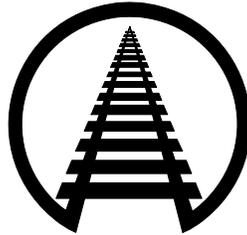


**TESTIMONY OF**  
**EDWARD R. HAMBERGER**  
**PRESIDENT & CHIEF EXECUTIVE OFFICER**  
**ASSOCIATION OF AMERICAN RAILROADS**



**BEFORE THE**  
**U.S. HOUSE OF REPRESENTATIVES**  
**COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE**  
**SUBCOMMITTEE ON RAILROADS, PIPELINES**  
**AND HAZARDOUS MATERIALS**  
**HEARING ON FREIGHT AND PASSENGER RAIL**  
**IN AMERICA'S TRANSPORTATION SYSTEM**

**MARCH 5, 2013**

**Association of American Railroads**  
**425 Third Street SW**  
**Washington, DC 20024**  
**202-639-2100**

## Introduction

On behalf of the members of the Association of American Railroads (AAR), thank you for the opportunity to talk with you about America’s freight railroads.

Freight railroads are an indispensable part of America’s transportation system. Whenever Americans grow something, eat something, export something, import something, make something, turn on a light, or get dressed, it’s likely that railroads were involved somewhere along the line.

More than 560 freight railroads operate in the United States today — only Hawaii does not have at least one — over nearly 140,000 miles.<sup>1</sup> Nearly all of America’s freight railroads are privately owned and operated. Unlike trucks, barges, and airlines, the freight railroads operate almost exclusively on infrastructure that they own, build, maintain, and pay for themselves.

The seven “Class I” freight railroads account for approximately 70 percent of U.S. freight rail mileage and more than 90 percent of freight rail employees and revenue.<sup>2</sup> Class I railroads typically operate in many different states over thousands of miles of track and concentrate largely (though not exclusively) on long-haul, high-density intercity traffic lanes.

Type of Railroad	Number	Miles Operated*	Employees	Freight Revenue (\$ billions)
Class I	7	95,387	158,623	\$65.0
Non-Class I	561	43,188	17,317	4.0
Total	568	138,575	175,940	\$68.9

\*Excludes trackage rights. Source: AAR

Non-Class I railroads, also known as regional railroads and short line railroads, range in size from small operations transporting a few carloads a month to multi-state operators that are close to Class I in size. Short line railroads typically perform a gathering and distributing

<sup>1</sup> Fact sheets on freight railroading in individual states are available from the AAR upon request and at [www.aar.org](http://www.aar.org).

<sup>2</sup> Class I railroads are defined by statute as those with operating revenue of at least \$250 million in 1991 dollars. Adjusted for inflation, the threshold for Class I status in 2011 was \$433.2 million.

function, often linking rural and semi-rural shippers and communities to high-volume Class I lines. A typical Class I railroad exchanges traffic with scores of non-Class I railroads.

In the United States, the same company usually both owns the track and owns and operates the trains that run over those tracks. It's not uncommon for a railroad to operate over tracks it does not own, but access to another railroad's tracks is almost always the result of voluntary negotiations. Railroads share common standards, including a standard track gauge, equipment, data protocols, and operating practices. This allows railroads to provide seamless service throughout the country. In fact, freight railroads are fully integrated throughout North America: the rail systems of the United States, Canada, and Mexico operate largely barrier-free except for customs and provide the world's most productive and lowest-cost freight rail service.

**The North American Freight Rail Network**



### **What Railroads Haul**

From the food on our tables to the cars we drive to the shoes on our children's feet, freight railroads carry the things Americans depend on.

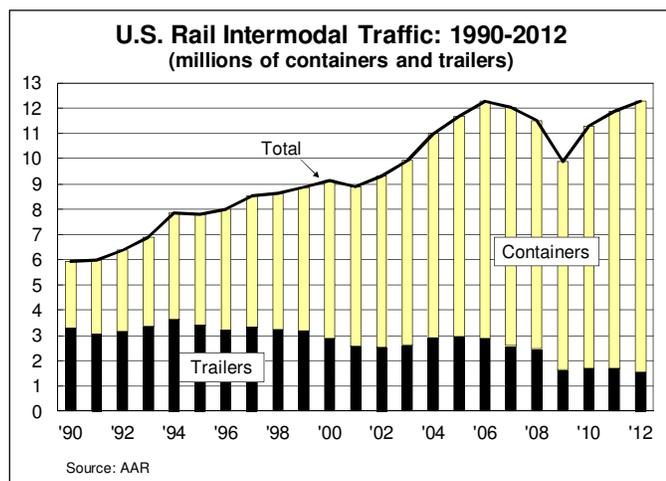
Each year, U.S. freight railroads transport more than 30 million carloads of freight. The rail share of intercity ton-miles is about 40 percent, more than any other transportation mode.

