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ANDERSON ECONOMIC GROUP

The Impact of the Freight Rail Infrastructure Capacity Expansion Act of 2006

Commissioned by:
Citizens for Rail Safety

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I. Executive Summary

PURPOSE OF REPORT

The purpose of this report is to review several aspects of the Freight Rail Infrastructure Capacity Expansion Act (FRICEA). In particular, we:

- Compare the tax environment the rail industry would face under this law to that faced by the trucking and marine shipping industries.
- Analyze the incentives the rail industry would face under this law to purchase capacity- and safety-enhancing capital.
- Identify the likely effect of the law on shipping costs in the rail, trucking, and marine shipping industries.

RAIL INDUSTRY BACKGROUND AND STRUCTURE

The U.S. freight rail industry, which covers over 170,000 miles of track, is dominated by seven "Class I" rail companies, who accounted for $39 billion out of the $42 billion in freight revenue in the industry in 2004. See Table 2, "The Railroad Industry by Classification, 2004," on page 8.

These companies are characterized by several key factors. In general, the companies are:

1. Publicly traded.
2. Capital intensive (spending over 17% of revenue on capital, on average).
3. Increasingly profitable.

The rail industry was deregulated in 1980, which, among other measures, made abandoning under-used rail lines simpler and faster. Since that time, the industry has seen a dramatic change in how it manages its capacity—resulting in tens of thousands of miles of track being abandoned since that time.[1] Despite being profitable and publicly traded, the Congressional Budget Office has identified several disadvantages that the rail industry has in attracting capital compared to other shipping industries. These include:

1. Unlike other shipping industries, the rail industry fully pays for, and bears the risk of owning, the infrastructure it uses.
2. The prices that the rail industry can charge are regulated by the federal Surface Transportation Board.

PROVISIONS OF FRICEA

The individual provisions of FRICEA make two main changes to the tax liability of firms: the addition of a tax credit for "qualified freight rail infrastructure" and "qualified locomotive property," and a change to tax expensing rules.

1. Source: "Abandonment Activity and Shipper Views on Rail Service Loss," General Accounting Office, July 1987.

Tax Credit

FRICEA creates a tax credit worth 25% of the amount a firm spends on:

- Qualified freight rail infrastructure, including track, rail yards, and other infrastructure, as outlined in "Provisions of FRICEA" on page 14 of this report.
- Qualified locomotive property, including locomotives that meet certain environmental standards and which add to the firm's overall locomotive horsepower. See "Tax Credits" on page 14.

Expensing Rules

FRICEA would create new expensing rules allowing the expensing of *all* expenditures on qualified freight rail infrastructure (as outlined in "Tax Credits" on page 14 of this document). This means that, rather than making deductions over time according to a depreciation schedule, firms would be able to deduct the entire amount they spent on qualified items from their income in the year they make the purchase.

Deducting from AMT Liability

The deductions allowed by new expensing rules would be allowed in computing the taxpayer's Alternative Minimum Tax (AMT) liability.

EFFECT OF FRICEA ON THE RAIL INDUSTRY

The incentives provided by FRICEA will affect the behavior of firms in the freight rail industry, with effects on the quantity and types of capacity, safety, prices, and profits. In particular, capacity expansion options that are currently on the margin of being profitable will be pushed into profitability by the tax credit. As discussed in "Likely Effect of FRICEA on Rail Industry" on page 16, there are four main likely effects on the rail industry's behavior:

1. **"Encouraging" investment that would have been made otherwise.** If the demand for freight rail service increases in the coming years, as many expect (see "Rail Industry Background" on page 5), the industry will likely increase capacity somewhat even without the incentives provided by FRICEA. In this way, some of the tax incentives will be used to "encourage" investment that would have happened anyway.
2. **Additional safety-related investment.** Rail industry safety could be enhanced if FRICEA's incentives for investment result in: capacity increases (e.g. additional track or expanded rail yards) along service lines that are currently operating near their safe capacity; or in signal and communication equipment that enhances safety, such as equipment for Positive Train Control.[2] Note that this is

2. Positive Train Control systems (defined by FRA performance standards) are described by the FRA as "integrated command, control, communications, and information systems for controlling train movements with safety, security, precision, and efficiency." Source: http://www.fra.dot.gov/us/content/784

only true in situations where such capacity increases would not have been profitable under current law.

3. **Additional non-safety capacity increases.** Some capacity increases caused by FRICEA would not be on service lines operating near their safe capacity, such as infrastructure and locomotive purchases designed to improve service quality or reliability. Such investments would not necessarily enhance rail safety or reduce prices. Additionally, some investment in freight rail infrastructure may come at the expense of other types of safety-enhancing investment, such as employee training, which does not qualify for the financial incentives in FRICEA.
4. **Additional tax-avoidance investment.** Some infrastructure investments caused by FRICEA will have been made strictly to benefit from the tax credits and expensing rules, with marginal changes to the industry's capacity or safety, or to the industry prices. Allowing infrastructure expensing rules to apply to a firm's AMT liability is particularly likely to encourage tax-avoidance behavior—even by non-rail firms, who could reduce their AMT liability by making qualifying investments. For example, a profitable real estate company that expects to face corporate AMT liability in the near future could, under FRICEA, shelter some of its income from the AMT by temporarily converting some land it plans to develop to a railcar storage yard as a "capacity increasing" investment; leasing the facility to a rail company (regardless of its utility or efficiency); then sharing some of the tax savings with the rail company. See "Tax-avoidance Behavior" on page 16.

EFFECT ON OTHER SHIPPING INDUSTRIES

While FRICEA targets the freight rail industry, it will also affect the incentives of and the business climate faced by other shipping industries, such as the long-haul trucking and marine shipping industries.

Long-Haul Trucking

FRICEA will affect the long-haul trucking industry through its effect on rail industry prices. Where the trucking and freight rail industries directly compete, FRICEA will clearly give the freight rail industry an advantage over the trucking industry. This is especially true in areas where freight rail companies could add infrastructure to create new or increased competition.

