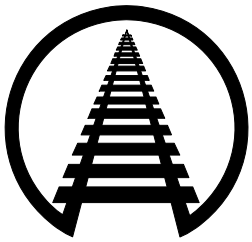
TESTIMONY OF

EDWARD R. HAMBERGER

PRESIDENT & CHIEF EXECUTIVE OFFICER

ASSOCIATION OF AMERICAN RAILROADS



BEFORE THE

UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

HEARING ON RAIL POLICY AND THE REAUTHORIZATION OF THE PASSENGER RAIL INVESTMENT AND IMPROVEMENT ACT OF 2008

JUNE 27, 2013

Association of American Railroads
425 Third Street, S.W.
Washington, DC 20024
202-639-2100

Introduction

On behalf of the members of the Association of American Railroads, thank you for the opportunity to discuss issues surrounding the reauthorization of the Passenger Rail Investment and Improvement Act of 2008 (PRIIA). AAR freight railroad members, which include the seven large U.S. Class I railroads as well as approximately 170 U.S. short line and regional railroads, account for the vast majority of freight railroad mileage, employees, and traffic in Canada, Mexico, and the United States. Amtrak and several commuter railroads are also members of the AAR. The AAR is presenting this testimony on behalf of its freight railroad members only.

Passenger railroading plays a key role in alleviating highway and airport congestion, decreasing dependence on foreign oil, reducing pollution, and enhancing mobility and safety. All of us want passenger railroads that are safe, efficient, and responsive to the transportation needs of our country.

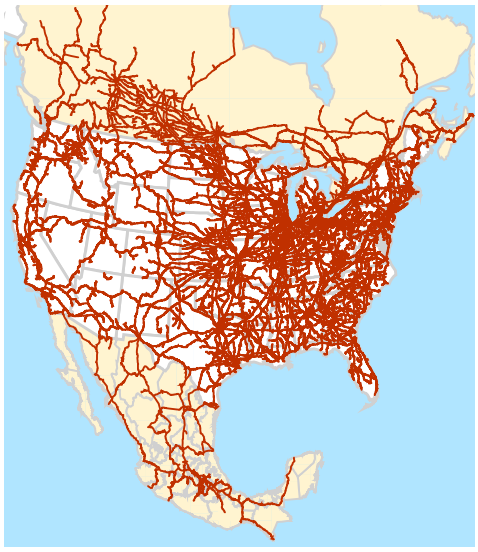
Meanwhile, America is connected by the most efficient, affordable, and environmentally responsible freight rail system in the world. Whenever Americans grow something, eat something, export something, import something, make something, turn on a light, or get dressed, it's likely that freight railroads were involved somewhere along the line. Looking ahead, America cannot prosper in an increasingly competitive global marketplace without a best-in-the-world freight rail system.

We think our nation can have both safe, effective passenger railroading *and* a safe, productive, world-best freight rail system. Freight railroads want passenger railroads to succeed, they work cooperatively with passenger railroads to help make this happen, and they support government efforts to grow passenger rail in ways that complement freight rail growth. The reauthorization of PRIIA presents an opportunity for policymakers to help achieve this goal.

Freight Railroads Are the Transportation Backbone of America

America's freight railroads and their 140,000-mile network serve nearly every industrial, wholesale, retail, and resource-based sector of our economy. In fact, they carry just about everything.

North America's Rail Network



U.S. railroads carry more coal than any other single commodity. Historically, coal has generated much more electricity than any other fuel source, and more than 70 percent of coal is delivered to power plants by rail. But railroads also carry enormous amounts of corn, wheat, soybeans, and other grains; fertilizers, plastic resins, and a vast array of other chemicals; cement, sand, and crushed stone to build our highways; lumber and drywall to build our homes; animal feed, canned goods, corn syrup, flour, frozen chickens, sugar, beer, and countless other food products; steel and other metal products; crude oil, asphalt, liquefied gases, and many other petroleum products; newsprint, paperboard, recycled paper and other paper products; autos and auto parts; iron ore for steelmaking; wind turbines, airplane fuselages, machinery and other industrial equipment; and much, much more.