Coal is the largest single commodity carried by U.S. railroads, accounting for approximately 41 percent of Class I rail tonnage and 22 percent of Class I rail revenue in 2012. Some of this coal is exported, but the vast majority is used to generate electricity domestically. More than 70 percent of the coal delivered to power plants is transported by rail.

Railroads also carry enormous amounts of corn, wheat, and soybeans; fertilizers, plastic resins, and a vast array of other chemicals; cement, sand, and crushed stone for construction; lumber and drywall to build our homes; autos and auto parts; 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, and other paper products; iron ore for steelmaking; and much more.



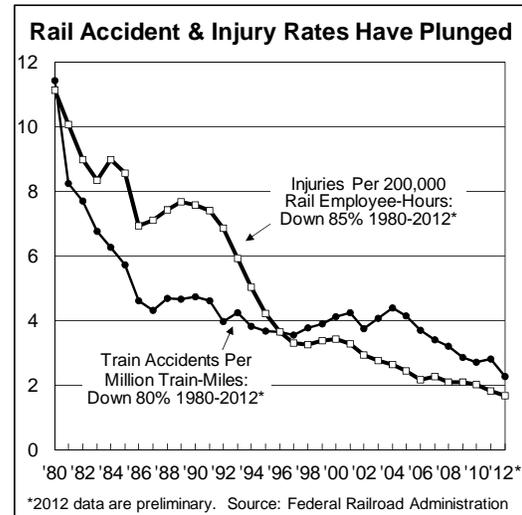
Intermodal — the long-haul movement of shipping containers and truck trailers by rail, combined with a (usually much shorter) truck movement at one or both ends — has been growing rapidly for more than 25 years. Most intermodal traffic is consumer goods. In fact, just about everything you find on retailers’ shelves may have traveled on an intermodal train. More than 50 percent of rail intermodal consists of imports or exports, reflecting the vital role railroads play in international trade.



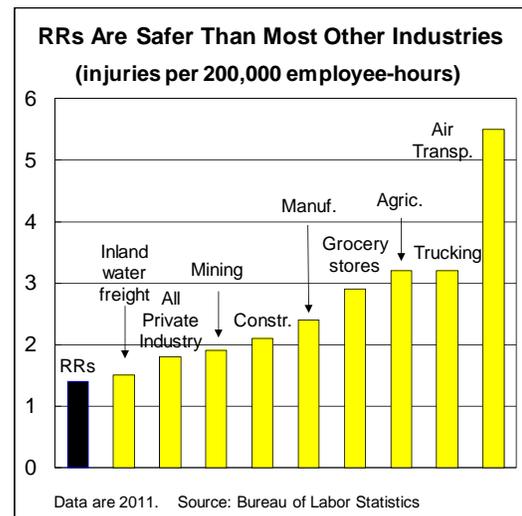
## Safer Today Than Ever Before

Nothing is more important to railroads than safety, and America's railroads are safer today than ever before.

According to Federal Railroad Administration (FRA) data, from 1980 to 2012 the U.S. train accident rate fell 80 percent and the U.S. rail employee injury rate fell 85 percent. Since 2000, the declines have been 45 percent and 52 percent, respectively. Overall, 2012 set a new record for railroad safety, breaking the previous record set in 2011, which in turn broke the record set in 2010.<sup>3</sup>



Many years ago, railroads were considered a relatively unsafe place to work, but that's not true anymore. Railroads today have lower employee injury rates than most other major industries, including trucking, inland water transportation, airlines, agriculture, mining, manufacturing, and construction — even lower than grocery stores. When they do occur, rail injuries are no more severe, on average, than injuries in U.S. industry as a whole.



