STATEMENT OF

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BEFORE THE

U.S. SENATE COMMITTEE
ON SCIENCE, COMMERCE, AND TRANSPORTATION

SUBCOMMITTEE ON SURFACE TRANSPORTATION
AND MERCHANT MARINE

HEARING ON

ECONOMICS, SERVICE, AND CAPACITY
IN THE FREIGHT RAILROAD INDUSTRY

JUNE 21, 2006

Introduction

On behalf of the members of the Association of American Railroads (AAR), thank you for the opportunity to discuss freight railroad economics, service, and capacity. AAR members account for the vast majority of freight railroad mileage, employees, and traffic in Canada, Mexico, and the United States.

Comprehensive, reliable, and cost-effective freight railroad service is critical to our nation. Today, freight railroads serve nearly every industrial, wholesale, retail, agricultural, and mineral-based sector of our economy. And in the words of the former World Bank Railways Adviser, "Because of a market-based approach involving minimal government intervention, today's U.S. freight railroads add up to a network that, comparing the total cost to shippers and taxpayers, gives the world's most cost-effective rail freight service."

Looking ahead, the United States cannot prosper in an increasingly competitive global marketplace if our freight railroads are unable to meet our growing transportation needs, and having adequate railroad capacity is critical to meeting those needs. Railroads must be able to both maintain their extensive *existing* infrastructure and equipment and build the substantial *new capacity* that will be required to transport the significant additional traffic our economy will generate.

Although I'm sure that most rail customers agree with this sentiment, not all of them seem to recognize that if they want added rail capacity, they must be willing to pay for it. Unlike utilities, which have peak-demand capacity built into their asset base for ratemaking purposes[1], railroads cannot afford to have spare capacity on hand "just in case." Consequently, before they invest in new capacity, railroads must be confident that traffic and

[1] Some utilities, in fact, receive regulatory permission to begin recouping the costs of new generation assets years *before* those assets actually come on line.

revenue will remain high enough to support the capacity in the long term, and that the investment will produce benefits greater than the scores of alternative uses of the funds.

Profits, therefore, are crucial, as the Congressional Budget Office (CBO) recently noted. According to the CBO, "As demand increases, the railroads' ability to generate profits from which to finance new investments will be critical. Profits are key to increasing capacity because they provide both the incentives and the means to make new investments."[2]

Today, some 25 years after the Staggers Act was passed, freight railroads are finally beginning to show tangible signs that financial sustainability might be within reach. Rail earnings over the past year, while still below average within the universe of all industries, have been significantly higher than their historical norm. This welcome development means that railroads can more easily justify and afford the massive investments and capacity enhancements that will be required if railroads are to continue to play their proper role in meeting our freight transportation needs.

I respectfully suggest that members of this committee, your colleagues in Congress, and other policymakers also have critical roles to play. Indeed, a primary obligation of policymakers is to take steps that assist — and, just as importantly, not take steps that hinder — railroads in making the investments needed to provide the current and future freight transportation capacity our nation requires.

Any policy that unreasonably restricts future rail earnings and capital cost recovery — and especially a swing in the regulatory or legislative environment back to heavy-handed government interference in rail operations — would take railroads away from the sustainability they need. Such an outcome would be harmful at any time, but it would be

[2] Congressional Budget Office, *Freight Rail Transportation: Long-Term Issues* (January 2006), p. 11.

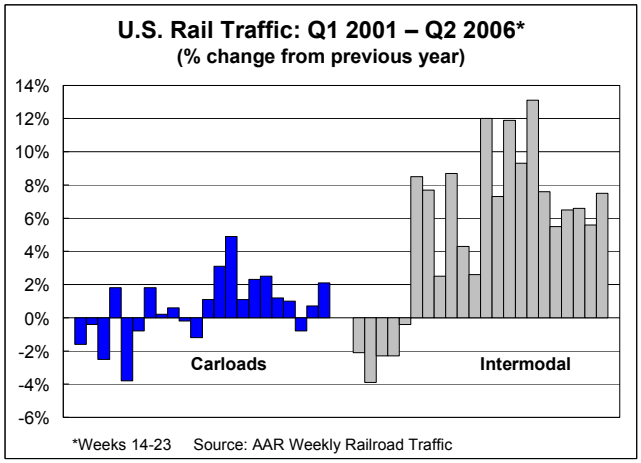
especially harmful today, given that as a nation we are in dire need of *more* railroad investments and *more* railroad capacity, not less.

Capacity is a Challenge Everywhere in Transportation Today

"Every aspect of the supply chain is stretched. It's not a question of whether [a congestion crisis] is going to happen. It's a question of when," notes a West Coast port terminal operator."[3] "In 23 years, I have never seen a situation where the supply chain is at capacity. It's busting at the seams," an executive with a major chemicals firm notes.[4] "Our highways, waterways, railroads and aviation networks are simply not keeping up with ordinary demands," says the head of UPS.[5]

To be sure, freight is still being delivered, and there is a tremendous amount of strength and flexibility in our nation's transportation systems. But as these statements make clear, all freight modes in the United States are facing capacity challenges today.

For U.S. freight railroads, year-over-year quarterly carload traffic has risen in nine of the past ten full quarters, and intermodal traffic has increased in each of the past 16 full quarters, year-over-year. As a result, U.S. railroads today are hauling more freight that ever before. These traffic increases have resulted in capacity constraints and service issues at



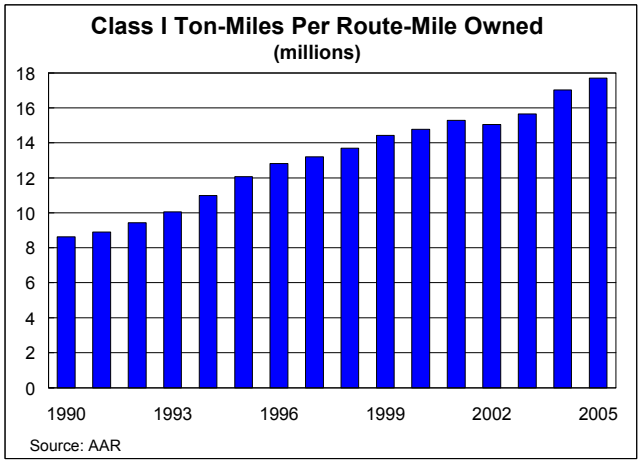
[3] Doug Tilden, CEO, Marine Terminals, quoted in *The Financial Times*, March 14, 2006.

[4] Randy Schaeffer, Manager of Rail Fleet Procurement, Air Products and Chemicals, quoted in *Traffic World*, May 16, 2005.

[5] Michael L. Eskew, Chairman and CEO, UPS, in a speech to the World Affairs Council of Philadelphia, April 6, 2006.

certain junctions and corridors within the rail network. In fact, excess capacity has disappeared from many critical segments of the national rail system.

The reality that rail assets are being used more intensively is reflected in rail traffic density figures. From 1990 to 2005, traffic density for Class I railroads — defined as ton-miles per route-mile owned — more than doubled. (Other measures of traffic density, such as car-miles per mile of track, have also shown substantial increases.) Of course, different rail corridors differ in their traffic density and their change in density over time, and individual railroads differ in the degree to which their capacity is constrained overall. Still, there is no question that there is significantly less room to spare on the U.S. rail network today than there was even a couple of years ago.



Railroads work closely with their customers on a regular basis to determine expected traffic levels well in advance in order to help ensure that the railroads have appropriate assets in place. Sometimes, though — as occurred in 2005 — actual demand for rail service exceeds expectations.

When this has happened, some shippers and others have inappropriately blamed railroads for not having enough infrastructure, workers, or equipment in place to handle the surge in traffic. But to contend that railroads can afford to have significant amounts of spare capacity on hand 'just in case' — or that shippers would be willing to pay for it, or capital providers willing to finance it — is completely unrealistic. Like other companies, railroads

try to build and staff for the business at hand or expected to soon be at hand. "Build it and they will come" has rarely been a winning strategy for freight railroads.