Rail intermodal — the transport of shipping containers and truck trailers on railroad flatcars — has grown tremendously over the past 25 years. Today, just about everything you find on a retailer's shelves may have traveled on an intermodal train. Increasing amounts of industrial goods are transported by intermodal trains as well.

Given the volume of rail freight (close to two billion tons and 30 million carloads in a typical year) and the long distances that freight moves by rail (nearly 1,000 miles, on average), it's hard to overstate freight railroads' role in our economy. The rail share of freight ton-miles is about 40 percent, more than any other transportation mode. But freight rail's contribution to our nation extends far beyond that:

- Thanks to competitive rail rates — 44 percent lower, on average, in 2012 than in 1980[1] and the lowest among major industrialized countries — freight railroads save consumers billions of dollars every year, making U.S. goods more competitive here and abroad and improving our standard of living.
- Railroads are, on average, four times more fuel efficient than trucks. That means that moving freight by rail helps our environment by reducing energy consumption, pollution, and greenhouse gases.
- Because a single train can carry the freight of several hundred trucks — enough to replace a 12-mile long convoy of trucks on the highways — railroads cut highway gridlock and reduce the high costs of highway construction and maintenance.
- America's freight railroads are privately owned and operate almost exclusively on infrastructure that they own, build, maintain, and pay for themselves. When railroads reinvest in their networks — which they've been doing in record amounts in recent years — it means taxpayers don't have to.
- Railroads are safe and getting safer: 2012 was the safest year in history for railroads, breaking the record set in 2011, which in turn broke the record set in 2010.
- America's freight railroads sustain 1.2 million jobs, including 180,000 high-paying jobs in the freight rail industry itself. Millions of other Americans work in industries that are more competitive in the global economy thanks to the affordability and productivity of America's freight railroads.[2]

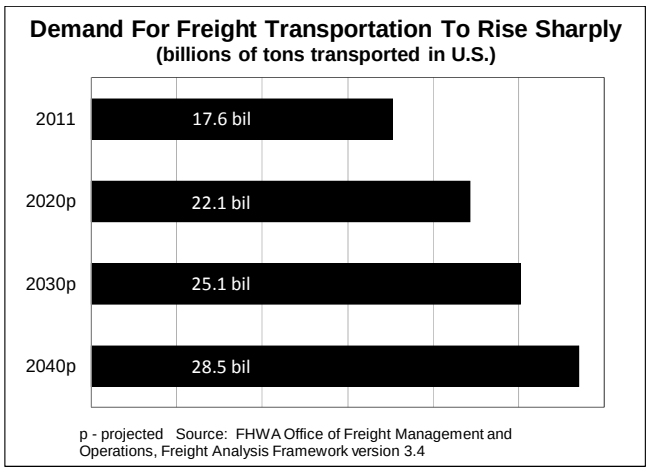
For all these reasons, I respectfully suggest that it is in the public interest to enact policies that result in more freight moving by rail.

[1] As measured by inflation-adjusted revenue per ton-mile.

[2] For much more background on the U.S. freight rail industry, see my March 5, 2013 testimony to the Subcommittee on Railroads, Pipelines, and Hazardous Materials of the Committee on Transportation and Infrastructure.

Preparing For Tomorrow Today

Railroads are proud of their contributions to our nation, but we can't just sit still. In the years ahead, America's demand for safe, affordable, and environmentally responsible freight transportation will grow. Recent forecasts reported by the Federal Highway Administration found that total U.S. freight shipments will rise from an estimated 17.6 billion tons in 2011 to 28.5 billion tons in 2040 — a 62 percent increase. Railroads are the best way to meet that demand.



No one, and certainly not railroads, disputes that motor carriers are absolutely indispensable to our economy and quality of life, and will remain so long into the future. That said, because of the enormous cost involved in building new highways, as well as environmental and land use concerns, it is highly unlikely that sufficient highway capacity can be built to handle expected future growth in freight transportation demand.

The United States has the world's most highly developed highway network, built and maintained at enormous public cost over the years. According to data from the FHWA, in 2011 alone, states disbursed $94 billion just on capital outlays and maintenance for highways.[3] Adding in other expenses such as administration and planning, law enforcement, interest, and grants to local governments brings total disbursements for highways to $150 billion in 2011. Even this huge level of spending, however, is widely considered inadequate to meet present-day, much less future, needs.

