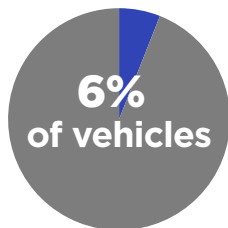


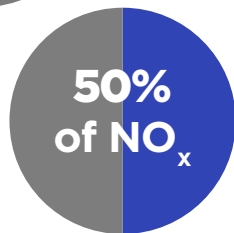
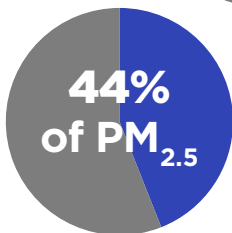
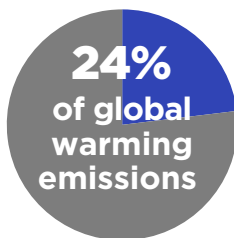
What the Advanced Clean Truck Rule Will Do for Rhode Island

Big trucks and buses cause disproportionate harm.

On Rhode Island's roads, big trucks and buses make up:



However, when it comes to the emissions released by all on-road vehicles in Rhode Island, trucks and buses are responsible for:



NO_x and PM_{2.5} are toxic air pollutants that aggravate respiratory symptoms and can have life-threatening consequences.

Deploying electric trucks will help Rhode Island's economy . . .

- ✓ **around \$150 million** in health savings*
- ✓ **around \$110 million** in annual net societal benefits in 2050
- ✓ **over \$15 million** in annual savings to commercial fleets in 2050

. . . and improve Rhode Island's environment and health.

- ✓ NO_x from trucks reduced by over **80%**
More than fivefold expected reductions of NO_x in 2050
- ✓ PM_{2.5} from trucks reduced by over **20%**
- ✓ Over 6,500 avoided cases of acute bronchitis, asthma, and other respiratory symptoms

Electric trucks and buses eliminate toxic tailpipe pollutants compared with their conventional counterparts—and also carbon emissions, if the electricity or hydrogen comes from renewable sources. Read on to learn about the public health, environmental, and economic costs and benefits of Rhode Island adopting policies that bring more electric trucks and buses on the road.

* These estimates do not consider the economic and health benefits associated with zero-emissions medium- and heavy-duty trucks that will be deployed using funds from the Inflation Reduction Act.

How Clean Trucks Can Benefit Rhode Island

Buses, delivery vehicles, tractor-trailer trucks, and other medium- and heavy-duty (M/HD) vehicles are an essential part of our economy. Though their operation facilitates commerce, trucks and buses are also a significant source of toxic air pollution and climate-changing carbon emissions. Conversely, electric trucks and buses powered by batteries or hydrogen fuel cells eliminate toxic tailpipe pollutants, and when powered by clean electricity or hydrogen, can operate with zero carbon emissions as well.

These vehicles are becoming increasingly available, and regulatory efforts such as California's Advanced Clean Trucks (ACT) rule can speed the transition to a future in which transportation poses less risk to public health and the climate. California adopted the ACT in 2020, requiring truck manufacturers to produce and sell an increasing percentage of zero-emissions M/HD vehicles. Under the Clean Air Act, California can set emissions standards such as the ACT that are stricter than federal standards, and other states may then adopt California's rules. To date, six other states have adopted California's ACT rule.

A 2021 study commissioned by the Union of Concerned Scientists and the Natural Resources Defense Council evaluated the public health, environmental, and economic costs and benefits of Rhode Island and other New England states adopting the ACT and a related regulation, called the Heavy-Duty Omnibus (HDO) rule, that will reduce nitrogen oxide (NO_x) emissions from internal combustion M/HD vehicles. This fact sheet highlights the key results. (Note: these estimates do not consider the economic and health benefits associated with zero-emissions medium- and heavy-duty trucks that will be deployed using funds from the Inflation Reduction Act.)

Big Trucks, Even Bigger Impacts

The nearly 50,000 M/HD vehicles on Rhode Island's roads significantly impact public health and the environment. Although they represent less than 1 in 10 of all vehicles on Rhode Island roads and highways, these big trucks and buses are responsible

Long term exposure of NO_x and PM_{2.5} can have life-threatening consequences and damage ecosystems already threatened by climate change.

By adopting the ACT and increasing sales of zero-emissions trucks, Rhode Island could eliminate over 2 million metric tons of carbon dioxide cumulatively through 2050.

for around 24 percent of the state's global warming pollution, 50 percent of its NO_x, and 44 percent of its fine particulate matter (PM_{2.5}) from on-road vehicles.

Short-term exposure to toxic air pollutants such as NO_x and PM_{2.5} aggravates respiratory symptoms, especially in vulnerable populations, and long-term exposure at even moderate concentrations can have life-threatening consequences. These health impacts significantly reduce Rhode Island's economic productivity, and the state's environment suffers too: NO_x and PM_{2.5} damage sensitive ecosystems and acidify rain, streams, rivers, and lakes. Climate change will intensify these effects.

Clean Trucks for Rhode Island

Adopting the ACT would put Rhode Island on the path to a cleaner and more efficient transportation future by requiring manufacturers to sell an increasing percentage of zero-emissions M/HD vehicles in the state, eliminating over 2 million metric tons of carbon dioxide cumulatively through 2050. This shift to cleaner trucks will bring significant health, economic, and environmental benefits to Rhode Island residents and commercial fleets.

Cleaner Trucks, Clear Health Benefits

With the ACT and HDO regulations in place, Rhode Island will see an over 80 percent reduction in NO_x emissions from M/HD vehicles in 2050 and an over 20 percent reduction in PM_{2.5} emissions, resulting in fewer premature deaths, fewer hospital visits, and over 6,000 avoided minor sicknesses. This amounts to around \$150 million in savings from avoided health care costs.

Clean Trucks Mean Business

Rhode Island's economy will also benefit from the savings that zero-emissions M/HD vehicles will bring to truck operators and businesses—more than \$15 million annually in 2050—along with increased electric utility revenue and air quality and climate benefits. While the sticker price of electric trucks may be higher

than comparable diesel trucks today, continuing reductions in battery costs and vastly reduced fuel and maintenance expenses will save electric truck operators more than \$8,000 in net life-time savings per vehicle by 2040. Infrastructure funding and clean commercial vehicle incentives in the 2022 Inflation Reduction Act will further spur the market and reduce upfront costs and increase ongoing savings for fleets.

Rhode Island Can Still Aim Higher

Rhode Island's transition to cleaner, more efficient trucks and buses under the ACT and HDO would be good for the state's environment, economy, and human health—but these rules would still leave some benefits on the table. If Rhode Island adopts ad-

ditional policies to ensure that all new M/HD vehicles sold by 2040 produce zero emissions, the state could see more than twice the reduction in global warming pollution by 2050 (87 percent lower than the baseline) and an over 30 percent increase in cumulative health-related savings.

*The content of this fact sheet is distilled from the Southern New England Clean Trucks Program report conducted by **M.J. Bradley for the Union of Concerned Scientists and Natural Resources Defense Council**. Read the report online at www.ucsusa.org/resources/truck-pollution-united-states. For more information, contact Sam Wilson, senior vehicles analyst in the UCS Clean Transportation Program, at swilson@ucsusa.org.*

Adopting California's Advanced Clean Trucks rule in Rhode Island will benefit the state's public health, environment, and economy.

The Union of Concerned Scientists puts rigorous, independent science to work to solve our planet's most pressing problems. Joining with people across the country, we combine technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.

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