

Amtrak: Overview

Updated September 28, 2017

Congressional Research Service

<https://crsreports.congress.gov>

R44973

Summary

Amtrak is the nation's primary provider of intercity passenger rail service. It was created by Congress in 1970 to preserve some level of intercity passenger rail service while enabling private rail companies to exit the money-losing passenger rail business. It is a quasi-governmental entity, a corporation whose stock is almost entirely owned by the federal government. It runs a deficit each year, and relies on congressional appropriations to continue operations. Amtrak was last authorized in the Passenger Rail Reform and Investment Act of 2015 (Title XI of the Fixing America's Surface Transportation (FAST) Act; P.L. 114-94). That authorization expires at the end of FY2020. Amtrak's annual appropriations do not rely on separate authorization legislation, but authorization legislation does allow Congress to set multiyear Amtrak funding goals and federal intercity passenger rail policies.

Since Amtrak's inception, Congress has been divided on the question of whether it should even exist. Amtrak is regularly criticized for failing to cover its costs. The need for federal financial support is often cited as evidence that passenger rail service is not financially viable, or that Amtrak should yield to private companies that would find ways to provide rail service profitably. Yet it is not clear that a private company could perform the same range of activities better than Amtrak does. Indeed, Amtrak was created because private-sector railroad companies in the United States lost money for decades operating intercity passenger rail service and wished to be relieved of the obligation to do so.

By some measures, Amtrak is performing as well as or better than it ever has in its 47-year history. For example, it is carrying a near-record number of passengers, and its passenger load factor and its operating ratio are at the upper end of their historic ranges. On the other hand, Amtrak's ridership is barely growing at a time when other transportation modes are seeing ridership increases. Amtrak contends that improvements to its infrastructure in the Northeast Corridor (NEC), between Washington, DC, and Boston, would enable it to offer faster and more reliable service and thus boost ridership. However, such improvements are expected to be extremely costly.

Amtrak's ridership may also be hurt by its relatively low on-time performance, which is especially low on routes which use tracks owned by freight railroads. In 2008, Congress tried to put in place measures that could improve Amtrak's on-time performance on these routes, but that effort has been blocked by the courts.

There are perennial calls to privatize Amtrak, but it could be argued that Amtrak is already privatized to a considerable degree. Efforts to create intercity passenger service independently of Amtrak have had limited success.

Several efforts are under way to build high-speed rail lines independent of Amtrak. These include the state-sponsored California High Speed Rail project and private passenger rail initiatives in Florida, Texas, and Nevada. It is unclear whether any of these initiatives, if completed, will ultimately be operated by or have business relationships with Amtrak.

Contents

Overview	1
Funding Issues	2
Authorization Status	3
Ongoing Funding Issues	4
Infrastructure Issues	5
The Northeast Corridor Commission	6
NEC Improvement Plans	6
Amtrak Gateway Program	7
The Northeast Corridor Commission's Capital Investment Plan	8
NEC FUTURE	8
Washington Union Station Redevelopment Proposal	8
Fleet Replacement Strategy	9
Train Station Compliance with Americans with Disabilities Act	10
Positive Train Control Implementation	12
Operational Issues	12
Ridership Levels	12
Operating Efficiency	13
Passenger Load Factor	13
Operating Ratio	14
Amtrak's On-Time Performance	15
Amtrak's Terms of Access to Freight Track	17
PRIIA Initiatives to Improve On-Time Performance	17
Food and Beverage Service	18
Restoration of Amtrak Service Along Gulf Coast	19
Privatization of Intercity Passenger Rail Services	20
All Aboard Florida	21
Texas Central High Speed Railway	22
XpressWest Southern California to Las Vegas	22
California High-Speed Rail Project	23

Figures

Figure 1. Amtrak Passenger Load Factor, 1986-2016	14
Figure 2. Amtrak Ratio of Revenues to Expenses, 1995-2016	15

Tables

Table 1. U.S. Intercity Passenger-Miles by Common Carriers, 2015	1
Table 2. Amtrak Revenues, Expenses, and Federal Support, FY2012-FY2016	2
Table 3. Amtrak Grant Requests, FY2018	3
Table 4. Amtrak Authorized and Appropriated Funding, FY2009-FY2020	4
Table 5. Gateway Program Project Status, August 2017	7
Table 6. Amtrak Ridership, Ticket Revenue, and Average Ticket Price	13

Table 7. Amtrak’s OTP	16
Table 8. Amtrak Food and Beverage Service Revenues and Expenses	19
Table A-1. Federal Funding for Amtrak Since Inception	24

Appendixes

Appendix. Federal Funding for Amtrak	24
--	----

Contacts

Author Information.....	25
-------------------------	----

Overview

Amtrak—officially, the National Railroad Passenger Corporation—is the nation’s primary provider of intercity passenger rail service. Amtrak is structured as a private company, but virtually all its shares are held by the U.S. Department of Transportation (DOT). Amtrak was created by Congress in 1970 to preserve a basic level of intercity passenger rail service, while relieving private railroad companies of the obligation to provide money-losing passenger service. Although created as a for-profit corporation, Amtrak has never made a profit; in this it resembles both the passenger rail experience of the private-sector companies that preceded it and of intercity passenger rail operators in many other countries.¹ During the 47 years from 1971 to 2017, federal assistance to Amtrak amounted to approximately \$81 billion in constant 2017 dollars (see **Appendix, Table A-1**).

Amtrak’s approximately 20,000 employees operate trains and maintain its infrastructure. It carries around 31 million passengers annually, providing slightly less than 1% of total U.S. intercity passenger miles traveled by common carrier (see **Table 1**). The company operates approximately 44 routes over 21,300 miles of track. Most of that track is owned by freight rail companies; Amtrak owns about 625 route miles.² The primary section it owns—most of the Northeast Corridor (NEC)—includes some of the most heavily used segments of track in the nation. Amtrak also operates corridor routes (covering distances under 750 miles) and long-distance routes (over 750 miles in length). Most of its corridor routes are financially supported by states they serve. Amtrak also operates commuter service under contract with state and local commuter authorities in various parts of the country.

Table 1. U.S. Intercity Passenger-Miles by Common Carriers, 2015
(millions)

Common Carriers	Passenger Miles Carried	% of Total
Airlines	641,905	64.7%
Buses	344,073	34.7%
Amtrak	6,536	0.7%
Total	992,515	100.0%

Source: Bureau of Transportation Statistics, *National Transportation Statistics 2017*, Table 1-40.

Notes: Bus figures include transit. Amtrak figures do not include contract commuter passengers.

¹ Railroad finances are sufficiently complex to allow assertions that some railroad companies in some countries sometimes make a profit. Upon examination it turns out that a company may have made an operating profit, typically when counting certain types of government funding as operating revenue and excluding the capital costs of maintaining the infrastructure. High-speed trains are generally considered more profitable than regular trains because their higher level of service allows the charging of higher fares. But the then-president of the International Union of Railways observed in 2009 that while high-speed rail offers a variety of social benefits, it was not a profitable business; he stated that only two routes had ever broken even (covering both their operating and capital costs, including construction costs). Victoria Burnett, “Spain’s High-Speed Rail Offers Guideposts for U.S.,” *New York Times*, May 25, 2009.

² Amtrak, *National Fact Sheet—FY2016*, p. 4, <https://www.amtrak.com/ccurl/372/260/National-Fact-Sheet-FY2016-0717.pdf>.

Funding Issues

Amtrak's expenses exceed its revenues each year. In FY2016, Amtrak's revenues totaled \$3.2 billion, against expenses of \$4.3 billion, for a net loss of \$1.1 billion (see **Table 2**). That loss was covered by federal grants made to Amtrak by DOT. In recent years, Congress has typically divided Amtrak's grant into two categories: operating and capital grants. Roughly, the operating grant could be thought of as relating to Amtrak's annual cash loss, and the capital grant as relating to the depreciation of Amtrak's assets, as well as an amount for Amtrak debt repayments.

Table 2. Amtrak Revenues, Expenses, and Federal Support, FY2012-FY2016

(in millions of nominal dollars)

	FY2012	FY2013	FY2014	FY2015	FY2016
Operating revenue					
Ticket revenue	\$1,968	\$2,056	\$2,147	\$2,124	\$2,136
Food and beverage revenue	122	123	126	132	132
State-supported train revenue	179	187	235	223	227
Total passenger-related revenue	2,269	2,367	2,508	2,479	2,496
Commuter revenue	140	112	119	123	121
Other revenue	434	512	608	556	556
Total revenue	2,844	2,991	3,236	3,157	3,173
Total expenses	4,063	4,204	4,284	4,333	4,243
Net loss	(1,219)	(1,276)	(1,083)	(1,286)	(1,128)
Adjustments	910	934	896	996	946
Adjusted operating loss	(389)	(359)	(189)	(290)	(181)
Federal capital and operating grants	\$1,418	\$1,344	\$1,390	\$1,390	\$1,390

Source: Amtrak, *Monthly Performance Report to Congress*, September, various years, "Consolidated Income Statement for the Year to Date," p. A-4.1. Federal grants taken from annual DOT appropriations reports.

Notes: The net loss includes depreciation (an accounting concept that represents the portion of the value of assets being used up or worn out; it is not a direct cash expense). Depreciation, along with certain other expenses, is removed in the adjustments line to produce the adjusted (net operating) loss. Amtrak notes that the figures in this table are drawn from an income statement that represents the federal support required for Amtrak's operations, and are not calculated according to Generally Accepted Accounting Principles.