Nevertheless, the magnitude of FRICEA's impact on the trucking industry through rail prices is not likely to be great. This is because rail and trucking industries are used differently to optimize their relative strengths, with rail largely carrying large loads cheaply, and trucking carrying more expensive and more time-sensitive loads reliably. Of the billions of dollars of goods that are shipped over billions of ton-miles, only a fraction are subject to direct competition between rail and trucking. Such goods include the most expensive cargo transported by rail and rail intermodal routes, and the least expensive, long haul trucking cargo.[3]

Marine Shipping

Unlike trucking, the marine shipping industry does not compete directly with freight rail. In fact, any increase in the freight rail industry's capacity, efficiency, and safety (to the extent that it reduces delays) is likely to be a boon for the marine shipping industry. This is because goods arriving at U.S. ports in ships need to get to inland customers somehow, and rail (for heavy, non-time-sensitive goods) and trucking (for smaller or more time sensitive goods) is how that occurs. In 2000, 236 billion ton-miles of goods (or 16% of all containerized intermodal freight) were shipped via freight rail using containerized intermodal shipping.[4] Because of this cooperation, the marine shipping industry (including port operators) may themselves be spurred by FRICEA to make more "capacity increasing investments" in intermodal facilities to facilitate increased capacity for the transfer of shipping containers from ships to rail.

3. According to the American Association of State Highway and Transportation Officials, trucks typically carry cargo worth 5-10 cents per pound, compared to around 1 cent per pound for freight rail. Source: "Freight-Rail Bottom Line Report," AASHTO, Figure 9.
4. Source: "Freight-Rail Bottom Line Report," AASHTO, Table 2.

II. Rail Industry Background

PURPOSE OF THIS REPORT

The purpose of this report is to review several aspects of the Freight Rail Infrastructure Capacity Expansion Act (FRICEA). In particular, we:

- Compare the tax environment the rail industry would face under this current environment
- Analyze the incentives the rail industry would face under this law to purchase capacity- and safety-enhancing capital (including areas where rail faces little or no competition)

Identify the likely effect of the law on shipping costs in the rail, trucking, and marine shipping industries.

INDUSTRY OVERVIEW

The rail industry in the United States began in 1827, when the Baltimore & Ohio railroad was chartered. Today the rail industry carries people and goods throughout the entire country. The rail industry is divided into passenger service and freight service. Passenger service is either offered by Amtrak, which is government-owned, or through light/commuter rails in major cities. Some commuter rail systems own the track on which they operate, but most passengers travel on tracks provided by freight railroads.

Despite the rise of air and trucking as alternatives to rail, rail freight remains a billion dollar industry, generating $50.5 billion of gross output in 2004 according to the Bureau of Economic Analysis (BEA). Figure 1, "Historic Gross Domestic Output in Current Dollars for the Rail Sector, 1990-2004," on page 6 shows the trend for the rail sector. Generally, the rail sector exhibits an upward trend over the period. The sector has experienced steady, though modest, growth since 1999.

FIGURE 1. Historic Gross Domestic Output in Current Dollars for the Rail Sector, 1990-2004

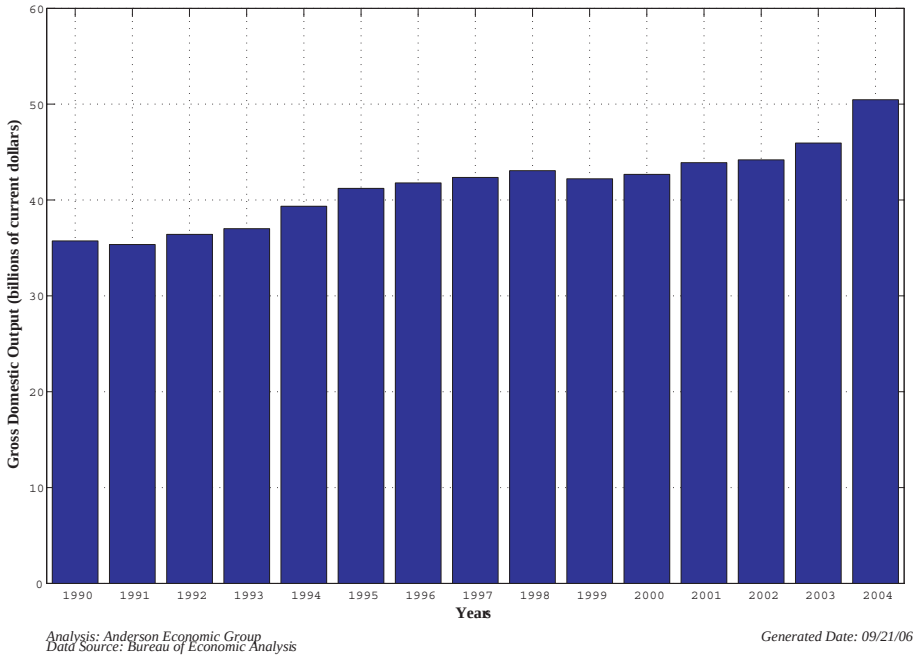


Table 1, "Gross Domestic Output by Mode of Transportation in Current Dollars, 2004," on page 7 compares output by the different modes of transportation. The rail sector lags behind truck transportation, but generates more output than the shipping sector. According to the Bureau of Economic Analysis, total U.S. output increased at an annual rate of 5.62% from 1990 to 2000 and 5.07% from 2001 to 2004. Over the same period, the transportation sector as a whole has not grown at that rapid a rate, and rail transportation grew much more slowly. Comparing annual growth rate from 2001 to 2004 with the ten-year rate, growth in the rail sector has increased from 1.79% to 4.76%. Truck and water transportation both experienced a slow down when comparing the two periods.

TABLE 1. Gross Domestic Output by Mode of Transportation in Current Dollars, 2004

Mode	Gross Output (millions of dollars)	Share of Transportation Output[a]	Share of Total U.S. Gross Output	CAGR* 1990-2000	CAGR* 2001-2004
Rail transportation[b]	50,470	11.2%	0.24%	1.79%	4.76%
Water transportation	32,133	7.1%	0.15%	4.54%	3.74%
Truck transportation	225,057	50.0%	1.05%	6.69%	3.05%
Pipeline transportation	32,149	7.1%	0.15%	2.20%	5.04%
Other	110,255	24.5%	0.24%	6.01%	3.24%

* Compounded Annual Growth Rate

Source: Anderson Economic Group analysis of Bureau of Economic Analysis data

a. Transportation Output excludes "Air" and "Transit and Ground Passenger" transportation, which are not major contributors to U.S. freight by tonnage.

b. Includes passenger rail service; freight rail accounts for over 80% of the gross output for the Rail Transportation industry. See Table 2, "The Railroad Industry by Classification, 2004," on page 8

STRUCTURE OF FREIGHT RAILROADS

By the end of 2004, 558 railroads operated 170,071 miles of road in the United States.[5] The rail industry is segmented into four groups by revenue and route length: "Class I Railroads" each had revenue in excess of $289.4 million in 2004; "Region Railroads" each had routes totaling at least 350 miles in length, and/or revenue between $40 and $289.4 million in 2004; "Local Linehaul carriers" each operated routes totalling less than 350 miles in length, and fell below the revenue threshold for regional railroads; and "Switching and Terminal" railroads generally do not operate rail lines, but provide pickup and delivery services to connect linehaul carriers. Figure 2, "The Railroad Industry by Classification, 2004," on page 8 shows the operating statistics for each of the four groups.