[3] Federal Highway Administration, Highway Statistics 2011, Table SF-2.

Fortunately, freight rail in general, and intermodal rail specifically, represents a viable and socially beneficial complement to highway freight movement. Today, rail intermodal takes millions of trucks off our highways each year, and its potential to play a much larger role in the future is enormous, both in traditional transcontinental markets and in new short- and middle-distance lanes. In the context of ports, railroads offer tremendous potential in safely and efficiently moving freight to and from port facilities, thereby greatly enhancing overall transportation productivity. In addition, a significant portion of the merchandise that railroads transport in their carload business (in addition to intermodal containers or trailers) is directly truck competitive. Shippers choose to move this freight on railroads because they find that the value railroads offer, in terms of cost and service, is superior. Railroads recognize that they will have to continue to work hard to earn this business, which is why they are constantly searching for ways to further improve productivity, reduce costs for their customers, and enhance their service offerings.

This does not mean that we should stop building highways or that we should no longer recognize the importance of trucks and highways in meeting our nation's transportation needs, but it does mean that policymakers should be doubly aware of the role railroads play, and can play, in meeting freight transportation demand. As manufacturing has become more global and as supply chains have become longer and more complex, the railroads' intermodal service has come to play a critical role in making the supply chains of a wide variety of shippers efficient.

First Mile-Last Mile Improvements

One of the main reasons why the United States has the world's most efficient total freight transportation system is the willingness and ability of firms associated with various modes to work together in ways that benefit their customers and the economy. That said, where freight is

handed off from one mode to another — for example, at ports from ships to railroads or from ships to trucks, or from railroads to trucks at intermodal terminals — freight movements are highly vulnerable to disruptions. Policymakers can help by implementing programs that improve these "first mile" and "last mile" intermodal connections. This would lead to especially large increases in efficiency and fluidity and forge a stronger, more effective total transportation package.

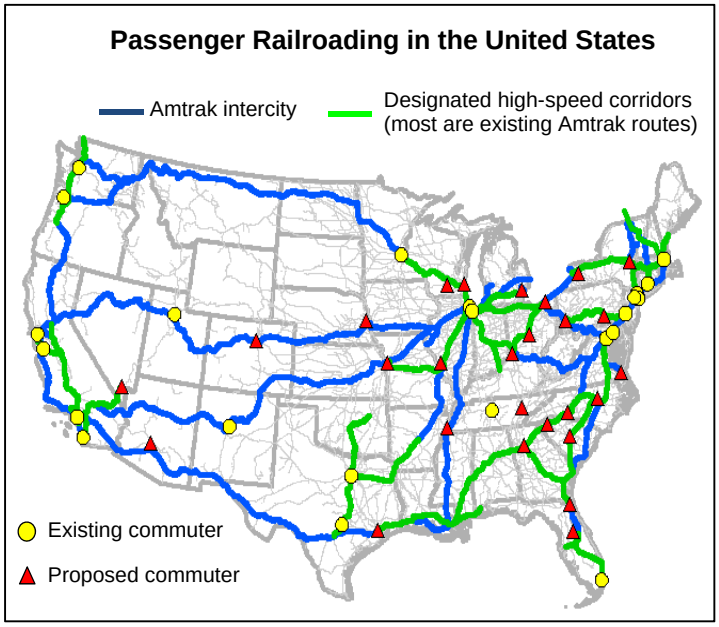
Railroads are gratified that the current administration and legislators in both parties and in both houses of Congress have shown a strong commitment to multi-modalism. That's evidenced, for example, in the evaluation and selection process for TIGER grants. To date, several dozen projects that have received TIGER grant funding have been associated in one way or another with freight railroads, and many of those projects are aimed at improving transportation performance by more effectively integrating different transportation modes.

Some intermodal connection infrastructure projects that are of national and regional significance in terms of freight movement could be too costly for a local government or state to fund. Consequently, federal funding awarded through a competitive discretionary grant process, like the TIGER program, has been an appropriate approach for these needs.

