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Office of Proceedings
August 14, 2024
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To: Surface Transportation Board
RE: EP 775- Notice of Intent to Participate in Oral Argument/Hearing
Requested time: 15 minutes
Day preference: September 16, 2024

Subject:
Public Interest in Mode Shift, Quantifying External Costs and the Relevance of Motive Power.

Respected Chair and Members of the Board,

As the executive director of Solutionary Rail and the co-author of the 2016 book *Solutionary Rail, a people-powered campaign to electrify America's railroads and open corridors to a clean energy future*, I have spent the last decade exploring the intersections between rail transportation and the public interest. These intersections are multiple and complex, yet tangible and quantifiable.

I request 15 minutes of your hearing time to present some key lessons about rail and the public interest in regards to mode share, external costs of mode choice, and how your work can shape a future freight system that increases benefits and reduces harms of rail as a critical element of our national freight system.

As you know, Railroads literally and figuratively connect us all. This is a precious thing in a society that currently suffers so much polarization and division. Though public interests in rail vary from community to community and from one sector of society to another, common interests far outweigh conflicting interests. And, where conflict exists, it is resolvable. Increased rail capacity and improvements to operations that deliver reliable service and draw freight from roads to rails is most definitely in the public interest. On time performance and returning access to communities that have been left behind is good for passengers as well as shippers - large and small - and it is critical to reshoring, supply chain resilience and national security. What cannot be allowed is for the benefits of mode shift to come at the expense of already overburdened communities that live adjacent to rail yards.

A robust and resilient rail system must be accomplished in concert with the decarbonization of our entire freight system. The Biden Administration recently announced a National Goal for a Zero Emissions Freight System. Though symbolic, this is an important recognition that the challenge of decarbonization of freight cannot be tackled in artificial silos of trucking and rail. The same is true with mode shift and electrification. Investment in the electrification of rail yards must go hand in hand with mode shift.

In 2020, Solutionary Rail submitted comments to the Select Committee on the Climate in the form of our

Putting Rail in Service of the Public Interest

paper [Moonshot Mode Shift](#). In its creation we learned how unreasonably difficult it is in the US to quantify the external costs of freight transport. (The EU did an Internalization Study to quantify the external costs of mode choice. They followed that with the Shift2Rail Joint Undertaking, published a Shift2Rail handbook, and declared 2020 the Year of the Train.) Since our *Moonshot* paper, we have advocated at the TRB for a user-friendly *External Cost Calculator* for public interest advocates, policy makers, and planners. SR even [developed a prototype](#) that draws data from the obtuse, limited and user-hostile Freight Analysis Framework and formulas from the Kansas DOT to show how such a tool might work.

It was only recently that I found a [2015 report](#) by the Congressional Budget Office that systematically developed a set of formulas to quantify accident risk, pavement damage, particulates + NOx, traffic congestion and CO2. This slide from a [2016 CBO presentation](#) shows the range of cost estimates (in 2014 dollars), the median and the resulting 8:1 ratio between truck and rail freight, by ton-mile.

Thanks to the CBO formulas and FAF data it is possible (though still not user-friendly) to estimate the external cost of freight by ton-mile. Solutionary Rail has applied these formulas to FAF 2025 data. We excluded coal/oil/grains and hazardous chemicals, commodities which railroads still have a *common carrier obligation* to transport. These are unlikely to move to trucks regardless. We also exclude distance bands less than 500 miles, since railroads are explicit about their market advantage for longer hauls. FAF estimates that this long haul freight moved by truck in 2025 will be approximately 800 billion ton-miles. The CBO report used 2014 dollars. Adjusting for inflation, the external cost of this long haul freight is \$0.048 per ton-mile. The result is a \$38.4 billion dollar cost borne by society. That is \$38 billion in one year. A mode shift of long haul freight from train to truck could save the US society \$33.6 billion dollars per year in external costs.

2014 Cents Per Ton-Mile		
Type of Cost	Truck	Rail
Accident Risk	0.8 to 2.3	0.1 to 0.25
Pavement Damage	0.7 to 1.0	0.05 to 0.06
Particulates + NOx	0.6 to 0.8	0.1 to 0.2
Traffic Congestion	0.4 to 0.9	0 to 0.03
CO ₂	0.02 to 0.22 to 0.9	0.01 to 0.05 to 0.2
Total of Median Costs	4.0	0.5

Note: For damages from CO₂, three numbers are shown to describe the distribution of estimates of external costs; values toward the middle of the range are much more likely to be selected. For other sources of external costs, two numbers are shown; all of the values in the range are equally likely to be selected.

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Despite this staggering cost to society - as the notification of this hearing makes clear - mode shift of truck freight to rail is not the direction the class 1 railroads have sought. In fact, they are headed in the opposite direction. CBO confirmed what others have found as well, i.e. conventional strategies for “leveling the playing” such as VMT and fuel taxes for trucking hold little promise. They are not enough to compel shippers to utilize rail rather than trucks, even for long hauls. Any mode shift of truck freight to rail greater than 3-4% will require more than taxes on trucking. Reliability and service are critical factors for shippers. When rail operations over emphasize short term profits, lower operating ratios and stock buybacks rather than investments in capacity and service, we all suffer.

The country depends upon the STB to use its powers to help chart a new path forward. Certainly, the White House and Congress must also do their part, but the STB does not need to wait. It is time for the STB to revoke service and commodity exemptions to return the power of common carrier obligations to restore service to industries and communities that have been left behind. It is also time for the STB to consider the broader implications of the National Rail Transportation Policy's mandates to protect workers, communities, the environment and national interests. A system that prioritizes private profit over public benefit, is exactly what is pushing freight off rails and onto roads and what is keeping the railroads from following the global trend to electrification.

Revoking exemptions and opening track to competition through reciprocal switching must be done, but it is likely not enough to shift the treatment of this critical national infrastructure as an extractive resource for insatiable forces of greed. It may be that without a shift in the ownership model of rail infrastructure that the public will continue to suffer and bear unnecessary external costs of an industry flawed from its creation as infrastructure that prioritizes private profit and stock buybacks over public goods. In that case, an exit strategy from this disaster must be championed by this board.

Railroads are critical national infrastructure and play a critical role in determining the future resilience, prosperity and health of our country. Increasing rail capacity, utilization, and sustainability through investments in infrastructure, improvements in service and accessibility, and its conversion to a backbone for a zero emissions freight system is inseparable from our public national and national security. Railroads have always existed in this quasi-utility space. If their continuation as profit generating monopolies is not compatible with national interests, then a reorganization of how they are regulated, incentivized, and assets utilized must be considered. ting the external costs of truck versus rail freight

Thank you for the opportunity to present at your upcoming hearing.

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