5. Note: Rail "road" can include multiple, parallel tracks on it. For example, a one mile stretch of road that had a double track on it would count as one mile of road, or two miles of track. Source: *U.S. Freight Railroad Statistics*, Association of American Railroads, obtained at http://www.aar.org.

TABLE 2. The Railroad Industry by Classification, 2004

Type of Railroad	Number	Miles Operated*	Employees	Freight Revenue (billions)
Class I	7	97,496	157,699	$39.13
Regional	31	15,641	7,422	$1.41
Local Linehaul	314	20,753	5.349	$0.98
Switching & Terminal	204	6,356	6,429	0.64
Total**	558	140,806	176,899	$42.16

* Excludes trackage rights

** Includes Canadian operations not attributed to a domestic carrier.

Source: Association of American Railroads

In 2005, BNSF Railway, CSX Transportation, Grand Trunk Corporation, Kansas City Southern Railway, Norfolk Southern Combined Railroad Subsidiaries, Soo Line Railroad, and Union Pacific Railroad were Class I Railroads. Coal made up the majority of freight carried for 2005 by the Class I railroads. Coal represented 42.4% of the total weight of all commodities carried by train and 20.1% of gross revenue.[6]

SAFETY

Safety is a very large concern in the rail industry. As railroad expansion rapidly increased through the 1800s, the public became notably concerned about the number of people killed or injured by railroads. Between 1883 and 1892, a total of 5,623 people were killed while 20,445 were injured; over this period nearly one person on average was killed for every million train miles.[7] What followed was a lengthy process establishing rules for safety equipment aboard trains and on tracks and rules regarding employees and safety record-keeping.

Currently, the Federal Railroad Administration (FRA) is responsible for setting and monitoring regulations. Safety data collected by the FRA is exhaustive, tracking injuries to employees, passengers, trespassers, and those involved in rail crossings. According to the FRA, accidents and incidents are any events that involve damage (above a certain threshold), injury, death or illness to any person or railroad employee. These accidents and incidents are divided into three

6. Ibid.
7. The Federal Railroad Safety Program - 100 Years of Safer Railroads, Charles W. McDonald, August 1993.

major categories: train accidents, highway-rail grade crossing incidents, and other incidents.

The most recent data from the FRA is summarized in Table 3, "Historical Safety Record of the Railroads, 2000-2004," on page 10. In total, rail accidents and incidents have experienced a decline over this period. Looking at the safety rate, a measure of how many accidents and incidents occur normalized by time and distance, accidents and incidents have shown a decline every year. In 2004, there were between 11 and 12 accidents or incidents that occurred every million train hours. While the probability of an accident or incident occurring is low, this figure still represents nearly 900 people killed in 2004. This is compared to 22 total people killed in airline accidents and 5,190 people killed in large truck accidents. A more detailed comparison on truck safety versus rail safety is presented in "Rail and Large Truck Safety" on page 11.

Train accidents are defined as safety-related events involving on-track rail equipment. Train accidents have shown a flat trend from 2000 to 2004 and the accident rate remained at approximately 4 accidents per million train miles. Train accidents cause a number of deaths each year, most recently in 2004, 13 people died as a result of a train accident. However, fatalities most frequently occur when trains meet highways. Highway-rail grade crossing incidents occur whenever collisions occur between rail users and highway users. This covers incidents where a public highway, road, street, or private roadway, including associated sidewalks and pathways, crosses one or more railroad tracks at grade, including private rail crossings. For example, a highway-rail incident may occur when a a rail crossing gate fails and a car is hit by a train or when a rail crossing gate is operational but a car chooses to ignore the oncoming train warning. The rate of these incidents has declined steadily, though modestly, from 2000 to 2004. However, 368 people were killed in these incidents in 2004, representing a significant concern for the public and the rail industry.

Finally, there is another category ("Other Incidents") to capture incidents and accidents not associated with trains or crossings. While the number of these train incidents has decreased every year from 2000 to 2004, the severity of these incidents is not decreasing. Injuries and deaths remain high over this period although injuries show a decline. In 2004, 517 people were killed in these other incidents.

TABLE 3. Historical Safety Record of the Railroads, 2000-2004

	2000	2001	2002	2003	2004
GRAND TOTAL[a]					
Accidents/incidents	16,918	16,087	14,404	14,279	14,232
Accident/incident Rate per million train miles	23.40	22.61	19.77	19.20	18.47
Deaths	937	971	951	867	898
Nonfatal conditions	11,643	10,985	11,103	9,180	8,871
TRAIN ACCIDENTS (On-Track Accidents)					
Accident Rate per million train miles	4.13	4.25	3.76	4.03	4.28
Total number	2,983	3,023	2,738	2,997	3,296
Deaths	10	6	15	4	13
Injuries	275	310	1,884	227	229
Collisions	238	220	192	200	237
Derailments	2,112	2,234	1,989	2,114	2,367
HIGHWAY-RAIL (Accidents Between Rail and Highway User)					
Incident Rate per million train miles	4.84	4.55	4.22	4.00	3.98
Incidents	3,502	3,237	3,077	2,977	3,063
Deaths	425	421	357	334	368
Injuries	1,219	1,157	999	1,031	1,081
OTHER INCIDENTS (Including Incidents Involving Trespassers)					
Incidents	10,433	9,827	8,589	8,305	7,873
Deaths	502	544	579	529	517
Injuries	10,149	9,518	8,220	7,922	7,561

Source: Federal Railroad Administration

a. Data on accidents and fatalities involving hazardous materials is collected by the U.S. Department of Transportation in a separate database (the Hazardous Materials Information System), which may not produce data that is directly comparable to those in this table in terms of Accident/Incident Rates. Between 2000 and 2004, there were 4,394 rail incidents involving Hazmats resulting in 7 deaths. Source: Hazardous Materials Information System, U.S. Department of Transportation. Data as of 10/3/2006.