Over the past couple of decades, Class I railroads have shed tens of thousands of miles of marginal trackage. They had no choice, because they could not afford to keep it, and it freed resources for use on higher priority core routes. Most of the miles that were shed were transferred to short-line operators, and most of these remain part of our rail network. Even if railroads could have afforded to retain this mileage — and again, they could not — most of it was in locations that would not be useful in ameliorating today's capacity constraints.

In part, this is because long-lived rail infrastructure installed many decades ago was often designed for types and quantities of traffic, and origin and destination locations, that are dramatically different than those that exist today. For example, only within the last two decades has Powder River Basin coal taken on the enormous importance it currently enjoys. Similarly, the explosive growth of intermodal traffic is mainly a phenomenon of the past 20 years.

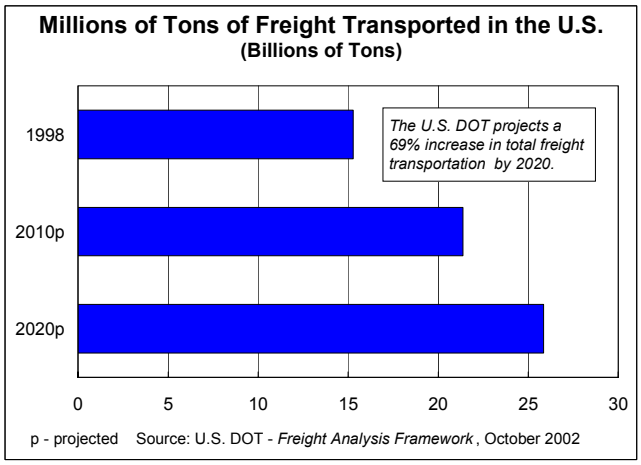
When business is unexpectedly strong, railroads are unable to expand capacity as quickly as they might like. Locomotives, for example, can take a year or more to be delivered following their order; new entry-level employees take six months or more to become hired, trained, and qualified; and it can take a year or more to plan and build, say, a new siding.[6] And, of course, before investments in these types of capacity enhancements are made, railroads must be confident that traffic and revenue levels will remain sufficiently high to justify the enhancements for the long term. Again, in this regard railroads are no different than the vast majority of their customers.

[6] This may seem like a long period of time, but it compares favorably with the decade (or more) it can take to build a typical stretch of highway.

Freight Transportation Demand Will Increase Sharply in the Years Ahead

No matter the mode, capacity constraints exert a substantial economic toll. As Secretary of Transportation Norman Mineta has noted, "Congestion and inefficiency in transportation are, in effect, hidden taxes that burden every business and every individual, and we must find ways to lighten that load." That "load" could become much worse over the next 15 years if demand for freight transportation grows as quickly as expected.

The U.S. Department of Transportation (DOT) has projected that overall demand for freight rail service (measured in tons) will increase 55 percent (1.3 billion tons) by 2020 from 1998 levels, equal to 2.0 percent per year. The DOT projects a 69 percent increase (10.6 billion tons) in total freight transportation demand.[7]



In a 2005 forecast, economic consultants Global Insight predicted that rail carload and intermodal tonnage will increase by 29 percent (650 million tons) from 2004 to 2016, or 2.1 percent per year. Global Insight expects total freight transportation demand to rise 31 percent by 2016.[8]

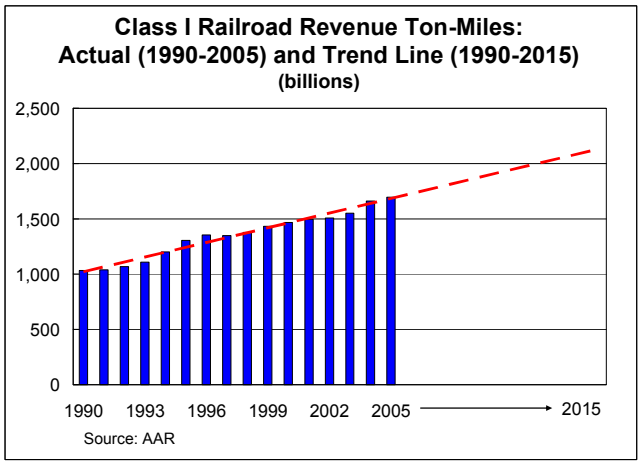
If Class I ton-mile growth from 2005 through 2020 does nothing more than match the rate of growth from 1990 through 2005, rail ton-miles in 2020 will total 2.35 trillion, up 38 percent (or 2.2 percent per year, on average) from the 1.70 trillion in 2005.

These projections for increases in freight transportation demand should give all of us pause. At full or near-full capacity, transport systems become more fragile. With inadequate

[7] U.S. Department of Transportation- *Freight Analysis Framework*, October 2002.

[8] *U.S. Freight Transportation Forecast to 2016*, produced for the American Trucking Associations.

redundancy, there are fewer alternative routes and facilities, breakdowns and back-ups proliferate faster and further, and recovery from disruptions takes longer. Ameliorating capacity constraints across modes will entail significant costs, but in the long run the cost is likely to be far less than if we do not adequately address the issue now.



Railroads Are Working Hard on a Variety of Fronts to Increase Capacity

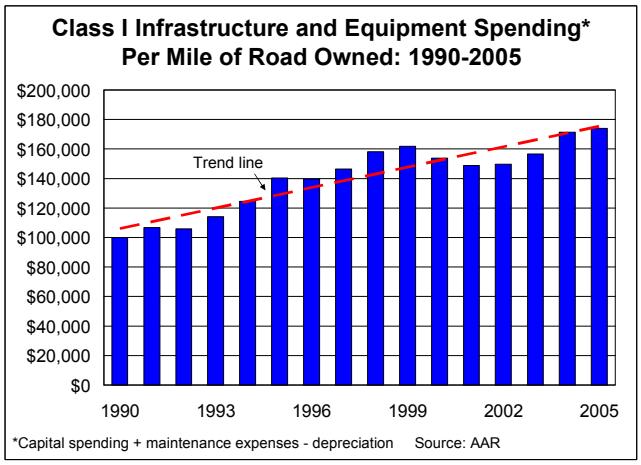
For their part, U.S. freight railroads are well aware that capacity constraints have led to service-related problems on parts of their networks, and they are committed to solving these problems by addressing the host of factors that influence the fluidity and resiliency of freight rail operations.

Spending on Infrastructure and Equipment

Of the many different factors that affect how well a rail network functions, the basic amount and quality of infrastructure and equipment is probably the most important. That is why U.S. freight railroads have been expending, and will continue to expend, enormous resources to improve their asset base. As traffic grows, railroads will have to concentrate increasingly on building new capacity to accommodate that growth — while continuing to maintain existing capacity. But if a railroad is not financially sustainable over the long term, it will not be able to attract the capital necessary to maintain its existing network in top condition, or make additional investments in the replacement or expansion of infrastructure required by growing demand.

This point is especially relevant for railroads relative to other modes. In contrast to the extensive government funding for truck, barge, and airline infrastructure over the past 25 years, freight railroads have historically received little government financial assistance for infrastructure construction or maintenance. Instead, freight railroads have financed infrastructure improvements (and equipment investments, such as locomotives) almost exclusively through their own earnings and by borrowing.[9]

From 1980 through 2005, Class I freight railroads alone invested some $174 billion in capital and maintenance expenses related to infrastructure, and another $183 billion in capital and maintenance expenses related to equipment. (Non-Class I railroads have invested additional billions of dollars.[10]) Class I railroads typically devote approximately 45 percent of their operating revenue, or $15 billion to $17 billion per year, toward these purposes, which have been trending higher since 1990 on a per-mile basis.