<sup>3</sup> 2012 FRA safety data are preliminary.

## Hazardous Materials

In 2010 (the most recent year for which data are available), U.S. railroads transported approximately 1.8 million carloads of hazardous materials, including 77,000 carloads of “toxic inhalation hazard” (TIH) materials.<sup>4</sup> Railroads are the safest surface transportation mode for moving hazardous materials, and it is safer to ship hazmat by rail today than ever before. More than 99.99 percent of rail hazmat shipments reach their destination without a release caused by a train accident. Rail hazmat accident rates were reduced 91 percent from 1980 to 2010 and 38 percent from 2000 to 2010.

Railroads have long been taking concrete steps to make hazmat transportation safer. For example:

- Railroads and a number of federal agencies have jointly developed the Rail Corridor Risk Management System (RCRMS), a sophisticated statistical routing model designed to ensure that TIH materials are transported on routes that pose the least overall safety and security risk.
- Railroads follow stringent TSA “chain of custody” requirements for rail cars carrying TIH materials. Transfer of TIH cars from a shipper to a railroad, from one railroad to another, and from a railroad to a receiver must be carefully documented.
- Around half of all chemicals, and nearly all TIH materials, are transported in tank cars. Tank cars built today are vastly improved over earlier generations of tank cars, with higher grade steel, better thermal protection, improved valves and fittings, often thicker tanks, and many other improvements.

## Grade Crossings and Trespassers

With respect to safety at grade crossings, there’s been tremendous improvement there too. From 1980 through 2012, the number of grade crossing collisions fell 82 percent, grade crossing injuries fell 77 percent, and grade crossing fatalities fell 71 percent. The grade crossing collision rate fell 82 percent from 1980 through 2012. It has fallen nearly every year since 1978 and in 2012 was lower than ever before.

---

<sup>4</sup> TIH materials are gases or liquids, such as chlorine and anhydrous ammonia, that are especially hazardous if released into the atmosphere.

This huge improvement is due in part to the federal Section 130 program, which allocates \$220 million per year to states for grade crossing improvements. 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. Clearly, the Section 130 program deserves continued dedicated support. In addition, railroads themselves spend hundreds of millions of dollars each year on grade crossing improvements and maintenance. They also work with state governments and local authorities to close unneeded or redundant grade crossings.

But grade crossing safety is only part of the public safety challenge. Trespassing is another area of concern. It is an unfortunate reality that too many people inappropriately use railroad property for short cuts, recreation, or other purposes, sometimes with tragic results. Railroads are engaged in ongoing efforts with Operation Lifesaver and others to educate the public that, for their own safety, they should stay off rail property.

### Safety-Enhancing Technologies

While railroads are safer today than ever before, they want to be even safer. That’s why they are constantly researching, developing, and implementing new safety-enhancing technologies, and working cooperatively with their employees, suppliers, customers, and governments to find new ways to improve their safety record. Just a few of the many examples of new safety-enhancing technologies developed in recent years or now being developed include:

- Sophisticated detectors along tracks that identify defects on passing rail cars, including overheated bearings and damaged wheels, dragging hoses, deteriorating bearings, cracked wheels, and excessively high and wide loads, before failure or other damage occurs.
- Ground-penetrating radar and terrain conductivity sensors are being developed that will help identify problems below the ground (such as excessive water penetration and deteriorated ballast) that hinder track stability.
- Remote monitoring capabilities that ascertain the structural health of bridges.

- Advanced track geometry cars that use sophisticated electronic and optical instruments to inspect track alignment, gauge, curvature, and other track conditions.

Many of the rail industry's technological advancements are developed and refined at the Transportation Technology Center, Inc. (TTCI) in Pueblo, Colorado, a wholly owned subsidiary of the Association of American Railroads that is widely considered to be the finest rail research facility in the world. We extend a standing invitation to all of you to visit TTCI and see firsthand the tremendous research that is being done there.

A key technology currently being developed and implemented that deserves special mention is "positive train control" (PTC). PTC is an extremely complex safety technology designed to automatically stop or slow a train before certain types of accidents occur. The Rail Safety Improvement Act of 2008 (RSIA) requires passenger railroads and Class I freight railroads to install PTC by the end of 2015 on main lines used to transport passengers or toxic-by-inhalation (TIH) materials.