Amtrak's federal funding is primarily provided within the DOT's appropriation.³ The Administration requests funding for Amtrak each year as part of its DOT budget request. Amtrak also submits a separate appropriation request directly to Congress each year;⁴ typically, that

³ As a result of a change in the subcommittee structure of the House and Senate Committees on Appropriations in 2006, the DOT appropriation is part of the annual Transportation, Housing and Urban Development, and Related Agencies appropriations act. For the past several years, Amtrak has also received a grant for security activities, in the range of \$25 million annually, in the Department of Homeland Security appropriations act.

⁴ Per 49 U.S.C. §24315(b)(1)(B).

request is larger than the Administration request. **Table 3** shows the difference in the requests that were submitted for FY2016.

Congress changed the structure of federal grants to Amtrak in the Passenger Rail Reform and Investment Act of 2015 (Title XI of the Fixing America's Surface Transportation (FAST) Act; P.L. 114-94). Previously, Congress had divided Amtrak funding into two pots, one for capital expenditures and one for operating costs. Starting in FY2017, the grants are divided between funding for Amtrak's NEC service (which is operationally self-sufficient but has billions of dollars in capital needs) and the rest of Amtrak's network (the National Network, which has modest capital needs but runs an operating deficit of several hundred million dollars). The change is intended to increase transparency of the costs of Amtrak's two major lines of business and eliminate cross-subsidization between them; operating profits from the NEC and state access payments for use of the NEC will be reinvested in that corridor, and passenger revenue, state payments, and federal grants for the National Network will be used for that account.⁵

Table 3. Amtrak Grant Requests, FY2018

(in millions of dollars)

Grants	FY2017 Enacted Grants	FY2018 Administration Budget Request	FY2018 Amtrak Request to Congress
Northeast Corridor	\$328	\$235	\$358
National Network	1,167	525	1,242
Total grants	\$1,495	\$760	\$1,600

Source: U.S. Department of Transportation, *Fiscal Year 2018 Budget Highlights*, p. 23 (https://www.transportation.gov/sites/dot.gov/files/docs/mission/budget/281076/fiscal-year-2018-budget-highlights-book_0.pdf), Amtrak, *General and Legislative Annual Report & Fiscal Year 2018 Budget Request* (<https://www.amtrak.com/ccurl/372/30/Amtrak-FY18-General-Legislative-Annual-Report-FINAL.pdf>).

Notes: Although Amtrak's Inspector General is part of Amtrak, its funding is not included in Amtrak's direct budget request. Congress appropriated \$24 million for the Inspector General in FY2017.

Authorization Status

Amtrak funding was authorized through FY2020 in the Passenger Rail Reform and Investment Act of 2015 (Title XI of the FAST Act, P.L. 114-94). This was the first time that it was included in the larger surface transportation act that authorizes highway and transit programs, fulfilling a longtime goal of Amtrak supporters. Amtrak's funding, however, is still drawn from the general fund, rather than from a transportation trust fund, and therefore it must still compete with other programs in the Transportation, Housing and Urban Development, and Related Agencies appropriations bill under the bill's overall limit on discretionary spending. Amtrak typically is appropriated less funding than is authorized, and funding Amtrak from a transportation trust fund likely would improve the odds that it receives the amount Congress authorized for it, as well as increasing the predictability of its future funding (see discussion of funding stability below).

Table 4 shows the funding authorized and appropriated for Amtrak from FY2009 through FY2020.

⁵ U.S. House of Representatives, H.Rept. 114-30 to accompany H.R. 749, the Passenger Rail Reform and Investment Act of 2015, February 26, 2015, p. 11, <https://www.gpo.gov/fdsys/pkg/CRPT-114hrpt30/pdf/CRPT-114hrpt30.pdf>.

Table 4. Amtrak Authorized and Appropriated Funding, FY2009-FY2020

(in millions of dollars)

Fiscal Year	Authorized Funding (nominal dollars)	Appropriated Funding (nominal dollars)	Appropriated Funding (in 2017 dollars)
2009	\$1,550	\$2,790 ^a	\$3,165 ^a
2010	1,840	1,565	1,749
2011	1,927	1,484	1,623
2012	2,203	1,418	1,519
2013	2,256	1,344	1,419
2014	NA	1,390	1,446
2015	NA	1,390	1,436
2016	1,450	1,390	1,423
2017	1,500	1,495	1,495
2018	1,600	—	—
2019	1,700	—	—
2020	\$1,800	—	—

Source: Authorized funding: P.L. 110-432, Division B, §101-102 & P.L. 114-94, Title XI, §11101. Appropriated funding: Federal Railroad Administration, *FY2018 Budget Estimates*, History of Appropriations, p. 135.

Notes: Appropriated funding does not include funding for Amtrak Inspector General's Office, discretionary grants received under the High Speed and Intercity Passenger Rail grant program under the Federal Railroad Administration (FRA), security grant funding received from the Department of Homeland Security, or \$297 million in emergency funding (FY2013) to repair damage from Hurricane Sandy. Appropriated funding figures for prior years are inflated to 2017 values; see note to **Appendix Table A-1** for method.

a. Includes \$1.3 billion provided in the American Recovery and Reinvestment Act.

Ongoing Funding Issues

Amtrak is able to cover about three-fourths of its total costs from its revenues. That leaves a portion of its operating (i.e., cash) expenses—and virtually all of its capital expenses, including depreciation—to be covered by outside funding, primarily federal funding. The federal grants Amtrak receives have, in recent years, typically been enough to cover its annual losses, with small amounts left over for capital projects. Amtrak reports a backlog of capital maintenance of many billions of dollars, and says this backlog grows larger each year because the amount available for capital expenses is not enough to keep up with maintenance needs.

The stability, or predictability, of Amtrak's federal funding levels is a perennial issue. Roughly one-third of Amtrak's revenue comes from federal funding appropriated on a year-to-year basis by Congress. DOT's Inspector General has noted that the lack of long-term funding "has significantly affected Amtrak's ability to maintain safe and reliable infrastructure and equipment, and increased its capital program's annual cost."⁶

Congressional authorizations for highway and transit programs are typically in the form of special budget authority (contract authority) drawn from a trust fund, which provides more predictable

⁶ Department of Transportation Office of Inspector General, *Amtrak Made Significant Improvements in Its Long-Term Capital Planning Process*, CR-2011-036, January 27, 2011, p. 1, <http://www.oig.dot.gov/library-item/5492>.

funding.⁷ There have been proposals to create a trust fund for Amtrak, in order to provide a greater level of financial stability. Such efforts have faced objections from some Members of Congress opposed to Amtrak receiving federal funding. There is also a practical challenge to identify where the revenues for an Amtrak trust fund would come from. If such a trust fund were to be funded solely from a tax on Amtrak passengers, the tax would need to be roughly two-thirds of the current ticket cost, potentially reducing ridership.

Another potential funding source, the existing Highway Trust Fund, also has challenges, as the revenues flowing into the fund are far below the level required to maintain the existing level of federal highway and transit spending. The Highway Trust Fund has received several transfers of money from the general fund since 2008.⁸

Infrastructure Issues

Amtrak owned no infrastructure at the time of its creation. It was structured as a contracting agency, and Amtrak trains were operated by private railroads over tracks they owned.

Several years later, as Congress was dealing with the bankruptcy of the Penn Central Railroad, Congress decided to give Amtrak much of the trackage owned by the Penn Central in the 450-mile corridor running from Washington, DC, north through Philadelphia and New York City to Boston, along with shorter lines serving Harrisburg, PA, and Springfield, MA. The line running from Washington to Boston, known as the Northeast Corridor (NEC), traverses 8 states and hosts 2,200 daily trains carrying over 800,000 passengers (mostly on commuter trains).⁹ The line includes more than 200 bridges, tunnels dating to the 1870s, and electric traction systems relying on 1930s-era components. While Amtrak owns the vast majority of the right-of-way and track, there are sections owned by state governments and commuter rail agencies. In addition to Amtrak, eight commuter rail agencies operate on the NEC, as well as four freight railroads.

The NEC is Amtrak's flagship corridor, with its fastest service. The premium-fare Acela service attains speeds of up to 125 miles per hour on the southern section between Washington, DC, and New York City, and up to 150 mph on the northern section between New York City and Boston. But those high speeds are possible only in limited stretches: the average speed of the Acela service is around 70 to 80 miles per hour.

Travel time improvements on the NEC likely would be valuable. A 2008 analysis by the DOT Inspector General estimated that reducing the New York-Washington travel time from nearly three to two and a half hours and the New York-Boston travel time from over three and a half to three hours would result in an average of \$500 million in annual benefits (in 2006 dollars).¹⁰ Most of that was estimated to come from air passengers shifting to the train as its travel times shrank.

⁷ During the 2000s, these authorizations were usually described as “guaranteed funding levels,” though the guarantee was not absolute. The mechanism that provided that “guarantee” was changed in the 112th Congress, but having the funding drawn from the trust fund still provides some level of predictability, since there are no competing uses: the funds in the Highway Trust Fund can be used only for highway and transit purposes.

⁸ CRS Report R44674, *Funding and Financing Highways and Public Transportation*, by Robert S. Kirk and William J. Mallett, Table 1.

⁹ Commuter trains represent around 90% of the 2,200 daily trains operating on the Northeast Corridor. Amtrak, *Northeast Corridor Fact Sheet 2017*, p. 2, https://nec.amtrak.com/sites/default/files/NEC%20Fact%20Sheet%202017_Final.pdf.

¹⁰ Department of Transportation Office of Inspector General, *Analysis of the Benefits of High-Speed Rail on the Northeast Corridor*, CC-2008-091, June 26, 2008. The benefits were estimated at \$16.3 billion (in 2006 dollars) over a period of 33 years.

The impact might be less now, as Amtrak's share of the combined air/rail market in the Northeast has increased since that report was written.