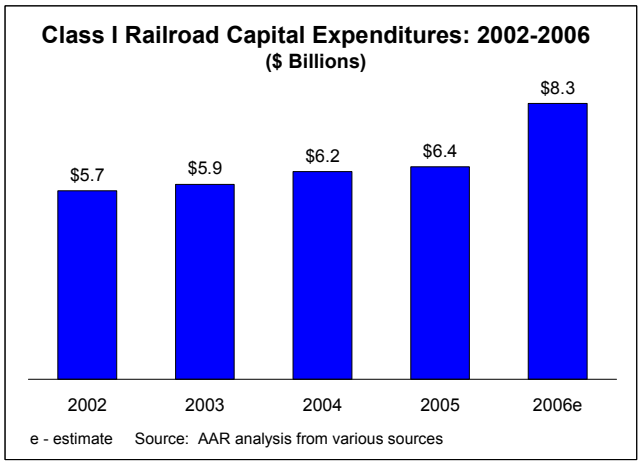


Moreover, rail spending, which is already substantial, is expected to rise sharply. Based on an analysis of recent railroad financial presentations, press releases, and other sources, it appears that Class I capital expenditures on infrastructure and equipment are set to rise in 2006 to around $8.3 billion, up sharply from around $5.7 billion just four years

[9] As discussed beginning on page 26, railroads favor more pronounced use of public-private partnerships for rail infrastructure improvement projects where the fundamental purpose of the project is to provide public benefits or meet public needs, and support tax incentives for rail investments that enhance capacity.

[10] For non-Class I railroads, improving infrastructure to handle 286,000 pound cars is a major issue. The AAR urges Congress to extend the three-year short line infrastructure tax credit, which expires in 2007.

earlier. This huge increase demonstrates the diligence with which railroads are responding to the capacity issue.



The following is just a sampling of the diverse types of capacity-enhancing investments individual railroads have recently made or will soon make:

- BNSF Railway double-tracked 76 miles of main line between Chicago and Los Angeles in 2005, and another 56 miles will be double- or triple-tracked this year. Within a couple of years, the entire 2,200-mile route will be double-tracked. In 2005, BNSF also took delivery of some 400 centerbeam cars (for hauling lumber); 3,700 high-capacity covered hoppers for carrying grain and other commodities; 1,300 rapid-discharge coal cars; and 650 intermodal flatcars with capacity to carry 6,500 intermodal double-stack containers. BNSF also took delivery of 288 new locomotives in 2005 and will add more than 300 more in 2006.
- In 2006, Canadian National will spend $1.2 billion to $1.3 billion on capital programs in the United States and Canada. Included are the reconfiguration of the key Johnston Yard in Memphis, a gateway for CN's rail operations in the Gulf of Mexico region; siding extensions in Western Canada; and investments in CN's Prince Rupert, British Columbia, corridor to capitalize on the Port of Prince Rupert's potential as an important traffic gateway between Asia and the North American heartland.
- In 2005, Canadian Pacific finished its biggest capacity enhancement project in more than 20 years by expanding its network from Canada's Prairie region to the Port of Vancouver. The project increased the capacity of CP's western network by 12 percent and improved the route structure from Canada's Pacific coast to the United States. Like other carriers, CP has added new sidings on congested corridors; taken delivery of dozens of new locomotives and newer, higher-capacity freight cars; and hired and trained hundreds of new employees, many of whom will be in the United States.
- CSX recently announced plans to spend $1.3 billion to $1.4 billion per year on capital expenditures in 2006 and 2007, up from approximately $1 billion over the previous few years. In addition to improvements elsewhere, installation of sidings, signals, and other infrastructure on lines between Chicago and Florida and between New York City and Albany will expand capacity and improve

service reliability. CSX will also add several hundred new locomotives over the next few years.

- Kansas City Southern is busy integrating its Kansas City Southern dé Mexico subsidiary fully into the railroad's other operations. KCS plans to spend some $120 million in the United States and another $96 million in Mexico in 2006. Particular attention will be given to the construction of new tracks and other improvements at the railroad's Shreveport, Louisiana hub; improvements on the "Meridian Speedway" between Shreveport and Meridian, Mississippi to augment the new rails, new sidings, and new drainage system installed in 2005; and the expansion of rail yards, track upgrades, and new sidings on its "Tex-Mex" subsidiary.
- Norfolk Southern (NS) will purchase more than 220 new locomotives from late 2005 through mid-2006 to augment the hundreds purchased over the past few years. NS is also in the midst of its largest-ever locomotive rehabilitation program — in 2005, 491 locomotives were overhauled and 29 were rebuilt; another 420 will be overhauled and 52 rebuilt in 2006. NS is also beginning its "Heartland Corridor" project, which, among other things, will entail raising clearances at 28 tunnels in Virginia, West Virginia, and Kentucky to allow double-stack intermodal service over the entire route from the Port of Norfolk to Columbus, Ohio and Chicago.
- In 2006 alone, Union Pacific will spend some $1.5 billion to replace track and hundreds of millions more to increase fluidity and capacity. Much of UP's current and recent spending is coal-related, including adding a third mainline from Reno to West Nacco on the PRB Joint Line; constructing a third run-through mainline to speed coal trains through North Platte; and a $35 million Marysville, Kansas bypass to expedite PRB coal trains. Another focus of UP's capacity expansion programs for 2006 is its 760-mile Sunset Route between Los Angeles and El Paso. Today, more than 42 percent of the Sunset Route is double tracked, including 69 miles that were completed in 2005 at a cost of some $100 million. UP plans to double track another 50 miles this year and most of the remainder within a few years. Since 2004, Union Pacific has purchased 713 new locomotives and will purchase an additional 200 in 2006.

The massive investments railroads must make in their systems are a reflection of the extreme capital intensity of railroads. By any of a variety of measures, railroads are at or near the top among all U.S. industries in terms of capital intensity.

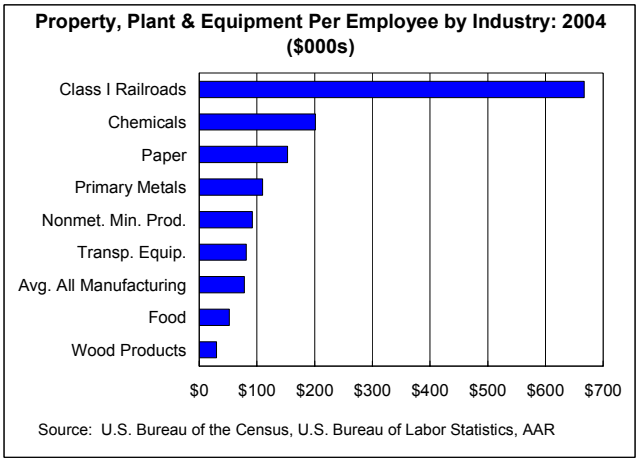
For example, from 1995 to 2004, the average U.S. manufacturer spent 3.5 percent of revenue on capital expenditures. The comparable figure for U.S. freight railroads was 17.8 percent, or more than five times higher. Likewise, in 2004 railroad net investment in plant

and equipment per employee was $667,000 — more than eight times the average for all U.S. manufacturing ($78,000).