Since enactment of the RSIA, railroads have devoted enormous human and financial resources to develop a fully functioning PTC system, and progress to date has been substantial. However, despite railroads' best efforts, the immense technological hurdles are such that a reliable, nationwide, and interoperable PTC network will not be completed by the current deadline. Railroads remain committed to implementing PTC and are doing all they can to address the challenges that have surfaced, but more time is needed to ensure safe and effective implementation on the nation's vast freight and passenger rail networks.

### FRA Safety Regulation

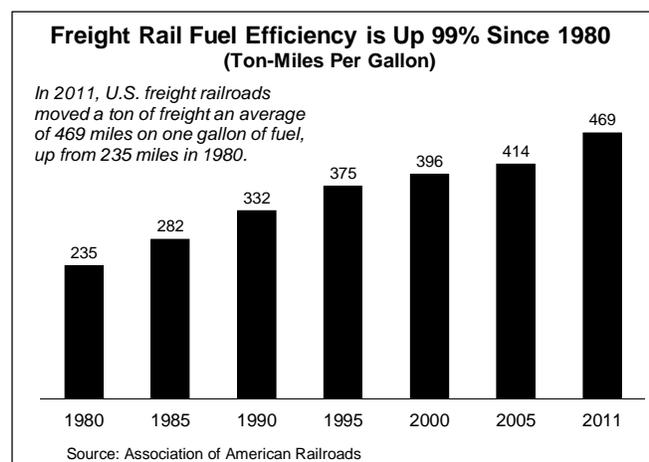
Virtually every aspect of rail operations is subject to strict safety oversight by the Federal Railroad Administration (FRA). Among many other areas, railroads are subject to FRA regulation regarding track and equipment inspections; employee certification; allowable

operating speeds; and the capabilities and performance of signaling systems. Hundreds of FRA personnel perform regular inspections of rail facilities and operations throughout the country. In many states, FRA safety inspectors are supplemented by state safety inspectors. Railroads are also subject to safety oversight by a plethora of other federal agencies, including the Occupational Safety and Health Administration (OSHA), the Pipeline and Hazardous Materials Safety Administration (PHMSA), and the Department of Homeland Security (DHS).

### Essential to a Greener, Less-Congested Future

Railroads are the most environmentally sound way to move freight and are committed to even greater environmental excellence in the years ahead.

First, railroads save fuel and reduce greenhouse gas emissions. According to a recent independent study for the Federal Railroad Administration, railroads, on average, are four times more fuel efficient than trucks. In 2011, U.S. freight railroads moved a ton of freight an average of 469 miles per gallon of fuel — up from 235 miles in 1980. That’s a 99 percent improvement. And because greenhouse gas emissions are directly related to fuel consumption, moving freight by rail instead of truck lowers greenhouse gas emissions by 75 percent.



Second, freight railroads mean less highway gridlock. According to the Texas Transportation Institute, in 2011 highway congestion cost Americans \$121 billion in wasted time (5.5 billion hours) and wasted fuel (2.9 billion gallons).<sup>5</sup> Lost productivity, cargo delays, and

<sup>5</sup> Texas Transportation Institute, 2012 Urban Mobility Report, p. 1

other costs add tens of billions of dollars to this tab. A single freight train, though, can replace several hundred trucks, freeing up space on the highway for other motorists.

Third, shifting freight from trucks to rail also reduces highway wear and tear and the pressure to build costly new highways. A few years ago, the American Association of State Highway and Transportation Officials (AASHTO) estimated that if all rail freight were shifted to trucks, it could cost governments an extra \$128 billion for highway improvements.<sup>6</sup> That number is surely much higher today.



Fourth, moving freight by rail rather than by truck significantly reduces harmful emissions. In March 2008, the EPA issued stringent new locomotive emissions standards. The EPA estimates that, when compared to the previous standards, the new standards will reduce particulate matter (PM) emissions by 90 percent and reduce nitrogen oxide (NOx) emissions by 80 percent.