The Northeast Corridor Commission

Recognizing that improvements to the NEC would require collaboration between many groups, in the Passenger Rail Investment and Improvement Act of 2008 (PRIIA; Division B, P.L. 110-432)¹¹ Congress directed DOT to create a Northeast Corridor Infrastructure and Operations Advisory Commission. The commission is made up of members from each of the states (including the District of Columbia) traversed by the NEC, plus representatives of DOT, Amtrak, and (as nonvoting members) freight rail companies that operate on the NEC.

The commission's purpose is to promote cooperation and planning for rail operations and improvements on the NEC. Toward this end, the commission has published several reports on the infrastructure needs of the NEC.¹² Also, the commission was directed to develop a formula for determining and allocating costs, revenues, and compensation for NEC commuter rail operators that use Amtrak facilities or services or that provide such facilities or services to Amtrak to ensure there is no cross-subsidization among commuter, intercity, and freight services on the NEC. In January 2015, the commission published a policy to allocate the annual operating costs and normal asset replacement on the NEC. This policy does not address the capital maintenance backlog,¹³ which the commission has estimated at around \$38 billion.¹⁴

NEC Improvement Plans

Portions of the NEC date from before the Civil War. In addition to the advanced age of much of the NEC infrastructure, its alignment was laid out at a time when the top speed of trains was much less than is possible today. These two factors have complicated Amtrak's efforts to improve service on the NEC. Amtrak has identified three general issues:

- a large backlog of capital projects needed to bring the railway to a state of good repair;
- limits on the number of trains that can operate on the NEC, especially due to bottlenecks at tunnels; and
- increasing demands for service, including service by commuter operators.

There are three plans for improvements to the NEC: Amtrak's Gateway Program, a set of projects between Newark, NJ, and New York; the Northeast Corridor Commission's Capital Investment Plan; and the Federal Railroad Administration's (FRA's) NEC FUTURE plan for the entire corridor.

¹¹ Section 212.

¹² Reports available at <http://www.nec-commission.com/resources/documents/#costallocation>.

¹³ Amtrak states that the backlog of capital projects needed to return the NEC to a "state of good repair" "should not be understood as an accumulation of disintegrating or unsafe structures; rather, it is a list of projects that have passed the end of their useful lives but may continue to carry traffic safely, albeit at times with the additional burden of increased maintenance or impacts on reliability and performance." Amtrak, *FY2012-FY2016 Five Year Financial Plan*, January 2012, p. 19.

¹⁴ NEC Commission, *Northeast Corridor Capital Investment Plan, Fiscal Years 2018 to 2022*, May 2017, p. 8, <http://www.nec-commission.com/capital-investment-plan/plan/NEC-Capital-Investment-Plan-18-22.pdf>.

Amtrak Gateway Program

Amtrak says that no further significant expansion of intercity service on the NEC is possible without increasing capacity into and through Manhattan. Also, the reliability of that service is threatened due to the aftereffects of the flooding of the rail tunnel under the Hudson River during Hurricane Sandy in 2012. The Gateway Program is a package of eight projects proposed to increase both reliability and capacity (see **Table 5** for a list of the projects and their status). The centerpiece is a new two-track tunnel under the Hudson River, supplementing the current tunnel. The cost estimates for the entire program of work are in the range of \$24 billion to \$29 billion.¹⁵

Most parts of the Gateway Program are currently in the planning stage. For the Hudson Tunnel project, FRA and New Jersey Transit published a Draft Environmental Impact Statement in July 2017.¹⁶

Table 5. Gateway Program Project Status, August 2017

Project	Status	Estimated Cost
New Hudson River Tunnel and repair of existing tunnel	Draft Environmental Impact Statement published July 2017; in project development for Federal Transit Administration New Starts grant.	\$12.9 billion (\$396 million available) ^a
Portal North Bridge replacement	Design and environmental review completed; in project development for Federal Transit Administration Core Capacity grant.	\$1.7 billion (\$106.5 million available) ^b
Portal South Bridge construction	Environmental approval received in 2011; needs updating.	Not available
Sawtooth Bridge replacement	Design to begin in 2017.	\$1.3 billion ^c
Penn Station (New York City) expansion	Environmental Impact Statement needed. Design not yet begun.	Not available; Amtrak estimated \$1.2 billion for property acquisition
Penn Station (Newark) improvements	In design.	\$163 million (\$33 million available) ^d
Hudson Yard concrete casing	Partly completed; the final portion awaits funding.	\$470 million for the final portion ^e
Secaucus Junction expansion	Funding needed for design.	Not available

Source: CRS.

- a. Cost estimate from *Hudson Tunnel Project Draft Environmental Impact Statement*, “Preferred Alternative Cost,” <http://www.hudson-tunnel-project.com/deis.html>. Available funding figure from Northeast Corridor Commission, *Northeast Corridor One-Year Implementation Plan, Fiscal Year 2017*, September 2016, p. 97, http://www.nec-commission.com/wp-content/uploads/2016/11/FY17-OYIP_FINAL.pdf.
- b. Northeast Corridor Commission, *Northeast Corridor One-Year Implementation Plan, Fiscal Year 2017*, September 2016, p. 98, http://www.nec-commission.com/wp-content/uploads/2016/11/FY17-OYIP_FINAL.pdf.

¹⁵ Amtrak’s most recent cost estimate for the project was \$24 billion, but a recent report on the Hudson Tunnel project included a \$5 billion increase in estimated costs for that portion of the project. Emma G. Fitzsimmons, “Cost of Hudson Tunnel Project Could Hit Nearly \$13 Billion, Report Says,” *New York Times*, July 6, 2017, <https://www.nytimes.com/2017/07/06/nyregion/cost-of-hudson-tunnel-project.html?mcubz=1>.

¹⁶ Federal Railroad Administration, “Notice of Intent to prepare an Environmental Impact Statement,” <http://www.hudson-tunnel-project.com/deis.html>.

- c. Amtrak, *FY2018 Budget Request*, p. 42, <https://www.amtrak.com/ccurl/620/54/Amtrak-FY18-Grant-Legislative-Request.pdf>.
- d. Northeast Corridor Commission, *Northeast Corridor One-Year Implementation Plan, Fiscal Year 2017*, September 2016, p. 100, http://www.nec-commission.com/wp-content/uploads/2016/11/FY17-OYIP_FINAL.pdf.
- e. Amtrak, *FY2018 Budget Request*, p. 41, <https://www.amtrak.com/ccurl/620/54/Amtrak-FY18-Grant-Legislative-Request.pdf>.

The Northeast Corridor Commission's Capital Investment Plan

The commission publishes a five-year investment plan (currently for the period FY2018-2022).¹⁷ The plan identifies the top 10 unfunded priority projects (3 of which are included in Amtrak's Gateway Program); it calculates the state-of-good-repair backlog to be \$38 billion, and calls for \$29 billion in work over the next 5 years to address that backlog, \$19 billion more than the commission sees as being available under current arrangements.

NEC FUTURE

FRA is leading a program called NEC FUTURE, which developed a long-range plan to bring the infrastructure to a state of good repair and make improvements to accommodate faster and more frequent passenger service through the year 2040. Public meetings were held in the fall of 2012, a preliminary alternatives evaluation was published in 2014, and FRA issued a Record of Decision describing the Selected Alternative for development in July 2017.¹⁸

The Selected Alternative includes a range of possible improvements to the NEC, represented at a conceptual level. The estimated cost of these improvements is \$121 billion to \$153 billion (in 2014 dollars).¹⁹ Improvements to the NEC based on this plan will depend on the decisions of Amtrak and commuter railroads and the pertinent states; these entities would be responsible for implementing and securing funding for individual projects. The individual projects will generally require a Tier 2 Environmental Impact Statement as part of their planning and permitting process.

The next step in this long-range planning process is for FRA and the NEC Commission to complete a service development plan, which would prioritize improvements to the NEC.

Washington Union Station Redevelopment Proposal

Union Station in Washington, DC, is the second-busiest station in Amtrak's system, with 100,000 passenger boardings or alightings each day. Amtrak says that the station is operating over its capacity; during rush hours lines of Amtrak passengers waiting to board trains extend beyond the waiting areas, obstructing movement through the station. Also, the tracks and platforms are not in compliance with Americans with Disabilities Act (ADA) requirements or with life safety codes.

Amtrak and the other transportation agencies using Union Station have proposed a redevelopment plan to address these problems.²⁰ The plan envisions 4 phases of construction over a period of roughly 20 years. The first 3 phases, which focus on reconstruction of the station and increasing

¹⁷ <http://www.nec-commission.com/capital-investment-plan/plan/NEC-Capital-Investment-Plan-18-22.pdf>.

¹⁸ Available at <http://www.necfuture.com/>.

¹⁹ Federal Railroad Administration, *NEC FUTURE: A Rail Investment Plan for the Northeast Corridor: Record of Decision*, Table 3-4, July 2017, <http://www.necfuture.com/pdfs/rod/rod.pdf>.

²⁰ Amtrak, *Union Station Master Plan Executive Summary*, July 25, 2012. <http://www.amtrak.com/ccurl/919/171/Washington-Union-Station-Master-Plan-201207.pdf>.

the capacity of the terminal, are estimated to cost around \$7 billion (in 2012 dollars).²¹ While FRA prepares an Environmental Impact Statement for the station reconstruction,²² Amtrak has begun a much more modest \$50 million modernization of its passenger concourse.