Capital Expenditures as a % of Revenue for Various U.S. Industries: Avg. 1995-2004

Average all manufacturing	**3.5%**
Food manufacturing	2.6%
Transportation equip. mfg.	2.8%
Machinery manufacturing	3.0%
Wood product mfg.	3.0%
Petroleum & coal products mfg.	3.0%
Fabricated metal product mfg.	3.5%
Chemicals manufacturing	4.4%
Plastics & rubber products mfg.	4.5%
Paper manufacturing	4.7%
Computer & electr. product mfg.	5.0%
Nonmetallic mineral product mfg.	5.4%
Electric utilities	11.6%
Class I Railroads	**17.8%**

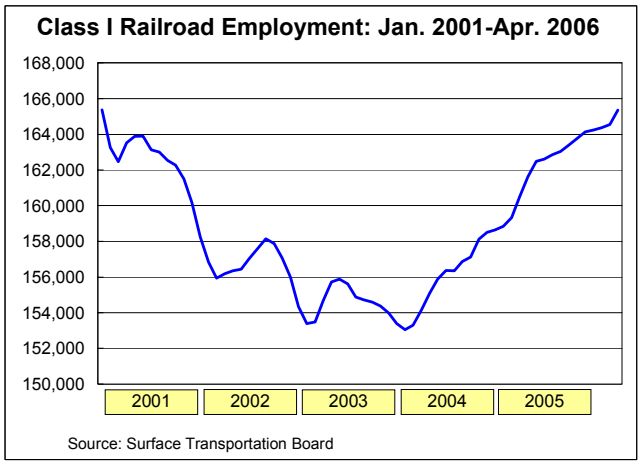
Note: Utilities are 1999-2004
Source: U.S. Bureau of the Census, AAR, EEI



The bottom line is that railroading is extraordinarily expensive, and simply cannot be done "on the cheap." And because when they make major investments, railroads are committing capital to assets that can have a life span of 30 years or more, adding rail capacity can be accompanied by substantial financial risk. That's why railroads, as noted earlier, need to be sure that the market will support additions to capacity over the long-term. As a former NS official remarked in comments to the Transportation Research Board, "Any capacity enhancing project (be it fixed plant or locomotives or cars) has to be compared to all of the other demands on corporate capital and the returns must be attractive. Further, all investments must be consistent with a company's ability to raise capital. However "worthy" a capacity project might be, it must, in the end, lead to improved financial returns."[11]

[11] James McClellan, "Railroad Capacity Issues," background paper for Research to Enhance Rail Network Performance: A Workshop, Transportation Research Board, April 5-6, 2006.

Aggressive Hiring



Rail capacity is a function of personnel in addition to infrastructure, and railroads have been aggressively hiring and training crews to expand capacity. After decades of steady decline, rail employment has been on the increase since 2004. According to STB data, overall Class I employment in April 2006 (the most recent month for which data are available) was 3 percent higher than in April 2005 and 7 percent higher than in April 2004.

Infusion of Technology

Technology has always played a key role in expanding rail capacity. Control systems have become more sophisticated; trains have become longer and heavier; locomotives have become more powerful and more reliable; and track structures have become more robust and thus less prone to outages for maintenance or because of failure.

Many of the dramatic technological advancements that have increased railroad efficiency (and safety) by helping to protect freight cars, locomotives, track, and cargo before damage, costly repairs, traffic holdups, and derailments occur have been developed and/or refined at the Transportation Technology Center Inc. (TTCI) in Pueblo, Colorado, a wholly-owned subsidiary of the AAR that is generally considered to be the finest rail research facility in the world. Just a few of these technological advancements include:

- *Wayside detectors* that identify defects on passing rail cars — including overheated bearings and wheels, dragging hoses, deteriorating bearings, cracked axles and wheels, and excessively high and wide loads — before structural failure or other damage occurs. Some of the newest wayside

detectors being developed use *machine vision* to perform higher-accuracy inspections through the use of digitized images, which are then analyzed using computer algorithms

- Trackside *acoustic detector systems* use "acoustic signatures" to evaluate the sound of internal bearings to identify those likely to fail in the near term. These systems supplement or replace existing systems that identify bearings already in the process of failing by measuring the heat they generate.
- Advanced *track geometry cars* use sophisticated electronic and optical instruments to inspect track conditions, including alignment, gauge, and curvature. TTCI is developing an on-board computer system that provides an even more sophisticated analysis capability of track geometry, predicting the response of freight cars to track geometry deviations. This information will better enable railroads to determine track maintenance needs and help improve the safety of day-to-day rail operations.
- One of the most straightforward ways to add capacity to a rail network is to pack more freight on each train, and railroads have been doing that ever more aggressively. In 1995, for example, the average coal car carried on a Class I railroad held just under 103 tons of coal. By 2005 that figure had risen to nearly 112 tons, a 9 percent increase. But heavier loads are far more damaging to track structures than lighter loads. Researchers at TTCI and elsewhere are engaged in efforts related to this *heavy-axle load* (HAL) service. HAL-related work is underway on rail steels, insulated joints, bridges, welding, maintenance practices, and more.

Freight railroads have always been at the forefront in the use of computers and information technology, and today railroads are rapidly expanding their use of these technologies to improve overall efficiency and the fluidity of their operations, thereby adding capacity without adding infrastructure.

For example, advanced computer modeling software is used in a wide variety of rail applications, from automating rail grinding schedules[12] and improving customer demand forecasting to optimizing yard operations. CN, for example, is implementing what it calls "SmartYard," complex computer software that identifies and analyzes every possible combination and outcome for sequencing cars in a large classification yard and

[12] Rail grinding is a maintenance procedure for removing rail corrugations and surface defects, and for restoring the shape of rail to improve wheel and rail interaction and extend rail life.

simultaneously updates and communicates the car processing plan. The result is more efficient, faster yard operations. Other railroads are engaged in similar efforts.

Recognizing that another way to add capacity is to move more trains faster over the same length of track, railroads are also working with their suppliers to design, implement, and improve innovative computerized "trip planning" systems. These highly-complex systems automatically incorporate and analyze a mix of ever-changing variables (*e.g.*, crew and locomotive availability, terminal congestion, the different priority status of loads of freight, track conditions, maintenance plans, weather, etc.) to optimize how and when cars are assembled to form trains and when those trains depart.

Trip-planning systems are just one way that railroads are trying to improve equipment "cycle time" — *i.e.*, the total time it takes for a freight car to be loaded, hauled to destination, unloaded, returned to the same or a different shipper, and loaded again.

The benefits of increased efficiency explain rail efforts to "supersize," automate, and increase the velocity of traffic flows where practical. For example, railroads and their grain customers collaborate to consolidate grain loading at high-speed "shuttle loader" elevators. Railroads gain by improving the efficiency of their operations; shippers gain because the efficiencies produce railroad cost savings that are passed through in the form of lower rates. The efficiencies of shuttle operations can be striking. At BNSF, for example, a typical grain car in shuttle service hauls approximately three times more grain over the course of a year than a typical grain car in non-shuttle service.

Expanded over a network, operational efficiency can free up substantial capacity for other uses. At one major railroad, for example, a one mile-per-hour increase in system-wide

velocity could mean that 250 locomotives, 5,000 freight cars, and 180 train and engine employees would be freed up to move additional traffic.

Cooperative Alliances and Collaborations

Railroads are also entering into operational alliances with each other which often rely on non-standard techniques to achieve desired results. These innovative collaborations lead to improved capacity utilization, lower costs, and better service. For example:

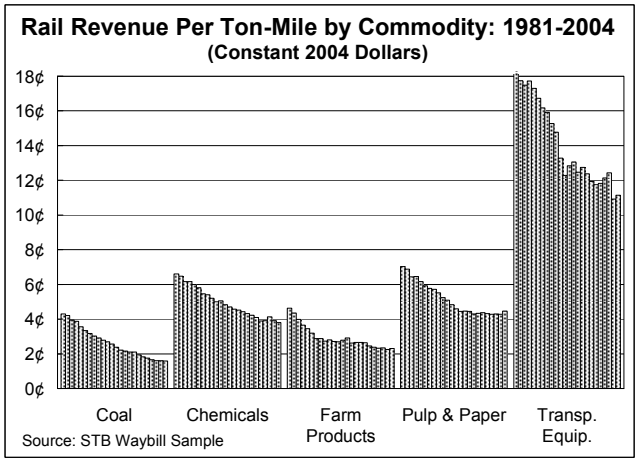
- A recent BNSF and CN track-sharing agreement will improve network fluidity and infrastructure capacity, principally in Vancouver, Chicago, and between Memphis and southern Illinois. Under the agreement, the railroads will exchange track and rail infrastructure, and CN will grant trackage, haulage, and other access rights to BNSF.
- CSX and UP are now operating their "Express Lane" service to haul fruits and vegetables by refrigerated rail car from California and the Pacific Northwest to population centers on the East Coast. UP and CSX also offer a similar "Wine Connection" service for wine movements. These joint ventures improve the utilization of rail assets and enhance the efficiency of coast-to-coast transportation.
- A KCS-NS joint venture will increase capacity and improve service on the "Meridian Speedway," a rail line between Meridian, Mississippi and Shreveport, Louisiana, that is crucial for transporting freight between the Southeast and the Southwest. KCS will contribute a 320-mile rail line between the cities, while NS will invest $300 million in cash, substantially all of which will be used for capital improvements to increase capacity over a four-year period. The capital improvements will include signal systems, extended sidings and stretches of double track.
- UP and CN have reached a routing protocol agreement to streamline their exchange of rail traffic at major gateways and reduce rail congestion in the Chicago area. Under the protocol, CN and UP are directing rail traffic flows through the most efficient interchange locations, thereby improving transit times and asset utilization.
- NS and CP recently began a partnership under which NS runs trains on CP trackage in New York state and then hands off the trains to CP, which hauls them across the border for further interchange or final delivery in Canada. The agreement allows NS to replace the inefficient and circuitous route it previously had to use for trans-border operations. In addition, NS hauls CP trains between other points in New York, thereby allowing CP to improve the efficiency of its own operations.