Rail and Large Truck Safety

One major consideration in evaluating the rail industry is how its safety performance compares to other modes of transportation. A strict comparison is difficult to make. For example, the airline industry is remarkably safe, but it carries very little freight over long distances. Any comparison to the rail industry will have air freight appear much safer. This is, however, an unfair comparison as aircraft are not capable of carrying the amount of freight that trains are. A fair comparison could be made with shipping by water, unfortunately the data does not exist to make that comparison. Many activities other than freight are carried out on boats, such as passenger service and fishing, that obscure data on accidents. Therefore, the only useful comparison that can be made is with large trucking. Short haul trucking is not a competitor for rail—rail service is only practical when carrying large loads over longer distances.

A large truck is defined as a truck with a gross vehicle weight rating of 10,001 pounds or more. Table 4, "Comparison of Historical Safety Records from Trains and Large Trucks, 2000-2004," on page 11 gives the safety rates normalized to miles traveled for trains and large trucks. One interesting fact presents itself in this comparison; trains have many more accidents per mile travelled, but trucks are associated with more deaths. In 2004, trains were associated with over 4 accidents per million train miles while large trucks experienced less than 1. However, trains were associated with less than 2 fatalities per hundred million miles traveled in 2004 while large trucks were associated with over 2 fatalities.

TABLE 4. Comparison of Historical Safety Records from Trains and Large Trucks, 2000-2004

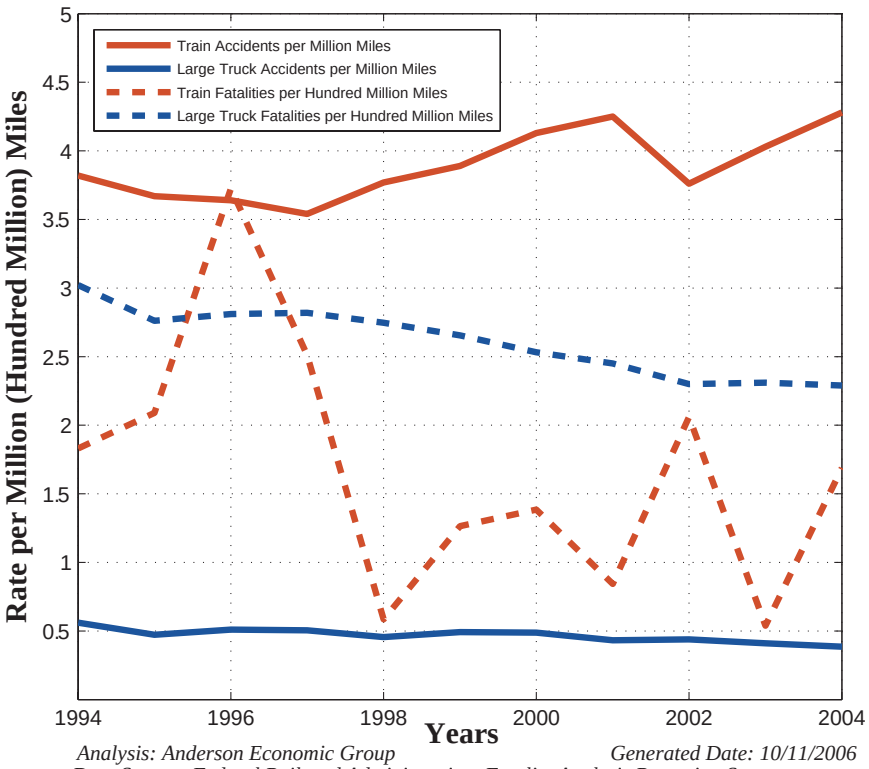
	2000	2001	2002	2003	2004
Train Accidents* per Million Miles	4.13	4.25	3.76	4.03	4.28
Large Truck Accidents per Million Miles	0.49	0.43	0.44	0.41	0.39
Train* Fatality Rate per Hundred Million Miles	1.38	0.84	2.06	0.54	1.69
Large Truck Fatality Rate per Hundred Million Miles	2.53	2.45	2.30	2.31	2.29

* These are accidents associated with train travel alone—excludes other events such as those at railway crossings on highways.

Sources: Federal Railroad Administration, Fatality Analysis Reporting System, Motor Carrier Management Information System

The safety trend of trains and large trucks is also important to consider. Figure 2, "Historical Comparison of Safety Rates for Trains and Large Trucks, 1994-2004," on page 12 gives a graphical representation of the safety rates. The ten-year historical trend shows that large trucks have a very flat safety record with no major improvements, but no large deviations either. The fatality rate is trending downward slightly. Trains, on the other hand, show an increasing trend for accident rates. The fluctuations are quite small, but the rail industry should show a decrease in accidents over time. The fatality rate for trains shows no consistent trend.

FIGURE 2. Historical Comparison of Safety Rates for Trains and Large Trucks, 1994-2004



Analysis: Anderson Economic Group *Generated Date: 10/11/2006*
Data Source: Federal Railroad Administration, Fatality Analysis Reporting System, Motor Carrier Management Information System

CAPACITY, REVENUE, AND PRODUCTIVITY

The rail industry has seen a steady reduction in its capacity, as the miles of rail line in the United States declined from over 200,000 in the 1960's[8] to 121,000 in 2004.[9] This drop in rail mileage was allowed by the Staggers Rail Act of 1980, which allowed rail companies to exert more control over what track they maintain and which areas they serve. Nevertheless, the remaining capacity is much more heavily used: the ton-miles of freight hauled by Class I railroads increased almost every year during that time, more than doubling from 1965-2003. See Table 1, "U.S. Ton-Miles of Rail Freight, 1960-2003," in Appendix B.

8. AASHTO, "Freight Rail Bottom Line Report, Figure 21.
9. Surface Transportation Board, "Statistics of Class I Freight Railroads in the United States 2004," Table 8.

This increase in track usage reflects the rail industry's effort to only maintain capacity where it is used, abandoning track where demand doesn't support its maintenance. Partially as a result of this initiative, but also because of advances in signaling and other technology, the industry's multifactor productivity (which captures both capital and labor productivity) increased fourfold from 1960-1999. See Table 2, "Rail Industry Multifactor Productivity, 1958-1999," in Appendix B.

Despite the rail industry's progress in shedding excess capacity and increasing its productivity, it has not been shielded from the realities of the market. Competition between railroads and from other shipping modes—notably from the long-haul trucking industry—has reduced the industry's revenue per ton-mile. From 1984 to 1999, the industry's revenue per ton-mile (adjusted for inflation) fell by 40%.[10]

INVESTMENT ENVIRONMENT

As demand for freight transportation increases, several widely-cited projections hold that the rail industry will need to increase capacity to keep up—a reversal of the capacity decline since 1980. Nevertheless, there are barriers to investment faced by companies in the industry.[11]

Railroads pay the full cost of their infrastructure, owning, for example, all of the track, signaling equipment, and rail yards required to run their operations. By contrast, the Federal Highway Administration estimates that large trucks pay fewer than 80 percent of the costs associated with their road use.[12] More importantly, most trucks pay for their infrastructure through user fees, while the railroads own theirs outright. This means that while taxpayers bear all of the risk of building infrastructure that ends up being under used, the railroads bear the entire "location risk" of their infrastructure.