Attention to first- and last-mile connections is a critical element of both local and state freight planning and policy as well. At the local level, for example, land use planning has been largely inadequate in appropriately accommodating the needs of freight. Freight movement — whether in rail yards, intermodal facilities, ports, or regional distribution — must be sufficiently taken into account when planning land uses such as residential developments, schools, and recreational areas.

Passenger Rail to Enhance Mobility

Our nation's privately-owned freight railroads are already partners with passenger railroads all across the country. Approximately 93 percent of Amtrak's approximately 21,300-mile system consists of tracks owned and maintained by freight railroads, and more than 60 percent of the miles traveled by Amtrak trains are on tracks owned by freight railroads. Freight railroads also furnish other essential services to Amtrak, including train dispatching, emergency repairs, station maintenance, and, in some cases, police protection and communications capabilities. In addition, hundreds of millions of commuter trips each year occur on commuter rail systems that operate at least partially over tracks or right-of-way owned by freight railroads, and most of the high-speed and intercity passenger rail projects under development nationwide will utilize freight-owned facilities.



Reshaping the nation's passenger transportation system with expanded rail choices entails significant challenges. There has been a great deal of discussion in recent years — and a great deal of disagreement — on how to deal with these challenges. I respectfully suggest, however, that there should be no disagreement that America's economic health and global competitiveness would suffer greatly if the expansion of passenger rail service were to impede our nation's freight railroads.

Thus, for passenger rail expansion to succeed, all parties — policymakers, railroads, and others — must understand that America's economic health and global competitiveness would suffer greatly if the integration of freight service with expanding passenger service is not planned and implemented to ensure the ongoing success of both services. To paraphrase Transportation Secretary Ray LaHood, we should not try to create a world-class high-speed rail system at the expense of our world-class freight rail system.

Through their ownership of the vast majority of the rights-of-way over which expanded intercity passenger rail would take place, freight railroads provide the foundation for passenger rail. That's why great care must be taken to ensure there will be a regulatory and legal framework that protects the business needs and responsibilities of all parties.

In that regard, freight railroads strongly support existing federal guidelines that stipulate that states receiving federal grants for intercity and high-speed rail projects must have written agreements up front with host freight railroads. The issues addressed — such as safety, capacity, compensation, and liability — help to ensure that all parties are on the same page, protect all parties' interests, and avoid unpleasant surprises later.

Principles to Guide the Expansion of Passenger Rail

As noted at the outset, freight railroads agree that passenger railroading can play a key role in alleviating highway and airport congestion, decreasing dependence on foreign oil, reducing pollution, and enhancing mobility and safety. At the same time, however, the ultimate success of passenger rail in this country, and including especially high-speed rail, will depend on the willingness of policymakers to address, in a serious and realistic fashion, the numerous financial, legal, and operational issues associated with passenger rail. We believe these challenges can be more easily met if five key principles are followed.

One, *safety comes first*. Railroads are an extremely safe way to move both people and freight, and everyone involved in railroading wants to keep it that way. That's why safety has to come first when it comes to passenger trains sharing track or rights-of-way with freight trains. Under certain conditions (case-by-case evaluations are always necessary), passenger trains operating at speeds over 79 miles per hour may be able to safely share tracks with freight trains. Where separate passenger tracks are required, AAR believes safety would be enhanced if these separate tracks were sufficiently far apart to minimize the likelihood that a derailment on one track could foul an adjacent track and lead to a collision involving a freight and passenger train.

Second, *capacity issues must be properly addressed*. As noted above, over the coming decades, population and economic growth will mean sharply higher demand for freight transportation, and railroads are the best way to meet this demand. But if passenger rail impedes freight rail and forces freight that otherwise would move by rail onto the highway, many of the primary reasons for having passenger rail in the first place — enhanced mobility, reduced congestion, and environmental benefits — would be compromised.