- UP and CP recently strengthened their alliance at Eastport, Idaho, where CP hands off grain trains to UP for delivery to Pacific Coast ports. Working with customs authorities, the railroads have improved the customs clearance process, eliminating a major bottleneck that had been backing up trains at the border. The result has been a significant decrease in dwell time and a sharp increase in daily train count at the interchange.

Railroad Rate Trends Since Staggers

With passage of the Staggers Rail Act of 1980, U.S. freight railroads were generally freed to price their services in the open marketplace, with government price regulation (which had been pervasive prior to Staggers) remaining only where it was determined that railroads did not face effective competition. Staggers allowed railroads to enter into confidential rate and service contracts with shippers and gave railroads freedom to operate over routes they found to be most efficient. Railroads responded to their new pricing freedoms by sharply increasing productivity and competing more effectively.

Most rail productivity gains have been passed on to shippers in the form of lower rates. In inflation-adjusted terms, rail revenue per ton-mile (RPTM) was relatively flat prior to Staggers, but has fallen 57 percent since then. Similarly large rate reductions have occurred over nearly all commodity types (including coal, agricultural products, and chemicals) and across geographical areas.



RPTM is often used as a surrogate for rail rates because it measures both the actual payments made by rail customers and the bases for which the rates are assessed — weight and distance. Although RPTM can be affected by changes in length of haul, commodity mix, equipment ownership, and other

shipment characteristics, studies that have controlled for such factors have confirmed that the decline in RPTM reflects a real drop in rail rates.

Numerous studies confirm the sharp drop in freight rail rates. For example:

- In September 2004, the U.S. Department of Energy's Energy Information Administration (EIA) released a report on rail rates for coal delivered under contract from 1979 through 2001. The report found that contract rail coal rates peaked in 1984 at $17.52 per ton, then declined by nearly 42 percent, to $10.19 per ton, by 2001. On a revenue per ton-mile basis, the EIA reported that rail rates declined 60 percent in real terms from 1979-2001, compared with a decline in barge coal rates of 38 percent and an increase in truck coal rates of 73 percent over the same period.

  The September 2004 EIA report was an update to a similar October 2000 study covering 1988 to 1997. In that study, the EIA found that "Although the share of coal transported by railroads increased, the average rate per ton to ship contract coal by rail fell steadily (a 25.8 percent decline) during the study period… The general finding of declining rates was also substantiated when the rates were calculated as a rate per ton-mile, a rate per million Btu, or rates between specific supply and demand regions." According to the EIA, on a RPTM basis, the average contract coal rate fell 41.4 percent from 1988 to 1997, and "the decline…was a response to competitive markets."

- In a June 2002 report, the U.S. General Accounting Office (now the Government Accountability Office) released a rail rate analysis covering 1997 to 2000. The GAO found that "From 1997 through 2000, rail rates generally decreased, both nationwide and for many of the specific commodities and markets that we examined." The June 2002 report was an update to a similar April 1999 GAO report covering 1990 to 1996. In the June 2002 study, the GAO noted that "[t]hese decreases followed the general trend we previously reported on for the 1990-1996 period and, as before, tended to reflect cost reductions brought about by continuing productivity gains in the railroad industry that have allowed railroads to reduce rates in order to be competitive."

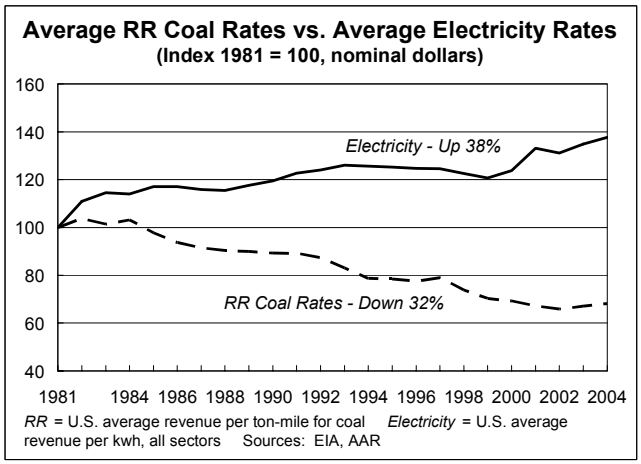
- In December 2000, the Surface Transportation Board (STB) released the latest in a series of periodic reports entitled "Rail Rates Continue Multi-Year Decline." The STB found that "inflation-adjusted rail rates have fallen 45.3 percent" from 1984 to 1999. The STB continued, "[T]he very significant rate reductions…imply that shippers would have paid an additional $31.7 billion for rail service in 1999 if revenue per ton-mile had remained equal to its 1984 inflation-adjusted level. … It is important to note that all types of rail customers, and not just those with competitive transportation alternatives, must have received some portion of the rate reductions we have measured here." The STB also found that "an increase in the average length of haul is not responsible for the preponderance of the rate declines that we have identified.

We find that real railroad revenue per ton has fallen 43.7 percent since 1984, nearly identical to the decline of 45.3 percent obtained when using ton-miles."

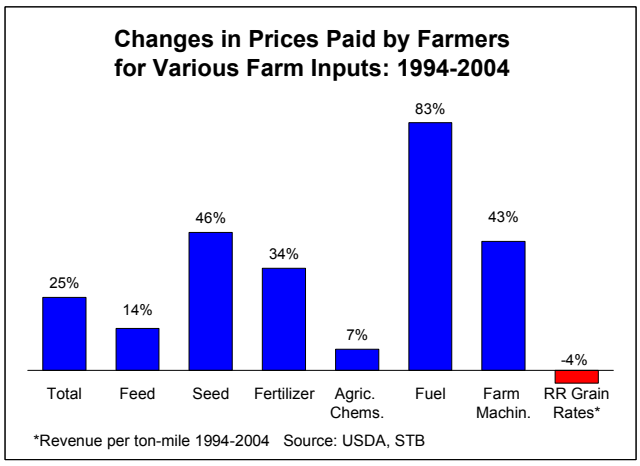
- A study published in September 2000 by scholars at the University of Maryland and The Brookings Institution noted that "[D]eregulation was not just a boon for the rail industry. Shippers benefited too. Based on the first decade of deregulation, one study found that the annual benefits to shippers from lower rates and improvements in service time and reliability amounted to at least $12 billion (1999 dollars). And, … shippers have generally continued to benefit from lower rates."

Competitive rail rates help rail users control the prices of their goods.

For example, from 1981 to 2004, average railroad coal rates (as measured by coal RPTM in nominal terms) fell 32 percent, while average electricity prices rose 38 percent.