10. Surface Transportation Board, "Rail Rates Continue Multi-Year Decline," 2000, as cited in Congressional Budget Office, "Freight Rail Transportation: Long-Term Issues," 2006.
11. "Freight Rail Transportation: Long Term Issues," CBO, January 2006.
12. Table 7 of "Addendum to the 1997 Federal Highway Cost Allocation Study Financial Report," Federal Highway Administration, May 2000.

III. Provisions of FRICEA

The Freight Rail Infrastructure Capacity Expansion Act (FRICEA) would amend the Internal Revenue Code of 1986 to include several tax credits and expensing allowances regarding the purchase of certain freight rail capital. The provisions of the March 20, 2006 draft are detailed below.

TAX CREDITS

FRICEA would add a new section (§45N) to the Internal Revenue Code of 1986. This section would create a tax credit of 25% of the cost of:

1. Qualified freight rail infrastructure property where such property does not currently exist, and
2. Qualified locomotive property

In order to qualify for the credit, the property purchased must be "placed into service during the taxable year." The specific property that qualifies for the tax credit is outlined below.

Freight Rail Infrastructure Property

The rail infrastructure property that qualifies for the tax credit can be separated into several categories.

Facilities. This includes all buildings, yards, and equipment that facilitate the loading, unloading, and operation of freight railroads. Examples include terminals, yards, roadway buildings, fuel stations, and intermodal transfer or transload facilities, including related equipment.

Track and Ways. This category includes all equipment and structures that comprise a train's way between destinations. Examples include track (including subcomponents such as ties and rails), as well as railroad grading, tunnels, culverts, and bridges.

Operating Equipment. Perhaps in recognition that freight rail capacity can be expanded though better use of existing infrastructure, the tax credit also applies to railroad signal, communication, or other operating systems, including such systems installed on locomotives. (This provision seems to include equipment, such as digital communication equipment and GPS receivers, required to implement the "Positive Train Control" system recommended by the National Transportation Safety Board.)[13]

Exclusions. Specifically excluded from the tax credit are land, rolling stock (although locomotives are explicitly included later in the bill, as outlined

13. See the NTSB's recommendation at http://www.ntsb.gov/Recs/mostwanted/positive_train.htm

below), property that is predominantly used outside the United States, and property which is not chargeable to the firm's capital account.

Locomotive Property

In order to qualify for the FRICEA tax credit, a locomotive must meet certain environmental standards. The newly-purchased locomotive also must satisfy the "capacity expansion requirement," which requires that

> "on the last day of the taxable year in which such locomotive is placed in service, the total horsepower of all locomotives owned or leased to the taxpayer exceeds the total horsepower of all locomotives owned by or leased to the taxpayer on the last day of the preceding taxable year."

Freight rail operations sometimes lease rather than own parts of their locomotive fleet. The tax credits in FRICEA are available only to the lessor—provided the capacity expansion requirement, outlined above, is met. A tax payer who purchases locomotives and leases them to a rail operator is not eligible to receive the credit.

EXPENSING RULES

In addition to the tax credits outlined above, FRICEA would change the rules associated with expensing freight rail infrastructure property. Stated simply, the new expensing rules outlined in FRICEA allow the expensing of *all* expenditures on qualified freight rail infrastructure (as outlined in "Tax Credits" on page 14 above). This deduction is allowed in computing the taxpayer's Alternative Minimum Tax (AMT) liability.

IV. Likely Effect of FRICEA on Rail Industry

The Freight Rail Infrastructure Capacity Expansion Act would change the incentives surrounding the freight rail industry—including the creation of perverse incentives that would interfere with rational actions of the industry's main actors.

EFFECT ON INVESTMENT BEHAVIOR

The incentives provided by FRICEA provide a genuine incentive for increased investment in qualified freight rail infrastructure. In particular, infrastructure investments that are not profitable under current law, but would become profitable under FRICEA can be said to be "caused" by the tax incentives and expensing rule changes in FRICEA. Most such investments would increase the industry's capacity, and some would increase the safety of the industry. The main effects on industry investment behavior are described below.

"Encouraging" investment that would have been made otherwise. If the demand for freight rail service increases in the coming years, as many expect (see "Rail Industry Background" on page 5), the industry will likely increase capacity somewhat even without the incentives provided by FRICEA. In this way, some of the tax incentives will be used to "encourage" investment that would have happened anyway.

Additional safety-related investment. Rail industry safety could be enhanced if FRICEA's incentives for investment result in capacity increases (e.g. additional track or expanded rail yards) along service lines that are currently operating near their safe capacity. Note that this is only true in situations where such capacity increases would not have been profitable under current law.

Additional non-safety capacity increases. Some capacity increases caused by FRICEA would not be on service lines operating near their safe capacity, such as infrastructure and locomotive purchases designed to improve service quality or reliability. Such investments would not necessarily enhance rail safety or reduce prices. Additionally, some investment in freight rail infrastructure may come at the expense of other types of safety-enhancing investment, such as employee training, which does not qualify for the financial incentives in FRICEA.

TAX-AVOIDANCE BEHAVIOR

Some infrastructure investments caused by FRICEA will have been made strictly to benefit from the tax credits and expensing rules, with marginal changes to the industry's capacity or safety, or to the industry prices. Allowing infrastructure expensing rules to apply to a firm's AMT liability is particularly likely to encourage tax-avoidance behavior—even by non-rail firms, who could reduce their AMT liability by making qualifying investments. FRICEA would allow two types of tax-avoidance activities:

Inefficient Real Estate Developments. Because FRICEA designates several types of property and facilities as "capacity increasing investments," firms wishing to reduce their tax burden have several options, all involving purchasing such property in a year when they need tax or AMT relief. For example, a profitable real estate company that expects to face corporate AMT liability in the near future could, under FRICEA, shelter some of its income from the AMT by temporarily converting some land it plans to develop to a railcar storage yard as a "capacity increasing" investment; leasing the facility to a rail company (regardless of its utility or efficiency); then sharing some of the tax savings with the rail company.