Fleet Replacement Strategy

Amtrak owns or leases more than 1,500 passenger cars, almost 400 locomotives, and 25 trainsets (in which locomotives and passenger cars stay together in a unit).²³ The average age of Amtrak's passenger car equipment in 2015 was almost 31 years, the highest figure in its history, and considerably older than the average age (22 years) of the equipment it inherited from the private railroads in 1971.²⁴

In 2017, Amtrak finished replacing aging locomotives used on the NEC with 70 new electric locomotives from Siemens at a cost of \$466 million. This is intended to increase the reliability of the NEC fleet. The purchase was financed by a \$563 million loan from FRA under the Railroad Rehabilitation and Improvement Financing (RRIF) program (45 U.S.C. §821); that loan was paid off with part of the proceeds of a much larger RRIF loan to Amtrak in 2016. The primary purpose of that loan, for \$2.45 billion, is the purchase of 28 Acela trainsets.²⁵

Amtrak's plan to replace equipment used in parts of its network other than the NEC was published in 2012. At that time, Amtrak planned to purchase about 700 new single-level passenger cars between 2016 and 2022 (ordering about 100 per year) and about 500 bi-level cars between 2018 and 2022 (also ordering 100 per year).²⁶ In its 2018 budget request, Amtrak notes that the funding needed to implement that fleet replacement plan was not received; "Absent a new approach to funding the capital investment needs of intercity rail passenger service, the lack of adequate capital investment in fleet will at some point become a significant, perhaps the most significant factor, in what services are provided."²⁷

Amtrak ordered 130 cars for long-distance trains at a cost of \$298 million from CAF USA for delivery in 2013-2015.²⁸ That schedule was missed. The current schedule has deliveries through 2020.²⁹

²¹ "... the full realization of Phase 4 is not included in the cost estimate included in this report ..."; *ibid.*, p. 23.

²² Federal Railroad Administration, *Washington Union Station Expansion Project*, <https://www.fra.dot.gov/Page/P0866>.

²³ This does not include equipment owned by states and operated by Amtrak.

²⁴ Bureau of Transportation Statistics, *National Transportation Statistics 2017*, Table 1-33: Age and Availability of Amtrak Locomotive and Car Fleets, https://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national_transportation_statistics/html/table_01_33.html.

²⁵ Amtrak, *Consolidated Financial Statements for Years Ended September 30, 2016 and 2105*, p. 24. Amtrak expects to repay the loan through the increased ticket sales that the more reliable equipment will make possible. Congressional appropriators have encouraged Amtrak to use RRIF loans, rather than seek private financing, as private lenders would charge a higher rate—the repayment of which might have to come from taxpayers. Also, use of RRIF loans enables DOT to more closely oversee implementation of the fleet plan. United States Senate, Committee on Appropriations, S.Rept. 112-83, September 21, 2011, p. 70.

²⁶ According to *Amtrak Fleet Strategy, version 3.1*, dated March 2012; <http://www.amtrak.com/ccurl/36/921/2012-Amtrak-Fleet-Strategy-v3.1-%2003-29-12.pdf>.

²⁷ Amtrak, *General and Legislative Annual Report & Fiscal Year 2018 Budget Request*, p. 17, <https://www.amtrak.com/ccurl/372/30/Amtrak-FY18-General-Legislative-Annual-Report-FINAL.pdf>.

²⁸ Amtrak press release, July 23, 2010, no. ATK-10-101.

²⁹ The 130 cars represent 4 groups. The largest, 70 baggage cars, have been delivered and are in service. Of the 25 dining cars, 8 have been delivered. After that group is fully delivered, CAF will deliver 25 sleeping cars, and finally 10

Fleet replacement raises several oversight issues for Congress, including the following:

- **High costs due to lack of scale economies.** Amtrak does not purchase enough equipment with enough frequency to establish a robust domestic manufacturing base. Section 305 of PRIIA attempted to address that by creating a mechanism to create standardized passenger railcar designs. The intent of this provision was to achieve economies of scale not only in the cars' manufacture, but also in repair and parts replacement. However, there is a risk that equipment standardization could retard development of innovative car designs and dampen competition among manufacturers.
- **Lack of import competition.** By law, passenger rail equipment must abide by certain domestic manufacturing requirements.³⁰ Also, FRA safety standards put greater emphasis on crash survivability than crash avoidance compared to foreign standards. The need for bulkheads at the ends of cars generally makes U.S. equipment much heavier than foreign equipment, meaning that foreign car designs cannot simply be produced in U.S. plants. This likely increases Amtrak's cost to acquire equipment.³¹
- **Equipment lease arrangements.** Much of Amtrak's rolling stock is owned by banks that can claim tax benefits (depreciation) while Amtrak rents the equipment from them. In Section 205 of PRIIA, Congress authorized the Secretary of the Treasury, in consultation with Amtrak and the Secretary of Transportation, to restructure Amtrak's capital leases. This authorization expired in October 2010. Under this authority, Amtrak restructured 13 capital leases, including sale and lease-back arrangements for its locomotive and passenger car fleet, at a cost of \$420 million, but with ultimate savings of \$152 million. The Amtrak Inspector General reported that 39 additional capital leases that could result in savings of \$426 million, at a cost of \$638 million, are still available if Congress were to extend the authorization to negotiate early buyout options.³² Also, it is unclear how well the remaining economic life of Amtrak's equipment corresponds with the length of its lease agreements, and therefore whether the lease agreements interfere with fleet replacement plans.

Train Station Compliance with Americans with Disabilities Act

The Americans with Disabilities Act of 1990 (ADA) required that intercity passenger rail stations be made usable by persons with disabilities no later than 2010.³³ PRIIA directed Amtrak to produce a schedule for bringing all stations into compliance by the 2010 deadline.³⁴ The

baggage-dorm cars. The last delivery is expected by December 2020. Source: personal communication from Amtrak.

³⁰ Amtrak is subject to a Buy America preference under 49 U.S.C. §24305(f), while purchases made by FRA fall under the Buy America preference at 49 U.S.C. §24405(a).

³¹ Amtrak said in 2013 it would seek a change in FRA's structural strength rules. Angela Greiling Keane, "Amtrak Seeks Safety Changes to Allow U.S. Bullet Trains," Bloomberg News, January 2, 2013, <http://mobile.bloomberg.com/news/2013-01-02/amtrak-seeks-safety-changes-to-allow-u-s-bullet-trains.html>.

³² Amtrak Office of Inspector General, *Passenger Rail Investment and Improvement Act of 2008: Amtrak Has Made Good Progress, but Continued Commitment Needed to Fully Address Provisions*, Report No. OIG-A-2012-001, October 26, 2011, pp. 7-9. See Amtrak's annual report and business plan reports for further details on leased rolling stock and early buyout transactions.

³³ 42 U.S.C. §12162(e)(2)(A)(ii)(I).

³⁴ P.L. 110-432, Division B, §219.

legislation did not provide any specific funding for this purpose, authorizing “such sums as may be necessary” for the improvements.

Amtrak’s 2009 schedule for achieving full compliance estimated that it would take until 2015, 5 years past the statutory deadline, and cost \$1.564 billion. According to Amtrak, a subsequent DOT rule on ADA compliance,³⁵ issued in 2011, significantly delayed its plans for making its stations ADA-compliant because “in order to ascertain whether a level boarding platform is required, a freight usage determination must first be made for every track adjacent to every platform at each station.”³⁶ In 2015, the Department of Justice found that Amtrak had violated the ADA by failing to make stations accessible.³⁷ The department also found that Amtrak had incorrectly classified some stations as “flag stop” stations in an attempt to avoid having to make those stations accessible.

As of March 2017, Amtrak had determined that it had 517 stations, of which 512 were required to be ADA-accessible.³⁸ Of those 512, Amtrak had determined that its responsibilities were

- sole ADA responsibility for 138 stations;
- shared ADA responsibility for 246 stations; and
- no ADA responsibility for 128 stations.

Thus, Amtrak had sole or shared responsibility for 384 stations. Of those, the following work tasks had been completed:

- land survey: 368
- ADA assessment: 301
- design: 99
- construction awarded: 83
- construction complete: 57³⁹

The basic challenge in making Amtrak trains accessible to individuals with disabilities is that the boarding platforms typically are not at the same height as the seating areas of the trains. One complicating factor is that the various models of Amtrak passenger cars do not have uniform seating area heights above the wheels. Another complicating factor is that most station platforms used by Amtrak are owned by freight railroads, which generally do not permit platforms higher than 8 inches above the top of the rails in order to prevent physical conflicts with the freight rail rolling stock. Consequently, in most stations where freight and passenger trains operate on the same track, it is difficult to provide wheelchair-accessible level boarding platforms.

³⁵ Department of Transportation, “Transportation for Individuals with Disabilities at Intercity, Commuter, and High Speed Passenger Railroad Station Platforms; Miscellaneous Amendments,” 76 *Federal Register* 57924, September 19, 2011.

³⁶ Amtrak, *Update on Accessibility and Compliance with the Americans with Disabilities Act of 1990*, May 11, 2012, p. 3, <http://www.amtrak.com/ccurl/83/1005/ADA-Accessibility-Compliance-Report-May2012.pdf>.

³⁷ U.S. Department of Justice, Civil Rights Division, “The United States’ Findings and Conclusions Based on its Investigation under Title II of the Americans with Disabilities Act of the National Railroad Passenger Corporation, DJ No. 204-16-128,” June 9, 2015, https://www.ada.gov/amtrak/amtak_letter_of_findings.doc.

³⁸ Amtrak, *Accessibility Update: March 2017*, <http://www.greatamericanstations.com/amtrak-accessibility-update-march-2017/>. After the 2015 letter from the Department of Justice, Amtrak decided to classify all 35 of its flag stop stations as regular stations subject to ADA accessibility requirements.

³⁹ Amtrak notes that some of these stations might require additional work to meet ADA accessibility requirements.