Over the same period, rail RPTM for chemicals rose less than 1 percent. During this same period, prices paid by chemical companies for liquefied refinery gases, which are a major chemical industry feedstock, rose 147 percent, while the producer price for chemicals themselves (many chemicals are intermediates for other chemicals) rose 33 percent.



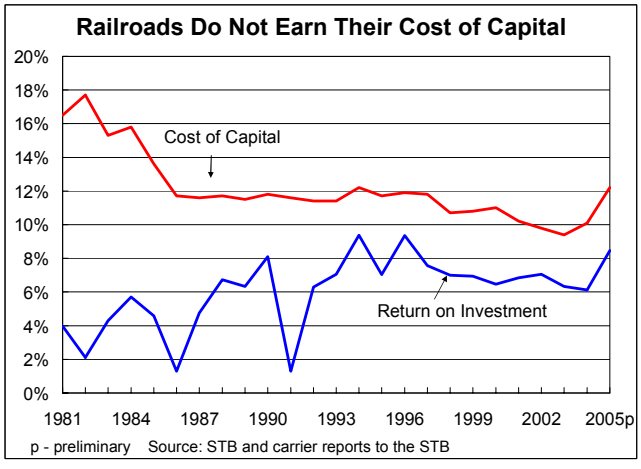
Likewise, from 1994 to 2004, the prices paid by farmers for most farm inputs rose: up 46 percent for seed, up 34 percent for fertilizer, and up 83 percent for fuel. During this same period, the average rail rate

for grain (as measured by grain RPTM) fell 4 percent. Clearly, railroads have been doing their part to help keep U.S. agriculture competitive.

Railroads Must Be Financially Healthy to Expand Capacity

Since Congress passed the Staggers Act, railroads have only slowly made progress toward the goal of long-term financial sustainability. Financial sustainability is essential if railroads are to have any hope of meeting future rail capacity needs.

This slow progress is documented in the STB's annual revenue adequacy determinations. A railroad is "revenue adequate" — *i.e.*, it is earning enough to cover all costs of efficient operation, including a competitive return on invested capital — when its rate of return on net investment (ROI) equals or exceeds the industry's current cost of capital (COC). This standard is widely accepted, approved by the courts, and similar to that used by public utility regulators throughout the country. It is also consistent with the unassailable point that, in our economy, firms and industries must produce sufficient earnings over the long term or capital will not flow to them. As a prominent Wall Street rail analyst recently noted, "Earning the cost of invested capital is not the end goal, but the entry ticket to the race...without which Wall Street will squeeze investment."[13]



During the more than 25 years in which railroad revenue adequacy determinations have been made, railroads have significantly narrowed the COC vs. ROI gap, but a gap still remains.

[13] Anthony Hatch, "Six for 06: Trends To Watch in Rail," *The Journal of Commerce*, January 2006.

Rail customers certainly understand the importance of earning the cost of capital over the long term. A spokesman for a major Florida electric utility noted, "If we can't make an attractive investment for the shareholder, then we are going to have a very difficult time going in the marketplace and competing for dollars."[14] The CFO of a major U.S. chemical company stated, "We want to create spread above the cost of capital through the cycle."[15] And the CEO of a major U.S. forest products company recently stated "Each of our businesses continues to assess the ability of their individual facilities and product lines to earn the cost of capital. Those that cannot make the grade do not belong in our portfolio."[16]

Railroads agree with this sentiment, which is echoed by firms in every sector of the economy. Without the ability to cover total costs and earn adequate returns, railroads — like electric utilities, chemical companies, forest products firms, or any other firm — would be unable to maintain (much less increase investment in) their networks and could not sustain themselves over the long term.

Last month, the Edison Electric Institute (EEI) released a document that defends the sometimes substantial price increases electricity consumers are facing in many parts of the country. EEI writes:

> "Clearly, electricity is an indispensable commodity that is crucial to our daily lives and to our nation's continued economic growth. And the costs needed to reinforce the nation's electric power system are worthy long-term investments. The bottom line is that we are living in a rising cost environment, and electricity prices have been a great deal for many years. Even with expected rate increases, electricity prices are projected to remain below the rate trends of other goods and services. In fact, the national average price for electricity today is significantly less than what it was in 1980, adjusted for inflation.

[14] Spokesman for Florida Power & Light, quoted in *The Palm Beach Post*, January 16, 2005.

[15] Rich Lorraine, SVP and CFO, Eastman Chemical Co., at the Morgan Stanley Basic Materials Conference, February 21, 2006.

[16] Steve Rogel, Chairman, President & CEO, Weyerhaeuser Co., Q4 2005 Weyerhaeuser Co. Earnings Conference Call, February 3, 2006.

> Of course that is small comfort to customers who will be opening costlier electric bills in the coming months. And no one — utility, regulator, or customer — is eager to see electricity prices increase. The unavoidable reality, however, is that we all must address the fact that in order to ensure that electricity remains affordable and reliable, we must help shoulder the expense of reinforcing and upgrading our electricity infrastructure. It is the only way to be certain that electricity will be there when we need it, and at a price we can afford over the long term"[17]

Railroads wholeheartedly agree with this sentiment too. It *is* critical to our nation's economy and standard of living that we upgrade and reinforce our electricity infrastructure.

We also think that EEI's statement above is just as valid, if not more so, if the word "electricity" were changed to "freight railroading." Looking ahead, the United States cannot prosper in an increasingly competitive global marketplace if our freight railroads are unable to meet our growing transportation needs, and having adequate railroad capacity is critical in meeting these needs. Like utilities, railroads must be able to both maintain their extensive existing infrastructure and equipment and build substantial new capacity. Railroads could not do this if their earnings were unreasonably restricted, any more than utilities could.

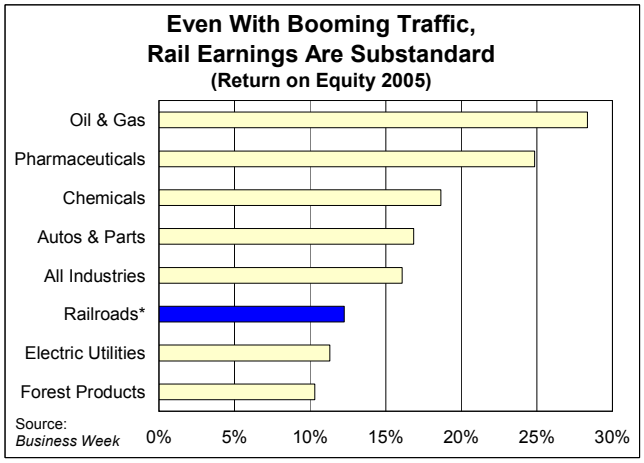
Even in 2005 Railroads Had Substandard Profitability

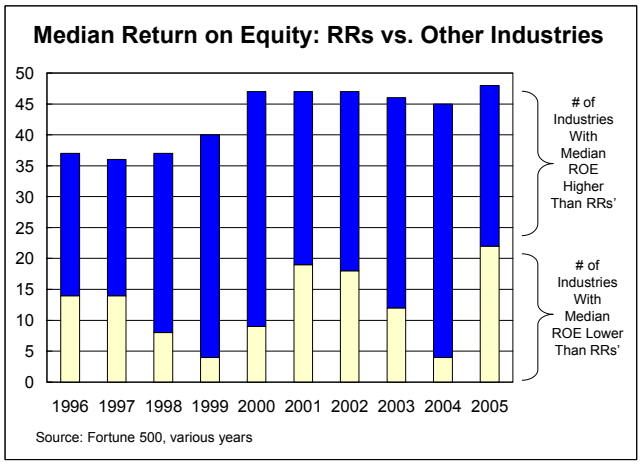
Without question, 2005 was a good year for railroads financially — revenue and net income were both up substantially. Frankly, it's about time the rail industry had a year like 2005, and they require them going forward. Improved rail earnings should be viewed as a welcome development because it means that railroads are better able to justify and afford the massive investments in new capacity and upkeep of their existing systems that need to be made.