Inventive Locomotive Arrangements. The provision of FRICEA allowing tax credits for the purchase or lease of a fleet-increasing locomotive allows tax avoidance in several ways. For example, subsidiary firms of rail companies could sell or lease locomotives to each other in ways that allow many of them to have increased their fleet's horsepower—earning a tax credit under FRICEA—while other subsidiaries show a drop in horsepower. Alternatively, non-rail-company investors could purchase locomotives and lease the locomotives to companies needing an AMT exemption (regardless of whether they need more horsepower in their fleet).

PERVERSE INCENTIVES

There are two perverse incentives created by the tax credits present in FRICEA:

"Rational" Contraction Discouraged. Locomotives may be kept in service longer than they would have under current law as a way to make new locomotive purchases increase the company's total horsepower—and thus qualify for a tax credit. In some cases, this would delay rational reductions in the industry's capacity where the firm—and the economy—would better allocate its resources elsewhere, such as during an economic slowdown or when an individual firm is struggling.

Investment Distorted. The credits rewards some types of purchases—many of which are already profitable and would be made without the tax credits—over others that may result in greater safety or service improvements, such as training for employees.

PRICES AND PROFITS

FRICEA will likely result in slightly higher profits for the freight rail industry, but will have a more complex effect on prices.

Freight Rail Industry Profits

While FRICEA gives the freight rail industry financial incentives to increase their capacity, it does not attempt to influence where that capacity is added. Firms in the industry are likely to respond by adding capacity along their most profitable routes, along which they have the most "pricing power." In practice,

this means routes along which the firm faces relatively less competition from other rail companies or from other shipping modes, such as trucking or waterway shipping; and routes on which the firm believes the Surface Transportation Board will allow favorable rates.

Additionally, freight rail firms may increase their profits though careful use of FRICEA's provisions for tax avoidance. For example, firms could accelerate or delay planned infrastructure spending from years when they expect to have low or no tax liability to other years in order to maximize their gain from the tax incentives.

Freight Rail Industry Pricing

As discussed above, the freight rail industry is most likely to add capacity along its most profitable routes, which will often be the routes where they face the least competition and charge the highest prices. Along the routes to which capacity is added, the extra capacity will either result in lower prices or identical prices. In this sense, despite added capacity along high-priced routes, FRICEA is not likely to result in higher prices for existing freight rail customers.

Nevertheless, the result could be higher *average* prices per ton-mile for rail freight than would be the case without FRICEA's passage even though each existing customer is not likely to see rail shipping prices rise. This is because added capacity along higher priced routes (e.g. routes servicing "captive shippers" such as the coal industry who have no plausible alternatives to rail) will result in more higher priced ton-miles included in the average.

V. Likely Effects on Other Shipping Industries

While FRICEA is aimed at increasing capacity in the freight rail industry, it will affect other shipping industries too. This section discusses how FRICEA will affect the trucking and shipping industries both directly and indirectly.

LONG-HAUL TRUCKING INDUSTRY

The incentives in FRICEA will not have a significant impact on the tax burden faced by the long-haul trucking industry. While there is little scope for direct, "capacity increasing" investments in rail infrastructure by the trucking industry, trucking companies would have the option of using FRICEA's provisions for tax avoidance. See "Tax-avoidance Behavior" on page 16.

FRICEA will affect the long-haul trucking industry through its effect on rail industry prices. Where the trucking and freight rail industries directly compete, FRICEA will clearly give the freight rail industry an advantage over the trucking industry. This is especially true in areas where freight rail companies could add infrastructure to create new or increased competition.

Nevertheless, the magnitude of FRICEA's impact on the trucking industry through rail prices is not likely to be great. This is because rail and trucking industries are used differently to optimize their relative strengths, with rail largely carrying large loads cheaply, and trucking carrying more expensive and more time-sensitive loads reliably. Rail companies tend to make longer trips, averaging 617 miles per trip in 2000, compared with 247 for trucking.[14] Furthermore, of the billions of dollars of goods that are shipped over billions ton-miles, only a fraction—the most expensive cargo transported by rail and rail intermodal routes, and the least expensive, long haul trucking cargo—can be considered to be in direct competition.[15] For example, consider that in 2000, 41% of the rail industry's tonnage was coal, which cannot practically be shipped by truck since many coal customers require multiple trainloads of coal per day.[16]

MARINE SHIPPING INDUSTRY

Unlike trucking, the marine shipping industry does not compete directly with freight rail. In fact, any increase in the freight rail industry's capacity, efficiency, and safety (to the extent that it reduces delays) is likely to be a boon for the marine shipping industry. This is because goods arriving at U.S. ports in ships need to get to inland customers somehow, and rail (for heavy, non-time-sensi-

14. Source: "Freight-Rail Bottom Line Report," AASHTO, Figure 10.

15. According to the American Association of State Highway and Transportation Officials, trucks typically carry cargo worth 5-10 cents per pound, compared to around 1 cent per pound for freight rail. Source: Ibid, Figure 9.

16. Ibid., Figure 12.

tive goods) and trucking (for smaller or more time sensitive goods) is how that occurs.

In 2000, 236 billion ton-miles of goods (or 16% of all containerized intermodal freight) were shipped via freight rail using containerized intermodal shipping.[17] Because of this cooperation, the marine shipping industry (including port operators) may themselves be spurred by FRICEA to make more "capacity increasing investments" in intermodal facilities to facilitate increased capacity for the transfer of shipping containers from ships to rail. Marine shipping firms would also be able to use FRICEA's provisions for tax avoidance. See "Tax-avoidance Behavior" on page 16.

17. Source: "Freight-Rail Bottom Line Report," AASHTO, Table 2.

Appendix A: About Anderson Economic Group

Anderson Economic Group, LLC specializes in providing consulting services in economics, finance, public policy, and market assessments. Our approach to work in these fields is based on our core principles of professionalism, integrity, and expertise.

This project was completed under the direction of Patrick L. Anderson, Principal and CEO of Anderson Economic Group, LLC. Alex L. Rosaen, a senior analyst with AEG in the firm's public policy, fiscal, and economic analysis practice area, managed the project and co-authored the report. Brief biographical information of the project team follows.

PATRICK L. ANDERSON

Mr. Anderson, principal and CEO, founded the consulting firm of Anderson Economic Group in 1996. Since founding the firm, he has successfully directed projects for state governments, cities, counties, nonprofit organizations, and corporations in over half of the United States.