Positive Train Control Implementation

Section 104 of the Rail Safety Improvement Act of 2008 (Division A of P.L. 110-432) required that intercity passenger railroads, commuter railroads, and freight railroads that haul certain toxic or poisonous products install a “positive train control” (PTC) system by the end of 2015; Congress subsequently extended that deadline to December 31, 2018.⁴⁰ The distinctive feature of PTC is that an automatic override system or a dispatcher from a remote location could slow a train or stop it in order to avoid a collision if the engineer fails to comply with a signal indication. The system relies on radio communications among a locomotive, track-side equipment, and a control center. PTC is intended to prevent accidents due to excessive train speed or conflicting train movements. As currently conceived, it will not address accidents caused by trespassers on railroad property, vehicles blocking tracks at grade crossings, or other factors.

Before enactment of Section 104, passenger and freight railroads were developing systems that could remotely control train movements, but there was no requirement that these systems be interoperable. Interoperability is a significant concern for Amtrak, which operates its trains over track owned by many different railroads and hosts freight and commuter railroads’ trains on its own tracks.

Amtrak began installation of a PTC system in 2000 on some NEC tracks as part of FRA requirements for higher-speed Acela service. An Amtrak train derailed due to excessive speed on a curved section of the NEC outside of Philadelphia on May 12, 2015; 8 passengers died and 185 were taken to hospitals for treatment. Investigators said the crash could have been prevented by PTC; Amtrak said PTC had been installed in that area but was not yet operational.⁴¹ Outside the NEC, Amtrak has had to install a different version of PTC on tracks it owns in Michigan, and must install PTC equipment on its diesel locomotives that is compatible with the host railroads’ versions of PTC.

In some cases, the presence of Amtrak trains on freight lines is the sole trigger of the PTC requirement, because the lines in question do not carry poisonous or toxic products. As Amtrak is required to pay host railroads for the incremental costs of operating its trains, it would be responsible for PTC installation in these circumstances, but Amtrak has stated it does not have the funds to install PTC on tracks it does not own.⁴²

Operational Issues

Ridership Levels

Amtrak ridership has grown slowly over the past decade. As **Table 6** shows, these increases have been seen on all types of trains. The corridor/short-distance trains have overtaken the flagship NEC service in terms of ridership, although the Northeast Corridor still provides the majority of ticket revenue.

⁴⁰ CRS Report R42637, *Positive Train Control (PTC): Overview and Policy Issues*, by John Frittelli.

⁴¹ National Transportation Safety Board, *Derailed of Amtrak Passenger Train 188*, <https://www.nts.gov/investigations/AccidentReports/Pages/RAR1602.aspx>.

⁴² Amtrak, *FY2012 Grant and Legislative Request*, p. 8.

Table 6. Amtrak Ridership, Ticket Revenue, and Average Ticket Price
(ridership in millions; revenue in millions of 2016 dollars; average ticket price in 2016 dollars)

Amtrak Route Group	FY2005		FY2010		FY2016	
	##/\$	% of Grand Total	##/\$	% of Grand Total	##/\$	% of Grand Total
NEC (Acela/Northeast Regional/Special Trains)						
Ridership	11.0	43%	10.4	36%	11.9	38%
Ticket revenue	\$801.5	52%	\$985.9	52%	\$1,191.4	54%
Average ticket price	\$72.9	—	\$94.8	—	\$100.1	—
State-Supported (Short-Distance)^a						
Ridership	10.6	42%	13.9	48%	14.7	47%
Ticket revenue	\$316.0	21%	\$427.6	22%	\$486.6	22%
Average ticket price	\$29.8	—	\$30.8	—	\$33.1	—
Long Distance						
Ridership	3.8	15%	4.5	16%	4.7	15%
Ticket revenue	\$411.3	27%	\$497.6	26%	\$510.7	23%
Average ticket price	\$108.2	—	\$110.6	—	\$108.7	—
Grand Total						
Ridership	25.4	100%	30.8	100%	31.3	100%
Ticket revenue	\$1,528.8	100%	\$1,911.1	100%	\$2,188.7	100%
Average ticket price	\$60.2	—	\$62.0	—	\$69.9	—

Source: Amtrak, *Monthly Performance Reports* for September 2005, 2010, and 2016. Average ticket prices calculated by CRS by dividing ticket revenue by ridership. Dollar figures for 2005 and 2010 inflated to 2016 using Bureau of Labor Statistics' Consumer Price Index inflation calculator.

a. State-Supported Trains were formerly known as Corridor Service.

Operating Efficiency

The number of passengers carried is not the only measure that should be considered when evaluating Amtrak's performance. A railroad may boost ridership by increasing the supply of seats (running more trains or offering more seats per train) or by increasing demand (improving service or reducing fares absolutely or relative to competitors). Thus, measures of efficiency and measures that incorporate financial results are also useful to assess performance.

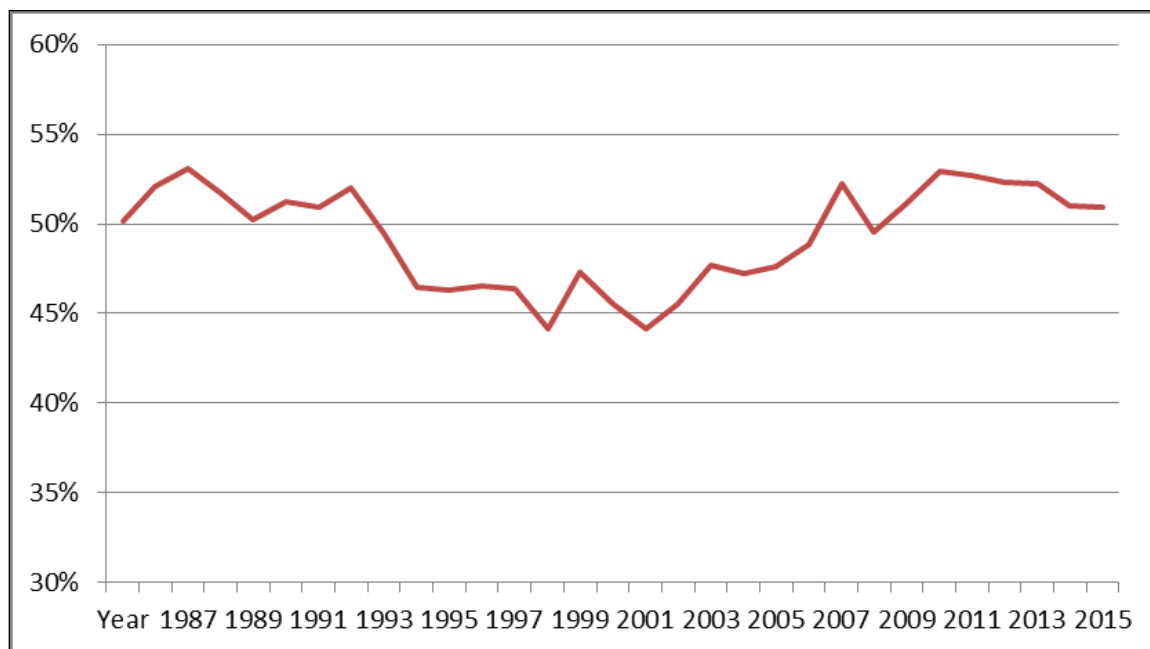
Passenger Load Factor

One measure of efficiency is the passenger load factor, which measures what percentage of the available seats is being used by passengers.⁴³ As **Figure 1** shows, Amtrak's load factor has varied within a fairly narrow band since 1986. Its current load factor, 51%, is near the record load factor

⁴³ At the direction of Congress (§207 of the Passenger Rail Investment and Improvement Act of 2008, Division B of P.L. 110-432), Amtrak uses a related metric, passenger miles per train miles. Congress has used this metric as far back as 1979 to measure Amtrak route performance. Since the number of passengers a train can carry is based on the number of seats on the train, and since the number of seats that a train carries may change from time to time due to reconfigurations of passenger cars, load factor (passenger miles divided by seat miles) is used here.

Amtrak reported in FY1988. In certain respects Amtrak's circumstances were more favorable at that time than today: its fleet was newer⁴⁴ and the rail network was less congested.⁴⁵

Figure 1. Amtrak Passenger Load Factor, 1986-2016
(passenger miles/seat miles)



Source: Calculated by CRS using data from Amtrak annual reports and year-end monthly performance reports.

Note: Load factor is the percentage of available seats that have passengers in them.