### **Helping Rail Customers Stay Competitive in the Global Economy**

The affordability of freight railroads saves rail customers (and, ultimately, American consumers) billions of dollars each year and enhances the global competitiveness of U.S. goods. Average rail rates (measured by inflation-adjusted revenue per ton-mile) were 45 percent lower

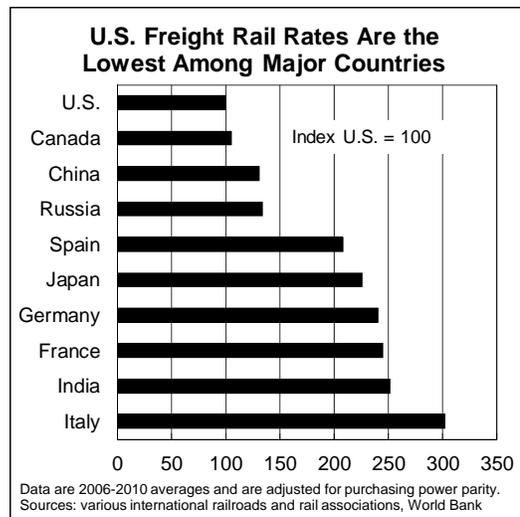
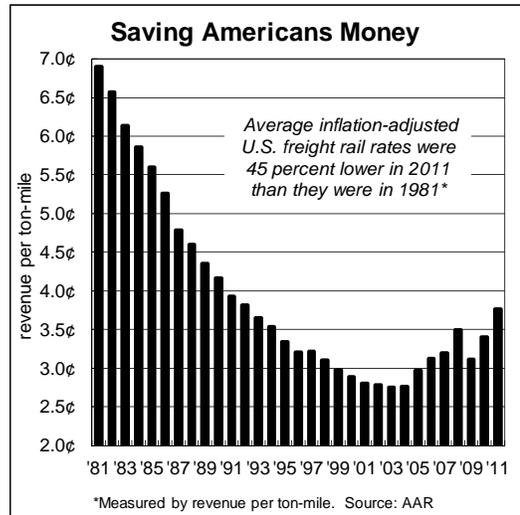
---

<sup>6</sup> AASHTO, *Freight Rail Bottom Line Report*, p. 1

in 2011 than in 1981. This means that the average rail customer today can ship nearly twice as much freight for the same price paid nearly 30 years ago.

U.S. freight railroads are also the most affordable among the world’s major countries. According to data from the World Bank and other sources, U.S. freight rail rates (measured by revenue per ton-mile) are less than half those in major European countries and well below China and Japan as well, helping make U.S. firms more competitive in a tough global economy.

A few years ago, AASHTO also estimated that if all freight rail traffic were shifted to trucks, rail shippers would have to pay an additional \$69 billion per year.<sup>7</sup> Adjusted for increased freight volume and inflation, that figure is probably around \$100 billion today.

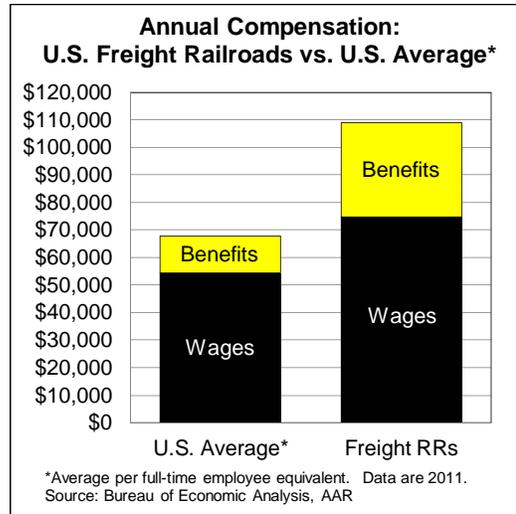


**Rail Employees: Professional, Productive, and Highly Compensated**

Rail management and rail labor are united in believing that safe and efficient railroads are indispensable to America’s economic health and societal well-being. Railroads appreciate the skill and professionalism of their employees and are committed to working with them to help ensure that the rail industry’s future remains bright.

<sup>7</sup> AASHTO, *Freight Rail Bottom Line Report*, p. 1

The more than 175,000 freight railroad employees are among America's most highly compensated workers. In 2011, the average freight railroad employee earned wages of \$74,900 and fringe benefits of \$34,000, for total average compensation of \$108,900. By contrast, the average wage per full-time employee in the United States in 2011 was \$54,400 (73 percent of the freight rail figure) and average total compensation was \$67,700 (62 percent of the freight rail figure).



