mitigation policies for this sector that takes into account EJ and equity considerations must be performed with careful consideration of the potential impacts that include but are not limited to geographic location, displaced emissions and community vulnerabilities.

The study also highlights what NJEJA believes to be some of the key shortcomings of the proposed regional TCI approach with respect to EJ. TCI prioritizes light duty passenger vehicles in both its investment and electrification scenarios. This study shows how critical the dirtier segments of the transportation sector are to reducing the health harming impacts of the transportation sector. Without targeted, ambitious and significant attention to the diesel sector, EJ communities that suffer the greatest impact from transportation related pollution will not benefit sufficiently from TCI related policies. Furthermore, the strong emphasis on the electrification of the light duty vehicles may in fact pose a potential harm to those communities that host power plants where emissions of certain co-pollutants may increase. EJ and racial justice demand that we prioritize climate mitigation policies that affirmatively address those most severely affected by pollution.

When we know better, we must endeavor to do better. This study clearly points the way forward to a more equitable and just approach to transportation sector mitigation policies focused on the communities that are most impacted. This would necessitate moving away from a program like TCI, which does not ensure emissions reductions in EJ communities as its core policy and moving towards targeted emissions reductions policies like Clean Truck Rules.

“This report demonstrates the need to develop very thoughtful and well-crafted strategies that focus on local pollution sources in order to ensure that transit sector climate change mitigation policy benefits environmental justice communities in New Jersey.” Nicky Sheats, Esq., Ph.D., NJEJA; Director, Center for the Urban Environment of the John S. Watson Institute for Public Policy at Thomas Edison State University.

“The only two children in my family who have asthma both lived along a truck route in the port-adjacent Ironbound neighborhood in Newark”, said Melissa Miles, Executive Director of the New Jersey Environmental Justice Alliance, a steering committee member of the Coalition for Healthy Ports. “Every
year we counted trucks on our corner as part of a community initiative, only to find out through this report that we were also being exposed to heavy emissions from off-road sources like freight trains. New Jersey needs to address the most serious contributors to transportation emissions like trucks and trains, not just passenger vehicles which are the low hanging fruit.”

“This report illustrates what EJ communities have long known, that living with dirty diesel in your backyard is dangerous to your health. Any climate mitigation policy focused on the transportation sector must prioritize the elimination of this local pollution as a core strategy.” Ana Baptista, PhD, NJEJA

Study after study confirms the fears our communities have of TCI being a false solution that doesn't even begin to address transportation or climate change in meaningful ways. When we need bold, visionary action, TCI is barely a whimper. New Jersey must lead the way to real solutions that reduce emissions at source, include communities at every step and actually help New Jersey reach our climate targets during this crucial time. Maria Lopez-Nunez, Ironbound Community Corp

"I know what it means to live in a community where we can’t breathe," stated Kim Gaddy, NJ Environmental Justice Organizer, Clean Water Action, a 4th generation Newarker and mother of 3 asthmatic children who lives near the port. “Trucks, trains and the Port are a bigger problem than cars. This report shows we know better, so the Governor, legislature and DEP must do better and that's not TCI."