

**Before the
FEDERAL RAILROAD ADMINISTRATION
Washington, D.C. 20590**

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In the Matter of)	Docket No. FRA-2021-0032
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Train Crew Size Safety Requirements)	87 Fed. Reg. 45,564
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COMMENTS OF REASON FOUNDATION

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Introduction

On behalf of Reason Foundation, I respectfully submit these comments in response to the Federal Railroad Administration's ("FRA") notice of proposed rulemaking ("NPRM") on train crew size safety requirements.¹

By way of background, I am a senior transportation policy analyst at Reason Foundation and focus on matters related to transportation technology, including freight automation.² I am also a member of the Transportation Research Board's Standing Committee on Emerging Technology Law. Reason Foundation is a national 501(c)(3) public policy research and education organization with expertise across a range of policy areas, including transportation.³

This comment letter develops the following points:

1. FRA presents no evidence to support this rulemaking.
2. FRA fails to consider the negative environmental impacts likely to arise from this rulemaking.

FRA Presents No Evidence to Support this Rulemaking

In 2016, when FRA first proposed a minimum crew-size regulation, it conceded that "FRA cannot provide reliable or conclusive statistical data to suggest whether one-person crew operations are generally safer or less safe than multiple-person crew operations."⁴

Despite the absence of evidence, FRA continued forward on the proposed crew-size rule until it was withdrawn in 2019. In its withdrawal notice, the agency concluded, "FRA's statement in the [proposed rule] that it 'cannot provide reliable or conclusive statistical data to suggest whether one-person crew operations are generally safer or less safe than multiple-person crew operations' still holds true today."⁵

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1. Train Crew Size Safety Requirements, *Notice of Proposed Rulemaking*, Docket No. FRA-2021-0032, 87 Fed. Reg. 45,564 (July 28, 2022) [hereinafter NPRM].
 2. See Marc Scribner, "Pathways and Policy for 21st Century Freight Rail," *Reason Foundation Policy Brief* (Sept. 2021), available at <https://reason.org/wp-content/uploads/pathways-and-policy-for-21st-century-freight-rail.pdf> (last visited Sep. 3, 2022).
 3. See About Reason Foundation, <https://reason.org/about-reason-foundation/> (last visited Sep. 3, 2022).
 4. Train Crew Staffing, *Notice of Proposed Rulemaking*, Docket No. FRA-2014-0033, 81 Fed. Reg. 13,917, 13,919 (Mar. 15, 2016).
 5. Train Crew Staffing, *Notice of Proposed Rulemaking; Withdrawal*, Docket No. FRA-2014-0033, 84 Fed. Reg. 24,735, 24,737 (May 29, 2019).

In the intervening years, FRA has been unable to furnish any evidence to support a safety basis for regulating train crew size. Like the 2016 NPRM, FRA concedes in this NPRM that it does not possess “any meaningful data” to support the conclusion that two-person train crews are safer or that one-person crews are less safe.⁶ And like the 2016 NPRM, this NPRM appeals to the same two decade-old anecdotes from Quebec and North Dakota that fail to provide a reasonable basis for the proposed rule.

Indeed, in the case of the 2013 Casselton, North Dakota, accident, FRA’s own recounting of the incident in this NPRM—“the conductor admitted that he had never been in a situation where a collision was imminent, did not know what to do, and therefore might not have gotten down on the floor and braced himself, as the locomotive engineer instructed”⁷—works against the supposed safety basis of this proposed rule because one-person crew operations would have eliminated the on-board conductor who was put in harm’s way in Casselton due to his own inexperience with proper safety protocols.

In Western European peer countries, the vast majority of freight and passenger trains are operated by a single crewmember and have been for decades. In the NPRM, FRA states that “train operations in developed countries, other than Canada, are not comparable for the most part due to differences in train lengths, territory, and infrastructure.”⁸

Oliver Wyman conducted a comparative analysis of U.S. and European crew-related characteristics and operational issues that casts doubt on FRA’s claims.⁹ Relevant findings include:

- “In the US environment, the train crew generally cannot directly observe more than the first 40 cars, which is about the average length of European freight trains. Beyond that distance, the train crew relies on wayside equipment detectors, telemetry from end-of-train devices and distributed power locomotives, in-cab brake pipe pressure gauges, and train handling characteristics (such as sudden changes in train speed, higher throttle settings needed to maintain speed, changes in ride quality, etc.) to monitor train integrity.”¹⁰
- “But the shorter average length of European freight trains actually creates significantly more operating complexity. Shorter block sizes and more

6. NPRM, *supra* note 1, at 45,571.

7. *Id.* at 45,570.

8. *Id.* at 45,580.

9. “Crew-Related Safety and Characteristic Comparison of European and US Railways,” Oliver Wyman (Apr. 5, 2021), *available at* <https://raillaborfacts.org/wp-content/uploads/2022/09/Carriers-Exhibit-11-Report-of-Oliver-Wyman-Comparison-of-European-and-US-Railways.pdf> (last visited Sep. 27, 2022).