[17] EEI, *Rising Electricity Costs: A Challenge For Consumers, Regulators, And Utilities*, May 2006.

That said, no one should get carried away regarding railroads' *relative* profitability in 2005, because the fact is, in 2005 — when railroads were hauling record levels of traffic and had sharply higher-than-historical profitability — rail industry earnings were *still* substandard compared with other industries.

Return on equity (ROE) is commonly used as an indicator of short-term profitability. According to *Business Week* data covering the S&P 500, in 2005 the average ROE for the four largest U.S. railroads was 12.3 percent — a substantial improvement over the 7.8 percent recorded in 2004, but still well below the 16.1 percent average for all firms in the S&P 500 for 2005. The railroad ROE was well below the median for chemical companies in the S&P 500 (18.7 percent) and only moderately higher than the median for electric utilities (10.8 percent) in the S&P 500.





Data from the *Fortune 500* tell a similar story. In 2005, the median ROE for the railroads in the *Fortune 500* was 14.1 percent, less than the *Fortune 500* median of 14.9 percent and well below the ROE of numerous major rail customer groups.[18]

[18] The median railroad ROE for *Business Week* and *Fortune 500* differs because different definitions were used. *Business Week* uses net income excluding discontinued operations; *Fortune* uses net income including discontinued operations. *Business Week* uses average shareholders' equity for a year; *Fortune* uses end-of-year shareholders' equity.

In each of the 20 years from 1986 to 2005, the median ROE for Class I railroads was less than the median for all *Fortune 500* companies, and in 15 of the 20 years, the median railroad ROE was in the lowest quartile among *Fortune 500* industries.

Fortune 500 Return on Equity: 2005

Industry	ROE	Industry	ROE
Household & Personal Prod.	41.5%	Aerospace and Defense	16.3%
Petroleum Refining	25.8%	**Fortune 500 Median**	**14.9%**
Mining, Crude-Oil Prod.	23.6%	Motor Vehicles & Parts	14.6%
Pharmaceuticals	23.4%	**Railroads**	**14.1%**
Food Consumer Products	21.8%	Pipelines	13.5%
Industrial & Farm Equip.	21.1%	Electronics, Electrical Equip.	12.1%
Computers, Office Equip.	19.7%	Engineering, Construction	11.8%
Oil & Gas Equip., Services	18.9%	Utilities: Gas & Electric	10.4%
Metals	18.3%	Energy	7.4%
Chemicals	18.1%	Food Production	6.2%
Medical Products & Equip.	17.3%	Packaging, Containers	4.6%
Beverages	16.4%	Telecommunications	4.2%

Source: Fortune 500

Thus, even the improved rail earnings in 2005 are generally no more than (and in most cases less than) what non-regulated companies and industries earn.

In any case, whatever may be the minimum level of earnings, profitability, or solvency considered adequate to declare a railroad "healthy" for short-term investment purposes, the primary point to remember is that only a return on investment in excess of the cost of capital over a *sustained* period can signify that railroads are financially healthy.

Reregulation is Not the Answer to Railroad Capacity and Service Problems

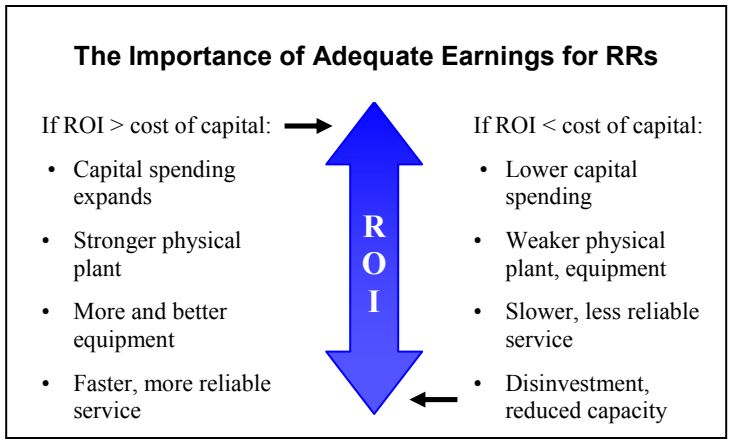
Unfortunately, rail critics have wrongly seized upon railroads' "record profits" in 2005 to support their claims that railroads should be forced to reduce their rates to certain shippers. This viewpoint — that short-term increased railroad profitability to moderate levels justifies a reinstatement of onerous restrictions on rail earnings — is exceedingly shortsighted and should be rejected.

Railroads have had to battle efforts to reregulate the industry since the Staggers Rail Act partially deregulated railroads in 1980. It is beyond the scope of this testimony to discuss

in any detail the many ways in which reregulatory legislation (like S. 919, the "Railroad Competition Act of 2005") is misguided.

It should be noted, though, that the primary objective of those who call for rail reregulation is lower rail rates, even though, as discussed above, railroads are not earning excessive profits. Lower rail rates would translate directly into lower rail earnings. But proponents of reregulation ignore the fact that rail investments in infrastructure and equipment, like most private investment decisions in our economy, are driven by expected returns. The hundreds of billions of dollars invested in U.S. freight railroads since Staggers would not have been provided if not for the investors' expectation that the opportunity for a competitive return promised by Staggers would remain.

Under reregulation, rail managers could not commit, and rail stockholders would not supply, investment capital needed to improve service and expand capacity, because the railroads considering such investments would not have a reasonable opportunity to capture the benefits of those investments. Disaster might not occur overnight, but there would be little or no capacity expansion — something that certainly would have a near-term and significant adverse effect.



The financial community, on whom railroads depend for access to the capital they need to operate and expand, has consistently supported the view that, under reregulation, an era of capital starvation and disinvestment would return. They understand that no law or

regulation can force investors to provide resources to an industry whose returns are lower than the investors can obtain in other markets with comparable risk.

Proponents of reregulation cannot avoid the fundamental fact that shippers must be willing to pay for the rail service and rail capacity they say they need, and the market is far superior to the government in determining who should pay.

Some in the electric power industry are among the most vocal proponents of restrictions on rail earnings. Their advocacy of restrictions on railroads are not consistent with their claims regarding the need for cost-recovery and regulatory certainty in electricity transmission — a sector of the electricity industry with some parallels to railroading.

A representative of the Edison Electric Institute, for example, wrote "I cannot overemphasize the need for FERC to establish and put into effect a durable regulatory framework that says if I prudently invest a dollar in transmission infrastructure, that I will be able to fully recover that dollar, along with my cost of capital, through electricity rates. Such a framework is essential to raising the substantial and nearly unprecedented amount of capital necessary to construct needed, cost-effective transmission facilities."[19]

Likewise, the National Rural Electric Cooperative Association has noted that it "believes that the best way to attract capital to transmission at reasonable rates is to give investors greater certainty that they will receive a return on their investment."[20] The rail industry can think of no better way to create *un*certainty for their own capital providers "that they will receive a return on their investment" than proposals such as S. 919. Such legislation

[19] Statement on behalf of the Edison Electric Institute by Alan J. Fohrer, CEO, Southern California Edison, to FERC, April 22, 2005.

[20] Comments of the National Rural Electric Cooperative Association Proposed Rulemaking Promoting Transmission Investment Through Pricing Reform," FERC Docket No. RM06-4-000, January 11, 2006, p. 17.

is bad economics and bad public policy and should be rejected. It would mean *less* rail capacity when we need *more*.

Public Involvement in Freight Rail Infrastructure Investment

Freight railroads will continue to spend massive amounts to improve and maintain their systems. But even with their improved financial performance, funding constraints will likely prevent railroads from meeting optimal future rail infrastructure investment needs entirely on their own. As AASHTO noted in its *Freight Rail Bottom Line Report*, "The rail industry today is stable, productive, and competitive, with enough business and profit to operate but not to replenish its infrastructure quickly or grow rapidly."[21]

In its analysis, AASHTO estimated that railroads will need to carry an additional 888 million tons of freight annually by 2020 just to maintain their current market share. AASHTO also found that railroads will need $175 billion to $195 billion of infrastructure investment over this period to accommodate this traffic growth, and projected that railroads will be able to fund the majority of this investment — $142 billion — from their own retained earnings and borrowing. Unfortunately, according to the AASHTO analysis, the $142 billion will be enough to enable railroads to handle only half of their expected increase in traffic.