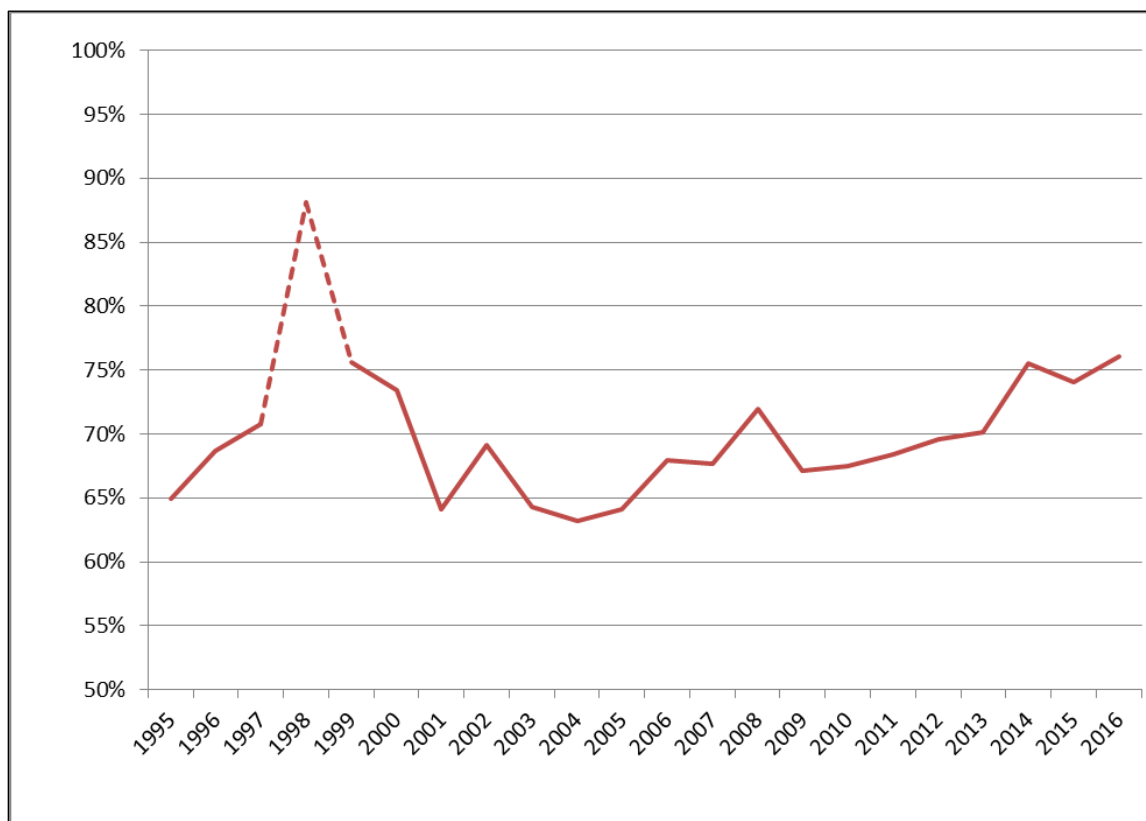
Operating Ratio

The most basic measure of financial performance may be operating ratio (the percentage of costs covered by revenues). Amtrak is able to cover about three-fourths of its operating costs from its revenues. As **Figure 2** shows, that ratio has been fairly constant over the past two decades, but Amtrak's operating ratio is currently about as high as it has ever been over that period.

⁴⁴ Average age of Amtrak locomotives: 12.0 years (1990), 21.1 years (2015); average age of Amtrak passenger cars: 20.0 years (1990), 30.7 years (2015). Source: Bureau of Transportation Statistics, *National Transportation Statistics*, Table 1-33: Age and Availability of Amtrak Locomotive and Car Fleets, https://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national_transportation_statistics/html/table_01_33.html.

⁴⁵ One measure of network congestion is traffic density, which is calculated as millions of revenue ton-miles of cargo carried per owned mile of track. In 1990 the rail network density level was 5.17; in 2015 it was over twice that, 10.86. Association of American Railroads, *Railroad Facts 2016*, "Traffic Density," p. 45.

Figure 2. Amtrak Ratio of Revenues to Expenses, 1995-2016
(total revenues/total expenses)



Source: Calculated by CRS using data from Amtrak annual reports and financial statements.

Notes: The spike around FY1998-FY1999 was due to a change in the way Amtrak accounted for federal and state grants. Without that change, Amtrak's ratio would have been 67% in FY1998 and 68% in FY1999.

Amtrak's On-Time Performance

Amtrak's ability to keep trains running on time has a direct bearing on its operating profit or loss.⁴⁶ First and foremost, low on-time performance reduces ridership (and ticket revenue). Secondly, it increases crew, fuel, and other operating costs. For Acela service, a train is considered on time if it arrives at its final destination within 10 minutes of the scheduled time.⁴⁷ This is also the standard for any routes of less than 250 miles. For longer routes, the standard depends on distance, with 30 minutes being the allowance for trips over 550 miles.⁴⁸

Amtrak's on-time performance over a recent three-month period, compared to its performance in 2012, is shown in **Table 7**. The data suggest that Amtrak's on-time performance has deteriorated, even on the NEC, where Amtrak controls train operations.

⁴⁶ Department of Transportation Inspector General, *Effects of Amtrak's Poor On-Time Performance*, March 28, 2008, CR-2008-047.

⁴⁷ Testimony of William Crosbie, Amtrak Chief Operating Officer, Surface Transportation Board, Public Hearing, Passenger Rail Investment and Improvement Act of 2008, February 11, 2009, Ex Parte 683, transcript pp. 55-56.

⁴⁸ These on-time standards were established by FRA through the rulemaking process. See FRA's Issuance of Metrics and Standards, Docket No. FRA-2009-0016, n.d., p. 26; <http://www.fra.dot.gov/rpd/passenger/2165.shtml>.

Table 7. Amtrak's OTP

Service	Endpoint On-Time Performance	
	Quarter Ended June 2012	Quarter Ended March 2017
NEC Acela	88.3%	83.09%
NEC Regional (Was-Bos)	86.4%	82.1%
Short Distance (24 routes)	from 44.9% to 96.1%	from 26.0% to 96.9%
Long Distance (15 routes)	from 25.6% to 91.8%	from 30.1% to 72.8%

Source: FRA, *Quarterly Report on the Performance and Service Quality of Intercity Passenger Train Operations*, Quarter ended June 2012; Quarter ended March 2017, Table 6.

Note: Endpoint on-time performance represents arrival at endpoint station within 10 to 30 minutes of scheduled arrival time, depending on route length.

Outside of the NEC, Amtrak trains run predominantly on track owned by freight railroads, and much of the delay on these routes is related to sharing track with freight trains.⁴⁹ The host freight railroad controls all the trains running on its network, including Amtrak trains. Freight railroads use automated systems that dispatch trains when all trains are running on schedule, but delays or unanticipated problems usually require that a human dispatcher intervene to make train control decisions. According to data recorded by Amtrak train conductors, “host railroad delays” is by far the leading cause of Amtrak trains being delayed,⁵⁰ and within that category, freight train interference is the leading factor.⁵¹ “Slow order” track—track that is subject to a temporarily reduced speed limit until repair or maintenance can be performed—was the second-leading cause of Amtrak delays. Signal problems and interference from other passenger trains were the third- and fourth-leading causes of delay.

Figures on the causes of delays are based on the recordings of Amtrak train conductors. Freight railroads contend that the data are inaccurate because conductors may not be aware of the root causes of delay; for instance, the conductor of an Amtrak train stuck behind a freight train might record the cause of delay as “freight train interference” even though the freight train could be stopped because of a railroad crossing accident farther ahead.

Several circumstances exacerbate interference between freight and Amtrak trains. A surge in rail shipments of oil from the Bakken formation in North Dakota led to frequent delays on routes in the upper Midwest in 2013 and 2014. In some areas, construction to add trackage in response to this increased traffic has caused delays in train movements. On some route segments, Amtrak uses a secondary route of the owning freight railroad, which may not want to invest in improving the performance of that segment.⁵² Off the NEC, about 70% of the mileage over which Amtrak operates consists of a single track with sidings, meaning that a single late train can cause many

⁴⁹ About 97% of the 22,000 miles over which Amtrak operates are owned by freight railroads.

⁵⁰ Amtrak, “Total Delay Trend by Responsible Party—Six Major Freight Hosts for June 2012 through June 2017,” *Monthly Performance Report for June 2017*, August 3, 2017, p. E-7, <https://www.amtrak.com/ccurl/240/284/Amtrak-Monthly-Performance-Report-June-2017.pdf>.

⁵¹ Ibid., “Delays to Amtrak Trains by Delay Type and Responsible Party (Major Hosts Only—BNSF, CN, CP, CSX, NS, UP) Most Recent Twelve Months through June 2017,” p. E-14.

⁵² For instance, Amtrak’s Southwest Chief route between Kansas City and Albuquerque runs over a BNSF route used by coal trains rather than the double-tracked “transcontinental” route used by faster intermodal trains.

other trains to be delayed. Amtrak trains, which travel faster than most freight trains, require more headway clearance, complicating operations on a heavily used freight corridor.⁵³

Amtrak's Terms of Access to Freight Track

In 1973, shortly after Amtrak's creation, Congress granted Amtrak "preference" over freight trains in using a rail line, junction, or crossing (P.L. 93-146, §10(2), 87 Stat. 548). In Amtrak's view, this "preference" should be enforced each time a dispatcher makes a decision involving an Amtrak train and a freight train.⁵⁴ The freight railroads contend that the entire fluidity of the route has to be taken into consideration, and that this sometimes may involve giving priority to a freight train over an Amtrak train in order to avoid delays on a larger scale.

Under the Rail Passenger Service Act of 1970 (P.L. 91-518, 84 Stat. 1327), Amtrak pays the host railroads for the *incremental* costs specific to Amtrak's usage of track—for instance, the additional track maintenance costs required for passenger trains. Amtrak is not required to contribute any share to a freight railroad's overhead costs. Based on agreements it has negotiated with each freight railroad, Amtrak provides incentive payments to host railroads when its trains arrive on time.⁵⁵ Part of this negotiation involves agreeing on a schedule for Amtrak trains. The DOT Inspector General reported in 2008 that three of the four host freight railroads visited regard the incentive payments as insufficient to influence the way they dispatch Amtrak trains.⁵⁶ There are also penalty provisions for late trains, but they come into effect only if the host railroad has received incentive payments within the last 12 months. In recent years, Amtrak has paid an average of \$100 million annually to the freight railroads for track usage and on-time incentive payments. This equates to about 0.2% of the freight railroads' annual freight revenues and about 1% of their annual capital expenditures.