On many corridors, current or expected freight traffic levels usually mean there is no spare capacity for passenger trains. In these cases, new capacity will be needed before passenger trains can operate. New infrastructure built for passenger trains should fully preserve both the ability to operate freight trains as needed and the opportunity to expand further freight service as the need arises in the future, including the ability of the freight railroad to access new customers along the right-of-way. In other words, passenger rail projects cannot "box in" the freight railroad so that new freight customers cannot access the freight railroad. This would limit the ability of the freight railroad to grow and subvert good public policy by potentially forcing this business to go by truck over roads.

Third, if passenger trains use freight railroad assets and property, it is reasonable for the host freight railroad to expect *full and fair compensation*. Simply put, freight railroads should not be expected to subsidize passenger rail any more than firms that provide locomotives, fuel, or food for dining cars. Tracks on which passenger trains operate, particularly high-speed trains, must meet different standards requiring significantly higher and more expensive maintenance than tracks on which freight trains operate. Host freight railroads should be fully compensated for these and any other added costs involved.[4] Moreover, railroads should not be subject to any new local, state, or federal tax liability as a result of a passenger rail project.

Fourth, freight railroads must be adequately *protected from liability* that would not have resulted but for the added presence of passenger rail service. It is almost inevitable that some accidents will occur on railroads, despite railroads' best efforts to prevent them. An accident involving passenger trains — which are generally far lighter than freight trains, often travel at much higher speeds, and, most importantly, have passengers on board — is far more likely to involve significant casualties than an accident involving only freight trains. Passenger operations also bring more people onto railroad property, resulting in a corresponding increase in risk. These potentially ruinous risks make freight railroads extremely reluctant to allow passenger trains on their tracks without adequate protection from liability.

Finally, there can be *no one-size-fits-all approach*. Each project involving passenger rail on freight-owned tracks in general, and high-speed rail projects in particular, has its own unique challenges and circumstances. Freight railroads currently and will continue to do their best to

[4] By statute, access fees that Amtrak pays to operate over the freight railroads' tracks are only required to cover the "incremental" costs associated with Amtrak's operations — that is, the additional costs that arise solely because of Amtrak's presence. Amtrak is not required to contribute to the freight railroads' fixed costs or to the shared costs for which Amtrak operations have a responsibility. Consequently, Amtrak's "track rental fee" is low and is, for all intents and purposes, an indirect subsidy paid by freight railroads to Amtrak. This means that the current structure by which Amtrak "rents" freight tracks should not necessarily serve as a guidepost for the future.

work with policymakers and passenger rail operators to overcome these challenges. For this to happen, agreements must be tailored to the specific needs and conditions of each project, which is why each project must be evaluated on a case-by-case basis.

Features of PRIIA Reauthorization

As this committee and others in Congress address the reauthorization of PRIIA, I respectfully urge you to keep the following points in mind.

Funding for Amtrak

Funding for passenger rail is, of course, a critical and often controversial issue. Freight railroads should not be obligated to fund passenger rail service or suffer negative effects on their own operations because of passenger rail. Nor should freight railroads be expected to pay for infrastructure investments that do not benefit them or that they do not want. That said, as this committee and others debate the reauthorization of PRIIA and related issues regarding the future of Amtrak, we hope you agree that once policymakers agree on the nature and scope of passenger railroading in this country, they must be willing to commit public funds on a long-term basis commensurate with that determination.

It is not reasonable to expect Amtrak to be able to plan, build, and maintain adequate infrastructure that provides optimal transportation mobility and connectivity when there is so much uncertainty regarding what its capital and operating funding will be from one year to the next. Freight railroads agree with Amtrak CEO Joseph Boardman when he said, "If Congress provides predictable and needed levels of federal funding support, Amtrak and our state partners

can better deliver a future of improved reliability, enhanced capacity, more service, increased speeds and reduced trip times on the Northeast Corridor and other passenger rail corridors around the country, including the development of new ones."[5]

On-Time Performance Metrics

Since passage of the Rail Passenger Service Act of 1970 (RPSA), which created Amtrak, Amtrak and freight railroads have worked together to establish and implement the rules and procedures governing the complex interactions between the parties. Most of these rules and procedures are spelled out in formal operating agreements negotiated between Amtrak and the freight railroads that host Amtrak trains.[6] These operating agreements, which are periodically renegotiated, are the products of decades of real-world experience regarding what works well and what does not. The freight railroads and Amtrak are in a far better position than anyone else to determine, working together, what these operating agreements should contain and how they should be structured.

