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## **EPA's Truck Emissions Rule: *Is it Technologically Feasible?***

The U.S. Environmental Protection Agency (EPA) has [proposed a new rule](#) to further reduce nitrogen oxide (NO<sub>x</sub>) emissions from medium- and heavy-duty vehicles, **a goal supported by truck and engine manufacturers** who are developing cleaner technologies. The proposal includes two potential regulatory approaches, “Option 1” and “Option 2,” to be effective with new trucks beginning in 2027. To meet a statutory deadline, EPA must issue a final rule by the end of 2022. Yet, with less than six months to go, EPA’s own technology demonstration research shows that **the proposed overly-stringent Option 1 is not technologically feasible.**

To support the rulemaking, EPA contracted with Southwest Research Institute (SwRI) to develop and demonstrate technologies that could meet the proposed new NO<sub>x</sub> emission standards. SwRI modified a production engine and produced a prototype exhaust aftertreatment system, both of which include many new emissions control technologies, with the aim of demonstrating in a laboratory that the proposed rule is technologically feasible. However, EPA’s technology demonstration study at SwRI will not be completed until long after EPA issues its final rule.

### ***EPA's Technology Demonstration is Proving that Option 1 is Not Feasible***

EPA recently released [results from testing](#) of SwRI’s prototype engine and aftertreatment system to the proposed extended useful life period in the Option 1. Those latest test results:

- **Fail to meet the proposed NO<sub>x</sub> certification standards.** The test results include higher emissions than the proposed standards at certain points during the useful life.
- **Fail to meet the proposed in-use NO<sub>x</sub> standards.** The tested emissions are higher than the proposed standards for some of the tested in-use duty cycles.
- **Fail to meet longstanding greenhouse gas emission standards.** The CO<sub>2</sub> emissions are higher than EPA’s existing standards that are set to take effect in 2024 and 2027.
- **Fail to provide sufficient compliance margin.** Manufacturers must certify engines at levels well below EPA’s standards to account for production and testing variabilities. The SwRI demonstration study ignores that real-world necessity.

Instead of demonstrating the feasibility of the proposed rule, **EPA’s research study at SwRI has so far proven the *infeasibility* of the Option 1 standards**, even with the novel engine and aftertreatment technologies developed by SwRI.

EPA’s proposed Option 1 standards are identical to the California Air Resources Board’s (CARB’s) [Omnibus Low-NO<sub>x</sub> Rule](#), and **both agencies used SwRI in failed attempts to demonstrate the feasibility of the stringent requirements.** Following CARB’s flawed technological assumptions, EPA’s research has produced an evolving series of aftertreatment systems. The Truck and Engine Manufacturers Association (EMA) provided comprehensive comments on [EPA's proposal](#) and on [CARB's rule](#) with detailed technical explanations on how **both studies have failed to prove the feasibility of the rules.**

### ***EPA's Technology Demonstration Research Will Not Conclude in Time***

EPA's research to demonstrate the feasibility of the proposed rule is significantly behind schedule. Following the latest poor test results, EPA has asked SwRI to make new upgrades to the aftertreatment system and conduct additional testing, **the results of which will be available too late to inform EPA's final rule.**

### ***EPA's Proposed New Option 1 Technologies are Unproven***

EPA's laboratory testing at SwRI of a single prototype engine and aftertreatment system is **woefully inadequate to demonstrate that a broad range of engine models and ratings will meet the rigorous demands of the U.S. trucking industry, even if the emissions testing were successful.** Manufacturers must demonstrate to their fleet customers that prototype product offerings, built with production-ready technologies, will reliably perform in a wide range of real-world operations. Otherwise, fleets simply will not buy the new trucks.

### ***Trucking Fleets Will Avoid Purchasing Expensive or Unreliable New Trucks***

EPA's new rule will prohibit the sale of new trucks built after the effective date unless they comply with all associated regulatory requirements. Fleet owners must determine if it makes business sense to invest their limited capital in purchasing expensive and potentially unreliable trucks built to the new rule, or if it would be more prudent to invest in maintaining their existing trucks longer.

If EPA's new NO<sub>x</sub> rule requires unproven technologies, or results in the [high costs predicted](#) by expert analyses, **trucking businesses will avoid buying new trucks and instead invest in maintaining their existing trucks longer.** Commercial vehicle [market forecasters predict](#) the Option 1 proposal would result in several years of very low new truck sales -- leaving older, higher-emitting trucks on the road longer and increasing overall emissions – **and causing particular harm to disadvantaged communities near ports, warehouses, and trucking corridors.**

### ***Option 2 Could be the Foundation of a Successful Rule***

There remains an opportunity to avoid the disastrous consequences of Option 1. If EPA carefully crafts the final rule to ensure new trucks can meet the standards with realistic engine and aftertreatment technologies, the environmental objectives are more likely to be achieved. [Expert research shows up to 35% lower NO<sub>x</sub> emissions under Option 2, compared to Option 1, which would increase emissions because of delayed fleet turnover.](#)

**Truck and engine manufacturers believe that EPA's Option 2 proposal could serve as the foundation of an effective and successful heavy truck NO<sub>x</sub> reduction program.** We urge EPA to take into consideration robust technological feasibility research and real-world data as they develop a workable and implementable final rule.

To learn more about the ways the truck and engine manufacturing industry is working to build clean and affordable commercial vehicles, visit [www.cleantruckfacts.org](http://www.cleantruckfacts.org).