

RESEARCH SHOWS THAT PROPOSED NO_x RULE COULD REVERSE ENVIRONMENTAL PROGRESS

More work is needed to make the rule workable, get older engines off the road, and achieve desired environmental outcomes

The proposed NO_x rule’s “Option 1” would actually increase, rather than decrease, NO_x emissions due to its failure to encourage fleet turnover.

According to a [2022 study](#) conducted by the global engineering consulting firm Ramboll on behalf of the Truck & Engine Manufacturers Association:

- Under a .02 g/bhp-hr FTP standard scenario, NO_x emissions actually increase from 2.2% -11.6%. Specifically, “Diesel truck activity from 2027+ engine model years is shifted to older model years. The shift to older model year trucks results in higher emissions because older diesel trucks have higher accumulated mileage and therefore higher emission rates compare to newer trucks.” (Slide 15)
- By contrast, under a .05 g/bhp-hr FTP standard scenario, NO_x emissions decrease from 0.7% -23.0%. (Slide 15)
- [ACT Research](#) has assessed that “Option 1” standards would result in the “largest ever” pre-buy, impacting approximately 40% of the heavy-duty truck market. (p. 2)

The proposed NO_x rule’s “Option 1” would increase the cost of heavy-duty diesel engines by more than \$31,000 per unit. This could cause fleet owners to use older trucks for longer – an outcome that worsens prospects for desired environmental outcomes.

According to impact studies conducted by Ricardo Strategic Consulting on behalf of the Truck & Engine Manufacturers Association in in [January](#) and [April](#) 2022:

- “Increasing stringency for NO_x emissions and an increase in useful life and warranties for emission-related components are expected to raise manufacturers' costs significantly.” (January, p. 43)
- “Based on some of the historical cost data reviewed, Ricardo also has concluded that most OEMs do not experience the steep cost reductions that US EPA uses in its analysis of the introduction of new emission-control technologies.” (January, p. 43)
- “EPA’s warranty cost estimation methodology grossly underestimates the expected incremental warranty costs.” (April, p. 49)
- “Ricardo’s analysis shows that the incremental costs for Option 1 will be more than \$31,000 per unit.” (April, p. 32)
- [An earlier cost](#) study that the California Air Resources Board commissioned from the National Renewable Energy Laboratory (NREL), but they elected not to use, reached similar conclusions.

It is inappropriate to merely adopt the California standard for every state in the union.

According to a [2021 study](#) conducted by NERA Economic Consulting on behalf of the Truck & Engine Manufacturers Association:

- “Figure 2 shows significant differences in the projected PM2.5 concentration distributions that are projected to exist between California and Rest of U.S. ... this suggests that even the raw (unadjusted) benefit per truck might be significantly higher for trucks operating in California than for those outside of California.” (p.11)
- “In [a] disaggregated analysis, we estimate that EPA’s future analyses might estimate per-truck benefits for trucks operating in California as high as \$17,180 at the least-confident level, and as high as about \$14,650 for a relatively moderate degree of increased confidence. At the same time, of course, the equivalent benefit-per-truck estimates for Rest of U.S. would be reduced to about \$6,200 (least confidence) and to about \$3,290 (greater confidence).” (p.15)
- “Although this finding could be used to justify a tighter standard for California trucks than for the rest of the U.S., it would be inappropriate to use the higher California specific benefits estimates in a benefit-cost analysis of a standard that would be applied to other states.” (p. 15)

A rule that is too stringent could have severe consequences for jobs and the economy.

According to a [2022 study](#) conducted by Americas Commercial Transportation Research on behalf of the Truck & Engine Manufacturers Association:

- “Overcapacity in all truck markets at the time of a new regulation will primarily impact manufacturers and suppliers who will have to lay off workers as demand for vehicles falls.” (p. 5)
- ACT also found that an “Option 1” proposal could result in the elimination of as many as 190,000 jobs in the impacted industries. (p. 3)