For example, one area of concern typically covered by these operating agreements is on-time performance and other service quality standards. The agreements typically include clauses that provide incentives and penalties to freight railroads to help ensure that Amtrak trains operating on freight railroads' tracks reach certain specified on-time targets.

This is a tremendously complex issue for many reasons. When Amtrak was created in 1971, freight railroads had significant excess capacity. Since then, freight carriers have shed much of their excess capacity, and traffic growth has consumed much of what remained. Today,

[5] Amtrak press release, May 1, 2013.

[6] Some of the basic features of the freight railroad-Amtrak relationship are defined by the RPSA itself. For example, the RPSA explicitly orders freight railroads to grant preference to Amtrak trains over their own trains and all other customers and grants Amtrak the power to force freight railroads to convey property to it if the property is necessary for intercity rail passenger transportation. See also footnote four above on Amtrak payments to freight railroads.

many segments of the U.S. freight rail system are capacity constrained, such that when an Amtrak delay occurs, substantial freight traffic means that Amtrak trains are often less able to recover lost time. Exacerbating the situation is the fact that a number of Amtrak routes coexist with freight operations not only on single-track corridors, but also on heavily-used, capacity-constrained double-track corridors. This issue will not be going away any time soon: as noted earlier, the long-term forecast is for much higher freight transportation demand. Demand for passenger rail is expected to grow as well.

Day-to-day realities of the rail network come into play too. For example, from time to time railroads reduce allowable operating speed for safety reasons when it is warranted by the condition of the tracks. Although these "slow orders" can cause delays for trains of all types, safety must take precedence over everything else. Similarly, railroads must devote sufficient time to needed track and signal maintenance. This often produces unavoidable delays in the short term for freight and passenger trains, but improves service reliability — and enhances safety — in the long term.

Obviously, Amtrak wants its trains to run on time. Freight railroads understand this and work closely with Amtrak to help make this happen. The key point, though, is that the establishment and measurement of schedules and on-time performance metrics should be undertaken jointly by host freight railroads and Amtrak and governed by private bilateral contracts and the facts and circumstances of particular routes, not by one-size-fits-all legislative mandates. The railroads involved are in the best position to have a clear understanding of the cause of the delays that occur on a particular rail system and how they can be reduced going forward. This kind of shared contract-based responsibility has worked well in the past, enabling Amtrak and freight railroads to better address problems and improve service, which, after all, is

the ultimate goal. That's also why freight railroads oppose legislative provisions that penalize freight railroads for Amtrak delays. Penalties inject antagonism and mistrust into what should be a cooperative relationship.

PRIIA contains a provision that required the FRA and Amtrak to jointly develop metrics and standards to measure the performance and service quality of intercity passenger trains. Freight railroads viewed this delegation of rulemaking authority to Amtrak as contrary to the Constitution and have sought judicial intervention. A decision on this case is expected soon. Depending on the outcome, the status of the on-time standards developed under PRIIA will be affected and may need to be revised by Congress. It would be best if Congress modified the PRIIA metrics and standards provisions to give precedence to the performance standards contained in the operating agreements negotiated between Amtrak and the particular host freight railroad.

Section 130 Program

Under the federal "Section 130" program, $220 million in federal funds are divided among the states each year for installing new active warning devices, upgrading existing devices, and improving grade crossing surfaces. Several years ago, FRA noted that the Section 130 program "has helped prevent over 10,500 fatalities and 51,000 nonfatal injuries." Those figures are surely much higher now.

Without a budgetary set-aside like the Section 130 program, grade crossing needs would fare poorly in competition with more traditional highway needs such as highway construction and maintenance. Indeed, one of the

primary reasons the Section 130 program was created in the first place was that highway safety — and especially grade crossing safety — traditionally received low funding priority. The surface transportation bill signed into law on July 6, 2012 continues dedicated funding for this important program for two more years and means more injuries averted and more lives saved. Railroads urge you to retain dedicated funding for the Section 130 program when you reauthorize MAP-21.