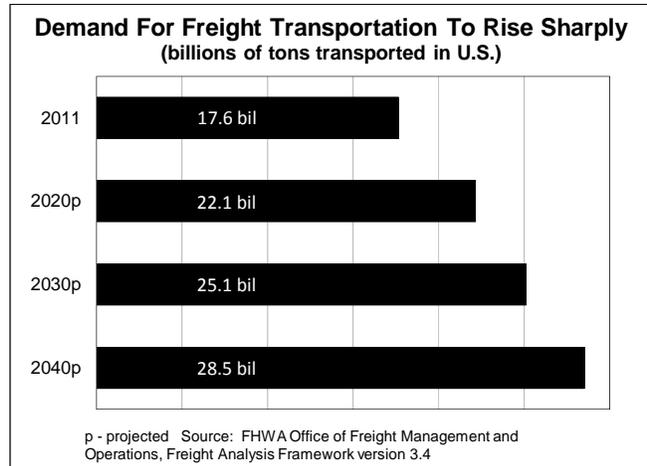
According to a U.S. Department of Commerce model of the U.S. economy, in addition to their own employees, freight railroads sustain more than 1 million additional jobs at firms that provide goods and services to railroads or that are recipients of spending by the employees of railroads and their suppliers. The model indicates that every job in day-to-day freight rail operations sustains another 4.5 jobs elsewhere in the economy. 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.

Rail industry employees are not covered by Social Security. Instead, they are covered by the Railroad Retirement System, which is funded by railroads and their employees. In fiscal year 2011, approximately 578,000 beneficiaries received retirement and survivor benefits totaling \$10.9 billion from the Railroad Retirement System.

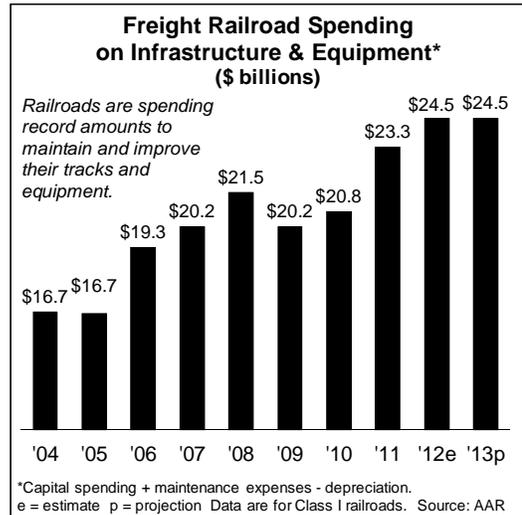
**Investing for the Future**

As America's economy grows, the need to move more people and goods will grow too. 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 getting ready today to meet this challenge.



Trucks, airlines, and barges operate on highways, airways, and waterways that are publicly financed. By contrast, America’s freight railroads operate overwhelmingly on infrastructure that they own, build, maintain, and pay for themselves. From 1980 to 2012, U.S. freight railroads reinvested more than \$525 billion — of their own funds, not government funds — on locomotives, freight cars, tracks, bridges, tunnels and other infrastructure and equipment. That’s more than 40 cents out of every revenue dollar.



In recent years, despite the recession,

America’s freight railroads have been reinvesting more than ever before — including an estimated \$24.5 billion in 2012 and a projected \$24.5 billion in 2013 — back into a rail network that keeps our economy moving.

One of the reasons railroads reinvest so much is that railroading is among the most capital-intensive of all industries. The average U.S. manufacturer spends about

<b>Average all manufacturing</b>	<b>3%</b>
Food	2%
Petroleum & coal products	2%
Machinery	2%
Motor vehicles & parts	3%
Wood products	3%
Fabricated metal products	3%
Chemicals	3%
Plastics & rubber products	4%
Paper	4%
Computer & electr. products	4%
Nonmetallic minerals	5%
<b>Class I Railroads</b>	<b>17%</b>

\*Avg. 2002-2011 Source: Census Bureau, AAR

three percent of its revenue on capital expenditures. The comparable figure for U.S. freight railroads is around 17 percent, or more than five times more. As Congress is well aware, building and maintaining an infrastructure network is very expensive whether done with public or private funds.