Prior to founding Anderson Economic Group, Mr. Anderson served as the chief of staff of the Michigan Department of State, and as a deputy director of the Michigan Department of Management and Budget, where he was involved in the largest state privatization project in U.S. history and the landmark 1994 school finance reform constitutional amendment. Prior to his involvement in state government, Mr. Anderson was an assistant vice president of Alexander Hamilton Life Insurance, an economist for Manufacturers National Bank of Detroit, and a graduate fellow with the Central Intelligence Agency.

Mr. Anderson has written over 100 articles published in periodicals such as *The Wall Street Journal, The Detroit News, The Detroit Free Press, Crain's Detroit Business*. His book *Business Economics and Finance* was published by CRC Press in August 2004, and his paper on "Pocketbook Issues and the Presidency" was awarded the Edmund Mennis Award for best contributed paper in 2004 by the National Association for Business Economics.

He is a graduate of the University of Michigan, where he earned a masters degree in public policy and a bachelors degree in political science.

ALEXANDER L. ROSAEN

Mr. Rosaen is a senior analyst at Anderson Economic Group, working in the public policy and economics practice area. Mr. Rosaen's background is in applied economics and public finance.

Prior to joining Anderson Economic Group, Mr. Rosaen worked for the Office of Retirement Services (part of the Michigan Department of Management and

Budget) for the Benefit Plan Design group. He has also worked as a mechanical engineer for Williams International in Walled Lake, MI.

Mr. Rosaen holds a masters in public policy from the Gerald R. Ford School of Public Policy at the University of Michigan. He also has a masters of science and a bachelors of science in mechanical engineering from the University of Michigan.

CONTRIBUTORS

Nicole Funari. Ms. Funari is a Research Associate at Anderson Economic Group working on economic and financial analyses, business valuation and damage analyses, strategy development, advanced statistical & econometric analysis, and forecasting. Ms. Funari's background is in applied microeconomics and econometrics. She holds a Master's degree in Economics from Michigan State University and Bachelor of Arts degree in Economics and Spanish from the University of North Carolina at Chapel Hill, and is currently working on her Ph.D. in Economics at Michigan State University.

Appendix B. Rail Industry Data

TABLE 1. U.S. Ton-Miles of Rail Freight, 1960-2003

Year	Ton-Miles of Rail Freight (Millions)
1960	572,309
1965	697,878
1970	764,809
1975	754,252
1980	918,958
1985	876,984
1990	1,033,969
1991	1,038,875
1992	1,066,781
1993	1,109,309
1994	1,200,701
1995	1,305,688
1996	1,355,975
1997	1,348,926
1998	1,376,802
1999	1,433,461
2000	1,465,960
2001	1,495,472
2002	1,507,011
2003	1,551,438

Source: Bureau of Transportation Statistics, "National Transportation Statistics 2005," Table 1-46a

TABLE 2. Rail Industry Multifactor Productivity, 1958-1999

Year	Multifactor Productivity (1958 = 100)
1958	100
1960	106
1965	143
1970	156
1975	176
1980	203
1985	261
1990	339
1995	417
1996	432
1997	433
1998	428
1999	441

Source: Bureau of Labor Statistics, Multifactor Productivity Series

Appendix C. FRICEA

The text of the Freight Rail Infrastructure Capacity Act of 2006 follows this page.

109th CONGRESS
2d Session
S. 3742

To amend the Internal Revenue Code of 1986 to provide incentives to encourage investment in the expansion of freight rail infrastructure capacity and to enhance modal tax equity.

IN THE SENATE OF THE UNITED STATES

July 26, 2006

Mr. LOTT (for himself, Mr. CONRAD, Mr. SMITH, Mr. CRAPO, Mr. INOUYE, Mr. HAGEL, Mr. NELSON of Nebraska, Mr. ISAKSON, and Mr. GRAHAM) introduced the following bill; which was read twice and referred to the Committee on Finance

---

A BILL

To amend the Internal Revenue Code of 1986 to provide incentives to encourage investment in the expansion of freight rail infrastructure capacity and to enhance modal tax equity.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the `Freight Rail Infrastructure Capacity Expansion Act of 2006'.

SEC. 2. CREDIT FOR FREIGHT RAIL INFRASTRUCTURE CAPACITY EXPANSION PROPERTY.

(a) In General- Subpart D of part IV of subchapter A of chapter 1 of the Internal Revenue Code of 1986 (relating to business-related credits) is amended by adding at the end the following new section:

`SEC. 45N. FREIGHT RAIL CAPACITY EXPANSION CREDIT.

`(a) General Rule- For purposes of section 38, the freight rail capacity expansion credit determined under this section for the taxable year is an amount equal to 25 percent of the cost of the following property placed in service during the taxable year:

`(1) New qualified freight rail infrastructure property.

`(2) Qualified locomotive property.

`(b) New Qualified Freight Rail Infrastructure Property- For purposes of this section--

`(1) IN GENERAL- The term `new qualified freight rail infrastructure property' means qualified freight rail infrastructure property--

`(A) the construction or erection of which is completed by the taxpayer after the date of the enactment of this section, or

`(B) which is acquired by the taxpayer after such date, but only if the original use of such property commences with the taxpayer.

`(2) EXCEPTION FOR PROPERTY REPLACING PROPERTY AT EXISTING LOCATION- The term `new qualified freight rail infrastructure property' does not include property which is replacing existing property if the property is located at the site of the existing property.

`(3) QUALIFIED FREIGHT RAIL INFRASTRUCTURE PROPERTY-

`(A) IN GENERAL- The term `qualified freight rail infrastructure property' means property used in the movement of freight by rail--

`(i) the cost of which is chargeable to capital account (determined without regard to section 179E), and

`(ii) which constitutes--

`(I) railroad grading or tunnel bore (as defined in section 168(e)(4)),

`(II) tunnels or subways,

`(III) track, including ties, rails, ballast, or other track material,

`(IV) bridges, trestles, culverts, or other elevated or submerged structures,

`(V) terminals, yards, roadway buildings, fuel stations, or railroad wharves or docks, including fixtures attached thereto, and equipment used exclusively therein,

`(VI) railroad signal, communication, or other operating systems, including components of such systems that must be installed on locomotives or other rolling stock, or

`(VII) intermodal transfer or transload facilities or terminals, including fixtures attached thereto, and equipment used exclusively therein.

`(B) EXCLUSIONS- The term `qualified freight rail infrastructure property' shall not include--

`(i) land,

`(ii) rolling stock, including locomotives, or

`(iii) property used predominantly outside the United States, except that this subparagraph shall not apply to any property described in section 168(g)(4).