10. *Id.* at 12.

interlockings, due to more double track and the density of trackage, create far more signals per route-kilometer.”¹¹

- “High complexity and train density mean that train crews in Europe face as many – if not more – decisions and work events every day than do US train crews, yet they do not experience task overload; in addition, the technology deployed is not significantly different than that used in the United States.”¹²
- “In Eastern Europe, where countries vary more in their policy regarding crew size, it is possible to more directly compare concurrent experience with one-person and two-person crews across a range of accident types. In the case of significant accidents, analysis yielded no evidence that two-person crews provide any safety advantages over one-person crews. The European data also shows that the economic impact of accidents is not alleviated by having a second person in the cab.”¹³
- “Looking at readily available and current data on European and US accident rates, it is difficult to see why two-person crews should be the presumptive standard for the United States, when one-person crews have been the longstanding presumptive standard on the far busier European network.”¹⁴

Because it has provided no evidence to support its proposed rule, this NPRM violates the basic principles of Executive Order 12866 that federal agencies such as FRA “should promulgate only such regulations as are required by law, are necessary to interpret the law, or are made necessary by compelling public need, such as material failures of private markets to protect or improve the health and safety of the public, the environment, or the well-being of the American people.”¹⁵

In this NPRM, FRA has neither “identif[ied] the problem that it intends to address (including, where applicable, the failures of private markets or public institutions that warrant new agency action) as well as assess the significance of that problem” nor “base[d] its decision[] on the best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and consequences of, the intended regulation,” as required by Executive Order 12866.¹⁶

11. *Id.* at 16.

12. *Id.* at 36.

13. *Id.* at 67.

14. *Id.*

15. Exec. Order No. 12866, § 1(a) (Sep. 30, 1993).

16. *Id.* at § 1(b).

FRA Fails to Consider the Negative Environmental Impacts Likely to Arise from This Rulemaking

Since taking office, President Biden has signed multiple executive orders related to the environment generally and climate change specifically. With Executive Order 13990, President Biden established that it is “the policy of my Administration to listen to the science; to improve public health and protect our environment; to ensure access to clean air and water... [and] to reduce greenhouse gas emissions[.]”¹⁷

In the NPRM, FRA states that it did not conduct any environmental analysis, finding that this proposed rule qualified for a categorical exclusion under 23 C.F.R. § 771.116.¹⁸ However, if promulgated, this rule is likely to have a negative environmental impact over the long run.

The trucking industry is anticipated to automate long-haul trucking in the coming years, which could reduce truck operating costs by nearly half if trucks can fully automate and eliminate the role of human drivers.¹⁹ This proposed rule would impose a default rail labor cost floor in perpetuity, thereby disadvantaging freight rail to its increasingly automated trucking competitors. This would cause some shippers to substitute trucks for rail.

According to the Environmental Protection Agency, when compared to freight rail, trucks produce approximately 10 times as much carbon dioxide (CO₂), more than three times as much fine particulate matter (PM_{2.5}), and two-and-a-half times as much nitrogen oxides (NO_x) per ton-mile.²⁰ Table 1 provides a breakdown of pollutant emissions intensity by mode.

17. Exec. Order No. 13990, § 1 (Jan. 20, 2021).

18. NPRM, *supra* note 1, at 45,615.

19. In 2021, driver wages and benefits were estimated to account for 44% of total truck operating costs per mile in the U.S. *See* Alex Leslie and Dan Murray, “An Analysis of the Operational Costs of Trucking: 2022 Update,” American Transportation Research Institute (Aug. 2022), p. 17, *available at* <https://truckingresearch.org/wp-content/uploads/2022/08/ATRI-Operational-Cost-of-Trucking-2022.pdf> (last visited Nov. 11, 2022).

20. “2022 SmartWay Online Shipper Tool: Technical Documentation,” U.S. Environmental Protection Agency (Oct. 2022), pp. 28, Appendix A, *available at* <https://www.epa.gov/system/files/documents/2022-10/420b22046.pdf> (last visited Dec. 19, 2022).

Table 1: U.S. Freight Transportation Emissions, Rail vs. Truck

Freight Mode	CO₂ (grams/ton-mile)	NO_x (g/ton-mi)	PM₁₀ (g/ton-mi)	PM_{2.5} (g/ton-mi)
Rail	20.7	0.29	0.0085	0.0082
Truck	210.0	0.74	0.0278	0.0270

Source: U.S. Environmental Protection Agency, *2022 SmartWay Online Shipper Tool: Technical Documentation*.

Given that trucks emit far more pollutants than freight trains, a modal shift from rail to truck would increase the air pollution emissions intensity of the transportation sector. The proposed rule's collateral economic impact of disadvantaging freight rail to its increasingly automated truck competitors would thus be expected to worsen environmental outcomes over time.

Conclusion

Due to the lack of evidence supporting a safety basis for this proposed rule and the likely environmental harms that would be generated if promulgated, FRA should withdraw the NPRM and discontinue this rulemaking project.

Thank for the opportunity to provide comments on the NPRM and we look forward to further participation.

Respectfully submitted,

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