This funding shortfall means that many rail projects that would otherwise expand capacity and improve the ability of our nation's farms, mines, and factories to move their goods to market; speed the flow of imports and exports; relieve highway congestion; reduce pollution; lower highway costs; save fuel; and enhance safety will be delayed — or never made at all.

[21] AASHTO, *Freight Rail Bottom Line Report*, p. 3.

I respectfully suggest that it is in our nation's best interest to ensure that optimal freight railroad capacity enhancements are made. Two ways that policymakers can help make this happen is by taking greater advantage of public-private partnerships for freight-railroad infrastructure projects and by introducing tax incentives for rail infrastructure projects that enhance capacity.

Public participation in freight rail infrastructure projects is justified because the extensive benefits that would accrue to the general public by increasing the use of freight rail would far exceed the costs of public participation. For example:

- *Highway congestion* – Highway congestion costs the U.S. economy more than $63 billion per year, but trying to eliminate it by focusing solely on highways is not practical because building more highways is becoming prohibitively expensive and time-consuming. Given budget constraints, environmental concerns, and other factors, we will be unable to simply build our way out of highway gridlock. Freight railroads, though, significantly reduce the costs of highway congestion and the need to build costly new highways. A single intermodal train takes up to 280 trucks (equivalent to more than 1,100 cars) off our highways. Trains carrying other types of freight take up to 500 trucks (equal to around 2,000 cars) off our highways.
- *Fuel efficiency* – Railroads are three or more times more fuel efficient than trucks. On average, in 2004 railroads moved a ton of freight nearly 410 miles per gallon of fuel. If just 10 percent of the intercity freight that moves by highway moved by rail instead, fuel savings would approach one billion gallons per year.
- *Pollution* – The Environmental Protection Agency (EPA) estimates that for every ton-mile of freight carried, a locomotive emits substantially less nitrogen oxides, particulates, and carbon dioxide than a typical truck.
- *Safety* – Fatality rates associated with intercity trucking are four times those associated with freight rail transportation. Railroads also have lower employee injury rates than other modes of transportation. Railroads and trucks carry roughly equal ton-miles of hazardous materials, but trucks have 16 times more hazmat releases than railroads.

This point was also made by AASTHO, which that "Relatively small public investments in the nation's freight railroads can be leveraged into relatively large benefits for

the nation's highway infrastructure, highway users, and freight shippers."[22] The Congressional Budget Office has also concluded that public investment in rail infrastructure should be considered: "Another way of addressing the underpayment of infrastructure costs by railroads' competitors is to provide financial assistance to the railroads." Echoing AASHTO, CBO observed that, "[p]roviding federal aid for a rail investment might be economically justified if the net social benefits were large but the net private benefits to railroads were insufficient to induce them to make such an investment."[23] The Transportation Research Board has reached a similar conclusion, noting that "Greater public investment to relieve bottlenecks may improve efficiency — perhaps even in facilities that formerly were exclusively private..."[24]

Public-Private Partnerships

As members of this committee know, U.S. freight railroads are, with few exceptions, privately owned and operated, and have traditionally financed their infrastructure investments overwhelmingly through their own earnings and by borrowing from outside capital providers.

Capital providers, however, insist that railroads focus their limited investment funds on projects that promise a direct financial benefit to the investing railroad. While these projects may well provide substantial public benefits — such as reduced highway congestion, cleaner air, improved safety, and enhanced mobility — from a railroad's and capital provider's point of view, these are secondary to the project's financial return. This kind of imposed discipline by the financial markets is necessary and appropriate in a market

[22] AASHTO, *Freight Rail Bottom Line Report*, p. 1.

[23] Congressional Budget Office, *Freight Rail Transportation: Long-Term Issues* (January 2006), p. 22.

[24] Transportation Research Board, *Critical Issues in Transportation* (January 2006), p. 3.

economy, but it discourages investments that would yield significant public benefits but only limited financial benefits to the railroad.

A way to help states and localities improve rail networks that generate public benefits is through a more pronounced use of public-private financing partnerships for rail infrastructure improvement projects. Partnerships are not "subsidies" to railroads. Rather, they are an acknowledgement that private entities should pay for private benefits and public entities should pay for public benefits.

Partnerships reflect the fact that cooperation between interested entities is far more likely to result in timely, meaningful solutions to transportation problems than a go-it-alone approach. Without a partnership, projects that promise substantial public benefits in addition to private benefits are likely to be delayed or never started at all because it would be too difficult for either side to justify the full investment needed to complete them. In contrast, if a public entity shows it is willing to devote public dollars to a project equivalent to the public benefits that will accrue, the private entity is much more likely to provide the private dollars (commensurate with private gains) necessary for the project to proceed.

Going forward, the best-known public-private partnership involving freight railroads is the Chicago Region Environmental and Transportation Efficiency Program, or CREATE. Conceived in June 2003, CREATE is a $1.5 billion program involving the State of Illinois, the City of Chicago, and the major freight and passenger railroads serving Chicago designed to modernize and improve Chicago's highway and rail transportation networks. Installing grade separations between tracks and highways will speed vehicle travel and reduce congestion and delays for motorists; updating track connections and expanding rail routes will reduce rail transit times; and adding separate, passenger-only tracks in key locations will

remove numerous bottlenecks that have slowed passenger and freight movements in the region for decades.

Investment Tax Incentives

Another way to bridge the funding gap between the level of investment that will bring the most benefit to our economy and what railroads are likely to be able to afford on their own is to implement an investment tax credit for rail capacity enhancement projects.

Under an investment tax incentive program for rail infrastructure, projects to *expand* freight rail capacity — by increasing the volume, weight, or speed of freight that can be carried — would be eligible for a 25 percent tax credit. Examples of qualifying capacity-expanding investments include raising tunnel clearances to accommodate double-stacked intermodal containers; upgrading single track lines to double or triple tracks; adding and lengthening sidings; strengthening bridges to carry heavier loads; and constructing intermodal terminals. In addition, new locomotives could also qualify for the credit if they met certain capacity-enhancement and other requirements.

Eligibility for the credit would extend to any taxpayer that makes a qualifying expenditure, not just railroads. For example, a shipper that built a rail spur from a distribution center to a main line would be eligible, as would the builder of a rail intermodal terminal.

Infrastructure capital expenditures that do not qualify for tax incentives would be expensed (the expensing option would not apply to locomotives). This would place capital cost recovery for rail infrastructure on the same basis as competing modes of freight transportation (*i.e.*, highway and waterway), which "expense" their infrastructure costs.

For a railroad considering whether to fund a new infrastructure project, the tax incentive would effectively reduce the cost of the project and thus lower the risk that the

project will not generate the level of return needed to make it economically viable. Thus, the incentive would be enough to help worthwhile projects get built sooner, but would not be enough to cause economically unjustified projects to go forward.

Conclusion

U.S. freight railroads do a remarkable job in meeting the needs of an extremely diverse set of shippers. Railroads move tens of thousands of railcars to and from thousands of origins and destinations every day. The vast majority of these shipments arrive in a timely manner, in good condition, and at rates that shippers elsewhere in the world would love to have.

Still, it is clear that transportation capacity will have to increase as the economy expands. The railroads are committed to meeting these increased capacity needs primarily through private capital, but only if the regulatory structure gives the railroads an incentive to make the necessary investments. Policymakers can help ensure that rail capacity is adequate to meet our future freight transportation needs by ensuring that harmful economic reregulation is not instituted, engaging in more public-private partnerships for rail infrastructure projects, and instituting targeted tax incentives for projects that expand rail capacity.