PRIIA Initiatives to Improve On-Time Performance

In PRIIA §207, Congress directed FRA and Amtrak to develop metrics and standards for measuring the performance and service quality of intercity passenger train operations, including on-time performance and delays incurred by Amtrak trains on the rail lines of each carrier. In Section 207 and Section 213, Congress gave the Surface Transportation Board (STB) the power to investigate, in certain circumstances, failures by Amtrak to meet the on-time performance standards. The statute provided that if the STB determined that a host freight railroad has failed to provide preference to Amtrak trains, the STB could award damages against the host freight railroad and order other relief.

The freight railroads challenged the constitutionality of this statute, arguing that Amtrak, as a private corporation, cannot have rule-making authority in developing performance standards and that the statute violates their due-process rights. On March 9, 2015, the Supreme Court ruled that Amtrak is a government entity for the purpose of developing the performance standards; it remanded the case to the U.S. Court of Appeals for the D.C. Circuit to consider the lawfulness of

⁵³ Testimony of Jeffrey Elliot, Oliver Wyman Inc., Surface Transportation Board hearing on PRIIA, Ex Parte 683, February 11, 2009.

⁵⁴ DOT IG, *Root Causes of Amtrak Train Delays*, September 8, 2008, report no. CR-2008-076.

⁵⁵ The Amtrak IG has found that Amtrak has significantly overpaid on these incentive payments, relying on invoices calculated by the host railroads and not adequately reviewing them before issuing payment. See, for instance, audit reports 403-2010 dated April 21, 2011 and 407-2003 dated September 24, 2010.

⁵⁶ DOT IG, *Root Causes of Amtrak Train Delays*, September 8, 2008, report no. CR-2008-076, p. 23.

the standards.⁵⁷ The Appeals Court then found Section 207 to be an unconstitutional delegation of power and voided the associated standards that FRA issued in 2011.⁵⁸

With the on-time performance standards developed by FRA and Amtrak suspended due to pending litigation, and with a complaint by Amtrak against host railroads causing delays, the STB developed its own standard for on-time performance through the rule-making process, and used that to rule against a host railroad. This action was challenged by freight railroads, and ultimately overturned. So Congress's effort in PRIIA to address the persistent problem of host railroad delays to Amtrak trains has thus far had little impact.

As freight traffic increases and states implement plans to increase passenger train speeds over certain routes (from a prevailing maximum of 79 mph to 110 mph), tension between freight and passenger use of track is likely to intensify.

Food and Beverage Service

Amtrak has served food and beverages since it began operating in 1971, continuing the practice of its predecessor companies. As far back as 1981, Congress prohibited Amtrak from providing food and beverage service at a loss,⁵⁹ and this prohibition is still in the statutes governing Amtrak: "Amtrak may ... provide food and beverage services on its trains only if revenues from the services each year at least equal the cost of providing the services."⁶⁰

The law does not define what is to be included in the "cost of providing the services." Amtrak has stated that providing food and beverage service is essential to meeting the needs of passengers, especially on long-distance trains, and it has interpreted the law as requiring that revenues cover the costs of food and beverage items and commissary operations but not the labor cost of Amtrak employees providing food service on-board trains. When on-board labor costs are excluded, Amtrak says, the service covers its costs. When labor costs are included, however, the service operates at a significant deficit (see **Table 8**).

⁵⁷ http://www.supremecourt.gov/opinions/14pdf/13-1080_f29g.pdf.

⁵⁸ United States Court of Appeals for the District of Columbia Circuit, *Association of American Railroads v. United States Department of Transportation, et al.*, No. 12-5204, decided April 29, 2016, [https://www.cadc.uscourts.gov/internet/opinions.nsf/7DB0A5319D2F70D385257FA4004FAB2B/\\$file/12-5204-1611061.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/7DB0A5319D2F70D385257FA4004FAB2B/$file/12-5204-1611061.pdf).

⁵⁹ P.L. 97-35 (enacted August 13, 1981), §1177, 95 STAT. 692.

⁶⁰ 49 U.S.C. 24305(c)(4).

Table 8. Amtrak Food and Beverage Service Revenues and Expenses

(in millions of nominal dollars)

Fiscal Year	Total Revenues	Nonlabor Expenses	Labor Expenses	Total Expenses	Total Revenues as % of Total Expenses
2012	\$122.0	\$91.7	\$113.2	\$204.9	60%
2013	123.4	91.4	116.0	207.4	59%
2014	125.7	85.5	115.5	201.0	63%
2015	132.1	84.7	114.5	199.2	66%
2016	\$132.3	\$79.0	\$111.3	\$190.4	69%

Source: CRS. Amtrak provides figures for revenue, but not cost, for its food and beverage service in its monthly performance reports; the cost figures are from personal communications from Amtrak. Percentages calculated by CRS.

Amtrak has taken measures, at Congress's direction, to reduce costs for food and beverage service. In 1999, it shifted from handling food and beverage supplies internally to contracting out such activities. A House proposal in the 112th Congress would have required FRA to contract out Amtrak's on-board food and beverage service but acknowledged that the service may operate at a loss.⁶¹ Section 11207 of the FAST Act requires Amtrak to develop a plan to eliminate food and beverage service losses, and prohibits federal funds from being used to cover losses starting five years after enactment—but also provides that no Amtrak employee shall lose his or her job as a result of any changes made to eliminate losses. Congress provided that Amtrak could eliminate the losses on food and beverage service through "ticket revenue allocation."⁶² Although that phrase is not defined in the law, it implies that Amtrak could declare that a portion of the ticket prices paid by certain passengers is dedicated to food and beverage service.

Restoration of Amtrak Service Along Gulf Coast

In 1993, service on Amtrak's Sunset Limited, which had operated between Los Angeles, CA, and New Orleans, LA, was extended east to Jacksonville, FL. The Sunset Limited route operated three trains a week in each direction. In August 2005, service east of New Orleans was suspended due to damage to the rail infrastructure between New Orleans and Mobile, AL, as a result of a hurricane. Although CSX, the owner of the rail infrastructure, restored the line to service in 2006, Amtrak did not restore its passenger service east of New Orleans. This eliminated service at 12 stations that were not served by any other Amtrak route.

In Section 226 of PRIIA, Congress directed Amtrak to develop a plan for restoring passenger rail service between New Orleans and Sanford, FL.⁶³ Amtrak presented a plan to Congress in July 2009 with three options for meeting this requirement.⁶⁴ All three would have required tens of millions of dollars in capital improvements (including making the stations be reopened compliant with ADA accessibility requirements and installing positive train control on that section of the rail

⁶¹ H.R. 7 (112th Congress), Section 8106.

⁶² 49 U.S.C. 24321(b)(6).

⁶³ Sanford is the third stop on Amtrak's routes going south from Jacksonville, and 27 miles (2 stops) from Orlando, FL, and is the location of the smaller of Orlando's airports.

⁶⁴ Amtrak, *P.R.I.I.A. Section 226 Gulf Coast Service Plan Report*, July 16, 2009.

network) and would have produced operating losses. Amtrak sought funding to implement any of the options, but no further action was taken by Congress.

Amtrak looked at the issue of resuming Gulf Coast service again in 2015 at the request of the Southern Rail Commission. This study examined a slightly different set of options, omitting the option of extending the thrice-weekly Sunset Limited Service eastward.⁶⁵

In Section 11304 of the FAST Act, Congress directed DOT to establish a working group to evaluate restoration of passenger rail service along the Gulf Coast. The working group's final report, published in July 2017, found that opening passenger service from New Orleans to Orlando, FL, via Jacksonville, would require capital expenditures of at least \$10 million and perhaps as much as \$102 million. CSX has stated that it needs \$2.3 billion in infrastructure upgrades to provide reliable service that does not interfere with its freight operations. The interested parties have yet to verify the need for the recommended improvements and develop a funding plan.⁶⁶

Privatization of Intercity Passenger Rail Services

When discussing privatization of intercity passenger rail service, details are important. Amtrak itself can be considered a privatized rail provider, as it is legally a for-profit company that receives grants from federal and state governments. Similarly, the rail service providers in Great Britain, for example, are not owned by the British government, but they receive government funding to operate routes that are not profitable on the basis of passenger-related revenues. The differences lie in how the government payments are structured; Amtrak receives annual funding directly from the federal government as a line item in DOT's appropriations act, while the British government awards franchises to rail companies to operate trains over a route for a certain amount of government funding over a period of years.⁶⁷

Suggestions for privatizing intercity passenger rail in the United States range from encouraging Amtrak to contract out more activities to encouraging private operators to compete with Amtrak on individual routes. One challenge to the latter is that, unlike in many other countries, the majority of the U.S. rail network is owned by private freight companies that control who can use their tracks and under what circumstances. Freight railroads have a statutory obligation to carry Amtrak trains, but they have discouraged the notion of having other passenger rail providers operating on their tracks.⁶⁸ There has been one recent effort to replace Amtrak with a private operator. In that instance, the State of Indiana contracted in 2015 with Iowa Pacific Holdings, a

⁶⁵ Amtrak, *Report for the Southern Rail Commission on Potential Gulf Coast Service Restoration Options*, December 2015, <http://static1.squarespace.com/static/5302778ee4b07a6f640874ef/t/5670735bd8af10d0d84e4965/1450210139160/Gulf+Coast+Initiative+Report+2015.pdf>.

⁶⁶ The Gulf Coast Working Group, *Report to Congress*, July 2017, <https://www.fra.dot.gov/Elib/Document/17156>, p. ES-3. CSX says its analysis found that even \$2.3 billion in infrastructure improvements would not be enough to ensure an on-time performance standard of 80%, which was the target threshold; at that level of expenditure the on-time performance for all stations would be 67%.

⁶⁷ Companies compete for the franchises based on the level of government support they seek and the services they promise to provide, and occasionally a company finds that it has underestimated the amount of government funding needed (or overestimated the amount of passenger-related revenue it can earn). In these cases, the companies have typically turned the franchise back over to the British government.