### **The Need for Reasonable Economic Regulation**

In 1887, the Interstate Commerce Act created the Interstate Commerce Commission (ICC) and made railroads the first U.S. industry subject to comprehensive federal economic regulation. Over the ensuing decades, increasingly oppressive regulation came to control nearly every aspect of rail operations, including the rates railroads could charge, the routes they had to travel over, and the equipment they could use to transport their freight.

By the 1970s, excessive regulations, intense competition from trucks and barges, and changing shipping patterns drove railroads to the brink of ruin. The Rail Passenger Service Act of 1970 created Amtrak and relieved freight railroads of most of the huge losses (then around \$200 million per year, or around \$850 million in today's dollars) incurred in passenger service, but conditions continued to deteriorate on the freight side. During the 1970s, most major railroads in the Northeast and several major Midwestern railroads went bankrupt. In fact, bankrupt railroads accounted for more than 21 percent of the nation's rail mileage.

Between 1970 and 1979, the rail industry's rate of return on investment never exceeded 2.9 percent and averaged just 2.0 percent. These extremely low returns meant that railroads lacked the funds to properly maintain their tracks. By 1976, more than 47,000 miles of track had to be operated at reduced speeds because of unsafe conditions. Railroads had billions of dollars in deferred maintenance, and the term "standing derailment" — when railcars that were standing still simply fell off poorly maintained track — was often heard.

The status quo was untenable, so Congress essentially had two options: nationalize the railroads, at a continuing cost of untold billions of dollars, or replace the excessive regulation of the past with a more balanced regulatory framework. Congress wisely chose balanced regulation and passed the Staggers Rail Act of 1980.

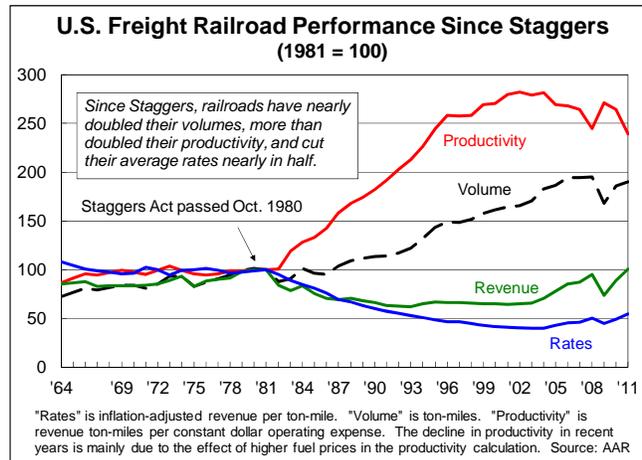
By passing the Staggers Act, Congress recognized that railroads faced intense competition for most of their traffic, but excessive regulation prevented them from competing effectively. To survive, railroads needed a new regulatory system that allowed them to act like most other businesses in terms of managing their assets and pricing their services.

The Staggers Act ushered in a new era in which railroads could largely decide for themselves what routes to use, what services to offer, and what prices to charge. Railroads were allowed to base their rates on market demand; railroads and shippers could enter into confidential contracts; procedures for abandoning or selling unneeded rail lines were streamlined; and the need for railroads to earn adequate revenues to support their operations was explicitly recognized.

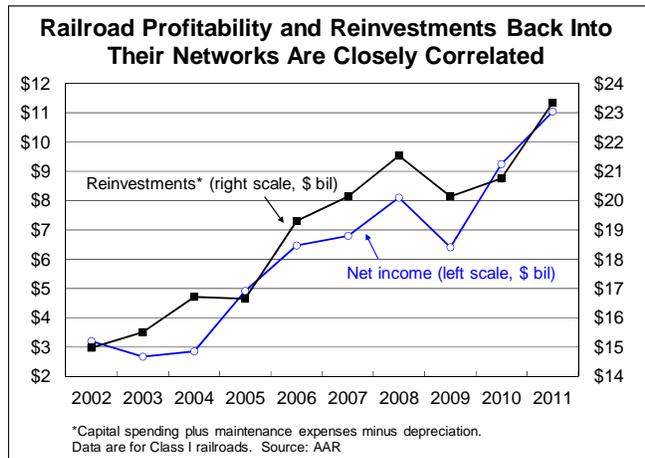
Under Staggers, regulators retained authority to protect rail customers against unreasonable rail rates where there is no effective competition for the rail services. Regulators still have this authority today, ensuring that railroads are held accountable for their actions.