`(4) LEASED PROPERTY- For purposes of determining whether property subject to a lease is new qualified freight rail infrastructure property, such

property shall be treated as originally placed in service not earlier than the date the property is used under the lease but only if such property is leased within 3 months after the property is placed in service by the lessor.

`(c) Qualified Locomotive Property-

`(1) IN GENERAL- For purposes of this section, the term `qualified locomotive property' means a locomotive which--

`(A) meets the Environmental Protection Agency's emission standards for locomotives and locomotive engines (as in effect on December 31, 2005), and

`(B) is owned by, or leased to, a taxpayer which meets the capacity expansion requirement of paragraph (2) for the taxable year in which the locomotive is placed in service.

`(2) CAPACITY EXPANSION REQUIREMENT- A taxpayer meets the requirements of this paragraph with respect to any locomotive only if, on the last day of the taxable year in which such locomotive is placed in service, the total horsepower of all locomotives owned by, or leased to, the taxpayer exceeds the total horsepower of all locomotives owned by, or leased to, the taxpayer on the last day of the preceding taxable year. A determination under this paragraph shall be made pursuant to such reports as the Secretary, in consultation with the Surface Transportation Board, may prescribe.

`(3) SPECIAL RULES FOR THE LEASING OF LOCOMOTIVES- In the case of the leasing of locomotives--

`(A) only the lessor is eligible for the credit, and

`(B) total horsepower under paragraph (2) shall be determined with respect to all locomotives owned by, or leased to, the lessee.

`(d) Other Definitions and Special Rules-

`(1) DEFINITIONS- For purposes of this section--

`(A) RAILROAD SIGNAL, COMMUNICATION, OR OTHER OPERATING SYSTEM- The term `railroad signal, communication, or other operating system' means an appliance, method, device, or system (including hardware and software) which is used to operate a railroad or to improve safety or capacity of railroad operations, including a signal, an interlocker, an automatic train stop, or a train control or cab-signal device.

`(B) INTERMODAL TRANSFER OR TRANSLOAD FACILITY OR TERMINAL- The term `intermodal transfer or transload facility or terminal' means a facility or terminal primarily utilized in the transfer of freight between rail and any other mode of transportation.

`(2) COORDINATION WITH OTHER CREDITS- The cost of any property taken into account in determining the credit under this section may not be taken into account in determining a credit under any other provision of this title.

`(3) BASIS ADJUSTMENT- If a credit is determined under this section with respect to the cost of any qualified freight rail infrastructure property

or qualified locomotive property, the basis of such property shall be reduced by the amount of the credit so determined.

`(4) RECAPTURE- The benefit of any credit allowable under subsection (a) shall, under regulations prescribed by the Secretary, be recaptured with respect to any qualified locomotive property that is sold or otherwise disposed of by the taxpayer during the 5-year period beginning on the date on which such property is placed in service.

`(e) Termination- This section shall not apply to any property placed in service after December 31, 2011.'.

(b) Credit Allowed as Business Credit- Section 38(b) of the Internal Revenue Code of 1986 (relating to current year business credit) is amended by striking `and' at the end of paragraph (29), by striking the period at the end of paragraph (30) and inserting `, and', and by adding at the end the following new paragraph:

`(31) the freight rail capacity expansion credit determined under section 45N.'.

(c) Coordination With Section 55- Section 38(c)(4)(B) of the Internal Revenue Code of 1986 is amended by striking `and' at the end of clause (i), by striking the period at the end of clause (ii)(II) and inserting `, and', and by adding at the end the following new clause:

`(iii) for taxable years beginning after the date of the enactment of this clause, the credit determined under section 45N.'.

(d) Clerical Amendment- The table of sections for subpart D of part IV of subchapter A of chapter 1 of the Internal Revenue Code of 1986 is amended by inserting after the item relating to section 45M the following new item:

`Sec. 45N. Freight rail capacity expansion credit.'.

SEC. 3. EXPENSING OF FREIGHT RAIL INFRASTRUCTURE PROPERTY.

(a) In General- Part VI of subchapter B of chapter 1 of the Internal Revenue Code of 1986 (relating to itemized deductions for individuals and corporations) is amended by inserting after section 179D the following new section:

`SEC. 179E. ELECTION TO EXPENSE QUALIFIED FREIGHT RAIL INFRASTRUCTURE PROPERTY.

`(a) Allowance of Deduction-

`(1) IN GENERAL- A taxpayer may elect to treat any amount paid or incurred for the acquisition, construction, or erection of qualified freight rail infrastructure property (as defined in section 45N(b)(3)) as an amount not chargeable to capital account. Any amount so treated shall be allowed as a deduction for the taxable year in which such property was placed in service.

`(2) COORDINATION WITH CREDIT- The amount to which the election under paragraph (1) applies with respect to any property shall be

reduced by an amount equal to the amount of any reduction in the basis of the property under section 45N(d)(3).

`(b) Election- An election under subsection (a) shall be made, with respect to each class of property for each taxable year, at such time and in such manner as the Secretary may prescribe by regulation. If a taxpayer makes such an election with respect to any class of property for any taxable year, the election shall apply to all qualified freight rail infrastructure property in such class placed in service during such taxable year. An election under this section shall not affect the character of any property for the purposes of section 45N.

`(c) Deduction Allowed in Computing Minimum Tax- For purposes of determining alternative minimum taxable income under section 55, the deduction under subsection (a) for qualified freight rail infrastructure property shall be determined under this section without regard to any adjustment under section 56.

`(d) Termination- This section shall not apply to any property placed in service after December 31, 2011.'.

(b) Deduction for Capital Expenditures- Section 263(a)(1) of the Internal Revenue Code of 1986 (relating to capital expenditures) is amended by striking `or' at the end of subparagraph (J), by striking the period at the end of subparagraph (K) and inserting `, or' and by adding at the end the following new subparagraph:

`(L) expenditures for which a deduction is allowed under section 179E.'.

(c) Technical and Clerical Amendments-

(1) Section 312(k)(3)(B) of the Internal Revenue Code of 1986 is amended by striking `or 179D' each place it appears in the text or heading thereof and inserting `179D, or 179E'.

(2) Paragraphs (2)(C) and (3)(C) of section 1245(a) of such Code are each amended by inserting `179E,' after `179D,'.

(3) The table of sections for part VI of subchapter B of chapter 1 of such Code is amended by inserting after the item relating to section 179D the following new item:

`Sec. 179E. Election to expense qualified freight rail infrastructure property.'.

SEC. 4. EFFECTIVE DATE.

The amendments made by sections 2 and 3 shall apply to property placed in service after December 31, 2006.