In addition, because the safest grade crossing is the one that no longer exists, we recommend that Congress consider measures that would provide incentives for grade crossing closures. One approach may be to give latitude to the U.S. Department of Transportation to give preferential consideration to state passenger rail grant applications that include detailed goals and plans for grade crossing closures within passenger rail corridors. The goals could be based on FRA's 2009 "Highway-Rail Grade Crossing Guidelines for High-Speed Passenger Rail," which notes that "[g]ood planning that consolidates crossings and substitutes grade separations for at-grade crossings will significantly enhance mobility and contribute to livable communities."[7] Another approach would be to ensure that state rail plans include elements focusing on grade crossings and plans for closures.

Amtrak Should Be the Entity That Provides Intercity Passenger Rail Service

Due to concerns about Amtrak's finances and other factors, some have proposed that Amtrak should be replaced by other passenger rail operators on all or part of Amtrak's current routes and on any new passenger rail routes that may develop. Freight railroads do not support these proposals. Freight railroads would oppose the transfer or franchise of Amtrak's right of

[7] Federal Railroad Administration, "Highway-Rail Grade Crossing Guidelines for High-Speed Passenger Rail," Version 1.0, November 2009, p. 2.

access, preferential access rates, and operating priority to any new non-Amtrak passenger operators.

Why? First, the terms and conditions under which Amtrak uses freight-owned tracks were originally negotiated 40 years ago under circumstances that are vastly different from today. Amtrak has historically enjoyed federal financial support and has proven itself to be a safe and professional operator over four decades. Should Amtrak services be picked up by others, it is unclear what the circumstances would be. For example, private entities may have different degrees of financial backing; public authorities may or may not enjoy the full faith and credit of their sponsoring states; some prospective passenger rail operators may be less committed to safety and sound operating standards than Amtrak; and serious labor issues could arise. Clearly, the status quo would be altered in respects that are impossible to know beforehand, creating huge uncertainties that, frankly, freight railroads do not need. They would rather concentrate on helping the economy grow by meeting the freight transportation needs of their customers.

Moreover, proposals to force freight railroads to grant other passenger carriers access to their tracks under preferential terms and conditions ignores the fundamental fact that freight railroads' rights-of-way are private, not public. In the absence of voluntary agreement, freight railroads should not be forced to allow passenger operators to use their assets any more than any other private business should be forced to allow another company to use its assets without its consent or at non-compensatory rates. Indeed, forcing freight railroads to convey mandatory access to non-Amtrak passenger operators would create serious constitutional issues.

Second, simply put, Amtrak and freight railroads have "grown up" together. Certainly, there have been struggles along the way, as there are in any complex relationship, but the relationship works.

Finally, for decades prior to Amtrak's creation, our nation's railroads learned the hard way how difficult it is to recover the full costs of passenger railroading. Although Amtrak was created as a for-profit entity, experience has shown that this is not achievable. No comprehensive passenger system in the world operates today without significant government assistance, and the fact that Amtrak requires public support should not be seen as a primary reason for seeking alternative passenger rail providers.

Positive Train Control

The term "positive train control" (PTC) describes technologies designed to automatically stop or slow a train before certain accidents caused by human error occur. The Rail Safety Improvement Act of 2008 (RSIA) requires passenger railroads and U.S. Class I freight railroads to install PTC by the end of 2015 on main lines used to transport passengers or toxic inhalation materials (TIH). Specifically, PTC as mandated by Congress must be designed to prevent train-to-train collisions; derailments caused by excessive speed; unauthorized incursions by trains onto sections of track where maintenance activities are taking place; and the movement of a train through a track switch left in the wrong position.

Although PTC was mandated by the RSIA, rather than PRIIA, the issue is of such central concern to the freight and passenger rail industries that I would be remiss if I did not take an opportunity to raise it.

Positive train control is an unprecedented technological challenge. A properly functioning, fully interoperable PTC system must be able to determine the precise location, direction, and speed of trains; warn train operators of potential problems; and take immediate action if the operator does not respond to the warning provided by the PTC system. For example, if a train operator fails to begin stopping a train before a stop signal or slowing down

for a speed-restricted area, the PTC system would apply the brakes automatically before the train passed the stop signal or entered the speed-restricted area.