The more balanced and reasonable regulatory environment created by Staggers has been a great success for rail shippers, railroads, and the public at large. Lower rail shipping costs have saved American consumers hundreds of billions of dollars compared to what they would have been had rail rates not fallen in the post-Staggers era, and hundreds of billions of dollars in reinvestments since Staggers have created a national network that is second to none worldwide. Rail safety, productivity, and service to customers have improved tremendously. Vibrant short

line railroads, most of which are new since Staggers, now operate some 45,000 miles of track in 49 states and employ approximately 18,000 workers, preserving rail service and rail jobs that otherwise would have been lost.



Railroads are also much stronger financially since Staggers. Return on net investment, which had been falling for decades, rose to 4.4 percent in the 1980s, 7.0 percent in the 1990s, and 8.5 percent from 2000 to 2011. Improved rail earnings are a positive development because they allow railroads to more readily justify and afford the massive investments needed to keep their track and equipment in top condition, improve service, and add the new rail capacity that America will need in the years ahead. Over the past ten years, there has been a very close positive correlation between freight rail earnings and the amount they reinvest back into their networks.



All of the outcomes listed above were results that Congress intended the Staggers Act to generate and could not have been achieved without the Staggers Act reforms. It's no surprise that The Economist magazine recently noted that the American freight rail system is “one of the

unsung transport successes of the past 30 years” and is “universally recognized in the industry as the best in the world.”<sup>8</sup>

### **Partnerships Between Freight and Passenger Railroads So That Both Succeed**

In the United States, freight railroads provide the foundation for passenger rail. Around 70 percent of the miles traveled by Amtrak trains are on tracks owned by freight railroads, and dozens of commuter railroads operate, or plan to operate, at least partially on freight-owned corridors. In addition, most of the higher speed and intercity passenger rail projects under development nationwide plan to use freight-owned facilities.

Passenger rail, including higher-speed rail, can only succeed if policymakers are willing to realistically address the numerous financial, legal, and operational issues associated with it. Perhaps most importantly, once policymakers agree on the nature and scope of intercity passenger railroading in this country, they must be willing to commit public funds on a long-term basis commensurate with that determination.

Expanding passenger rail operations over the nation’s freight rail network involves significant opportunities and challenges. The odds that these challenges can be overcome will be higher if certain principles are followed:

- Safety comes first. Among other things, this means that in some cases — depending on train speeds and frequency, track standards, and other factors — separate tracks for passenger and freight trains might be needed.
- Access and capacity. Passenger rail use of freight rail corridors should not compromise freight railroads’ ability to serve present or future customers.



---

<sup>8</sup> *The Economist*, “High-speed Railroading: America’s System of Rail Freight is the World’s Best. High Speed Passenger Trains Could Ruin It,” July 22, 2010.

- Full compensation. If passenger trains use freight railroad assets or property, the host freight railroads should be fully and fairly compensated.
- Liability protection. Despite railroads' best efforts to prevent them, accidents sometimes do occur. An accident involving passenger trains is far more likely to involve significant casualties than an accident involving only freight trains. Therefore, freight railroads cannot host passenger trains without adequate protection from liability.
- No one-size fits all approach. Each project involving passenger rail on freight-owned corridors has unique challenges and circumstances that must be evaluated on a case-by-case basis.

## **Conclusion**

America's railroads move vast amounts of just about everything, connecting businesses with each other across the country and with markets overseas over a 140,000-mile network. They save their customers billions of dollars each year in shipping costs while reducing pollution, energy consumption, and greenhouse gas emissions; relieving highway congestion; and enhancing safety.

Demand for freight transportation will surge in the years ahead due to population and economic growth. Railroads are the best way to meet this demand. They are safe and getting safer, save fuel, keep trucks off overcrowded highways, and reduce greenhouse gas and other emissions. And they do it while providing affordable, reliable transportation to America's manufacturers, farmers, energy producers, retailers, and consumers.

Railroads are working hard to ensure that adequate capacity exists to meet our future freight transportation needs. Meanwhile, they look forward to continuing to work with members of this committee, others in Congress and the administration, and other policymakers to find effective solutions to the transportation challenges we face.