Such a system requires highly complex technologies able to analyze and incorporate the huge number of variables that affect train operations. A simple example: the length of time it takes to stop a train depends on train speed, terrain, the weight and length of the train, the number and distribution of locomotives and loaded and empty freight cars on the train, and other factors. A PTC system must be able to take all of these factors into account automatically, reliably, and accurately to safely stop the train.

Freight railroads have enlisted massive resources to meet the PTC mandate. They've retained more than 2,200 additional signal system personnel to implement PTC, and to date have collectively spent approximately $3 billion of their own funds on PTC development and deployment. Class I freight railroads expect to spend an additional $5 billion before development and installation is complete. Currently, the estimated total cost to freight railroads for PTC development and deployment is around $8 billion, with hundreds of millions of additional dollars needed each year after that to maintain the system.

Despite railroads' best efforts, due to PTC's complexity and the enormity of the implementation task — and the fact that much of the technology PTC requires simply did not exist when the PTC mandate was passed and has been required to be developed from scratch — much technological work remains to be done.

Railroads also face non-technological barriers to timely PTC implementation. One such challenge that railroads are struggling to overcome right now involves regulatory barriers to the construction of antenna structures. As part of PTC implementation, railroads must install tens of

thousands of new antenna structures nationwide to transmit PTC signals. The vast majority of these antenna structures are small and are to be located along railroad rights-of-way.

However, the Federal Communications Commission (FCC) maintains that all PTC antenna structures, regardless of their size or location on the right-of-way, are subject to the National Environmental Protection Act (NEPA) and the National Historic Preservation Act (NHPA). The FCC's current interpretation of its rules implementing these acts would subject every PTC antenna structure to a separate, time-consuming environmental evaluation process. The FCC's current approval process is unworkable for a deployment on the scale of PTC in the timeframe mandated by the RSIA and FRA's rules. The railroad industry, the FRA, and the FCC are working to find a solution that will avoid the need for antenna-by-antenna reviews, but for now the installation of antenna structures is on hold. Unless that changes, the timeline for ultimate deployment of PTC will be delayed significantly.

Important PTC regulatory issues are unresolved as well. Current regulations pertaining to PTC implementation impose operational restrictions so severe that the fluidity of the rail network would be drastically impaired. It is important to resolve these issues, and the AAR appreciates that the FRA is considering them in a current rulemaking proceeding.

In addition to the challenges presented by both the FCC and FRA issues, another critical variable to the successful implementation of a nationwide PTC network is the question of the proper operation of the system. Does the system work, for both passenger and freight railroads? To effectively answer this question, railroads will need adequate time to ensure that PTC works as intended and that the systems are communicating accurately. The industry can achieve the objectives of the mandate if they have an implementation schedule that allows the technology to

be developed as well as tested and proven so the safety and operational efficiency of the nation's rail system are not put at risk.

In that regard, the current PTC implementation deadline mandated by the RSIA should be extended by at least three years from December 31, 2015, to December 31, 2018. Given the unprecedented nature of PTC and the uncertainties — both known and unknown — flexibility beyond December of 2018 should also be addressed, with the authority for that flexibility residing with the Secretary of the Department of Transportation. Additionally, in order to ensure that railroads can operate safely and efficiently with the PTC system, the imposition of PTC-related operational requirements and associated penalties should be deferred until all PTC systems are fully integrated and testing has been completed. Congress should also ensure that PTC funding is available for publicly owned passenger rail systems.

Conclusion

To reiterate, freight railroads want passenger railroads to succeed, they work cooperatively with passenger railroads to help make this happen, and they support government efforts to grow passenger rail in ways that make economic sense and that complement freight rail growth.

At the same time, America's economic health and global competitiveness depends on having a healthy freight rail system. Expanding passenger rail on corridors owned by freight railroads will require a partnership between freight and passenger railroads that strikes the right balance and protects the business needs and responsibilities of both parties. Freight railroads are committed to working with government officials, passenger rail stakeholders, and others to ensure a winning result for all parties involved.