⁶⁸ Edward R. Hamberger, President and CEO, Association of American Railroads, transcript of House Transportation and Infrastructure Committee Hearing, "An Update on the High Speed and Intercity Passenger Rail Program: Mistakes Made and Lessons Learned," December 6, 2012: "The association has long held the position that there should be one operator of intercity passenger rail and that that operator should be Amtrak."

private company, to provide passenger service between Indianapolis and Chicago for a subsidy amount less than the state was paying Amtrak to serve the route. The company made improvements to the passenger experience in hopes of increasing ridership, but the increased revenue did not cover the costs. The company decided to stop operating the service several months before its contract period was completed, saying it was losing money. In 2017, the state turned to Amtrak to resume operation of the service.⁶⁹

One obstacle to privatization is that if a state or a private operator other than Amtrak wishes to begin passenger service over freight-owned right-of-way, it would likely have to pay more than Amtrak does to gain access to freight property. Under laws enacted during Amtrak's first decade, Amtrak enjoys eminent domain power over freight railroad facilities and can use freight track at the railroad's incremental cost of hosting Amtrak trains.⁷⁰ To enforce these terms, Amtrak can appeal to the STB. No other potential passenger rail operator has access to freight track on these favorable terms. These provisions may make it difficult for other companies to compete directly with Amtrak, or to offer passenger service over any existing trackage without the support of the freight railroads that control the track.⁷¹

In December 2016, Congress directed DOT to establish a pilot program for competitive selection of applicants to operate up to three long-distance routes currently operated by Amtrak.⁷² The winning bidder would have the right to operate a route for four years, and the contract could be renewed for another four years. Amtrak would be eligible to bid; if a bidder other than Amtrak is selected, the winning bidder would have the same right to operate over the freight railroad's tracks as Amtrak, subject to performance standards set by DOT, and could receive an operating subsidy of not more than 90% of the amount provided for service on that route in the year before the bid to operate the route was received, adjusted for inflation.⁷³

Several pending initiatives involve proposed construction of new privately owned lines specifically for high-speed passenger rail services. One major obstacle to such ventures is the financial challenge of building the infrastructure before receiving any revenue.

All Aboard Florida

All Aboard Florida, a subsidiary of Florida East Coast Industries (FECI),⁷⁴ plans to run a passenger service called Brightline between Miami and Orlando (a distance of approximately 240 miles), with intermediate stops at Fort Lauderdale and West Palm Beach. It has said that it will begin service on the section between Miami and West Palm Beach in 2017.

⁶⁹ George Spohr, "Amtrak Takes Over Hoosier State Train," *Lafayette Journal & Courier*, January 31, 2017, <http://www.jconline.com/story/money/2017/01/30/indot-yanks-hoosier-state-train-contract/97257928/>.

⁷⁰ See P.L. 91-518 (§402), 1970; P.L. 93-146 (§10), 1973; and P.L. 95-421 (§15) 1978.

⁷¹ CRS Report R42512, *Passenger Train Access to Freight Railroad Track*, by John Frittelli.

⁷² The Fixing America's Surface Transportation (FAST) Act, P.L. 114-94, enacted December 4, 2015, Section 11307.

⁷³ These provisions in the FAST Act were implemented in the final rule of the Competitive Passenger Rail Service Pilot Program, 82 *Federal Register* 31476, July 7, 2017.

⁷⁴ The Brightline project was developed in a rail corridor in which FECI already owned the right-of-way and infrastructure through another subsidiary, Florida East Coast Railway, a freight rail company. In March 2017 FECI sold Florida East Coast Railway to Grupo Mexico; FECI announced that the sale would have no impact on the Brightline rail project, as All Aboard Florida was a separate company with dual ownership of the rail corridor and the right to operate passenger service on the line. Jay Weaver, "Mexican Conglomerate Buys FEC Railway for \$2.1 billion," *Miami Herald*, March 28, 2017, <http://www.miamiherald.com/news/business/article141301728.html>.

The company already owns most of the right-of-way; it plans to construct 40 miles of track that would allow it to serve a station at the Orlando Airport. The trains would travel at up to 110 miles per hour over much of the route, and up to 125 miles per hour on the section of track yet to be built. The company also owns land in downtown Miami where it is building a passenger terminal and a mixed-use development, using the availability of passenger rail service to enhance the value of its real estate development projects. The entire rail project is estimated to cost \$3 billion; construction began in 2015.⁷⁵

The sponsor applied for an RRIF loan, but suspended the application and instead sought state approval to sell \$1.75 billion in tax-free qualified private activity bonds, an amount subsequently reduced to \$600 million.⁷⁶ As of summer 2017 it had not issued the bonds. The project, which has encountered opposition from communities unhappy about the prospect of increased train frequencies interfering with road traffic in their downtowns, is dealing with a variety of permitting challenges as it approaches its scheduled opening of service.⁷⁷

Texas Central High Speed Railway

This project, which is being pursued by a group including the Central Japan Railway Company, one of the leading rail companies in Japan, would build a dedicated high-speed line connecting Dallas-Fort Worth and Houston. Trains on the 240-mile route would operate at up to 200 miles per hour, offering a 90-minute ride. The project's initial cost estimate was \$8 billion; that has now grown to \$12 billion. The initial target completion date was 2021, now moved to 2023. FRA has completed an alternatives analysis for the project and is working on a Draft Environmental Impact Statement, expected to be completed in 2017.⁷⁸

The project group says it does not expect to request government grants, though it may seek a federal loan. As of February 2017, Texas Central Partners, the company seeking to build the rail line, said it had contracts for about 30% of the land parcels estimated to be needed for the entire project.⁷⁹ Some landowners whose properties would be crossed by the rail line have been vocal in their opposition to the project. In 2017, the Texas State Legislature enacted a bill to ensure that the state will not be responsible for any costs of the train.⁸⁰

XpressWest Southern California to Las Vegas

XpressWest (formerly known as DesertXpress) has proposed to build a dedicated high-speed rail line from Victorville, CA (a community northeast of Los Angeles), to Las Vegas, NV, following

⁷⁵ All Aboard Florida (<http://www.allaboardflorida.com>).

⁷⁶ Heidi Mitchell, "A Florida Rail Project Breaks New Ground," *Wall Street Journal*, June 21, 2017, <https://www.wsj.com/articles/a-florida-rail-project-breaks-new-ground-1498068251>.

⁷⁷ Lisa Broadt, "Is a Painstaking Permit Battle the Future of the All Aboard Florida Fight?," *TCPalm*, July 14, 2017, <http://www.tcpalm.com/story/news/local/shaping-our-future/all-aboard-florida/2017/07/14/painstaking-permit-battle-future-all-aboard-florida-fight/467601001/>.

⁷⁸ Federal Railroad Administration, *Dallas to House High-Speed Rail—Passenger Service from Houston to Dallas*, <https://www.fra.dot.gov/Page/P0700>.

⁷⁹ Texas Central, "Texas Bullet Train Project Reaches Key Milestones," February 7, 2017, <http://www.texascentral.com/2017/02/07/texas-bullet-train-project-reaches-key-milestones/>.

⁸⁰ Mitchell Schnurman, "Full Speed Ahead for a Texas Bullet Train? Lawmakers Let the Market Decide—For Now," *Dallas News*, June 23, 2017, <https://www.dallasnews.com/news/transportation/2017/06/23/full-speed-ahead-texas-bullet-train-lege-market-decide-now>.

the Interstate 15 right-of-way, a distance of 185 miles.⁸¹ It proposes to run nonstop trains over this route at 150 mph, with trains operating at 20-minute intervals during peak periods, transporting tourists from southern California to Las Vegas and back. The project has been in development since 2005, and has completed various environmental and regulatory requirements. The project reportedly had private funding commitments of \$1.5 billion, and applied for a \$5.5 billion loan from the RRIF program, which would have been the largest RRIF loan to date. FRA halted review of the loan request in 2013, citing the railroad's unwillingness to meet the RRIF program's Buy America requirements.⁸² In 2015 XpressWest announced a partnership with China Railway International, which was to help provide financing for the project; in 2016, they announced the partnership was ended. The company reports that it is continuing discussions with potential partners and investors.⁸³

In 2016, the High Desert Corridor Joint Powers Authority, which was examining construction of a high-speed rail line linking the proposed XpressWest line with the California High Speed Rail project between Los Angeles and San Francisco, estimated that a high-speed line connecting Las Vegas with points close to Los Angeles and an average round-trip fare of around \$100 would carry 6.5 million passengers by 2024. It estimated that the Las Vegas ridership would grow if completion of the California High Speed Rail project allowed direct service between Las Vegas, Burbank, CA, and Los Angeles Union Station, producing passenger revenues of over \$1 billion each year.⁸⁴

California High-Speed Rail Project

The California High-Speed Rail Authority proposes to build a dedicated rail line between Sacramento and San Diego that will allow trains to reach speeds of up to 220 mph.⁸⁵ The first phase of the project will link San Francisco and Los Angeles, with trains covering the 520-mile distance in as little as 2 hours and 40 minutes. A recent change to the first phase would also provide service between San Francisco and the Central Valley city of Merced. The Authority expects to open service on the portion of the route in 2025, with the first phase completed by 2029. The Authority will need to select an operating company to run the trains, which may or may not be Amtrak.

⁸¹ <http://www.xpresswest.com/>.

⁸² Washington Post, "The XpressWest train project's deserved demise," July 17, 2013; http://www.washingtonpost.com/opinions/the-xpresswest-train-projects-deserved-demise/2013/07/17/8441378e-eeef-11e2-9008-61e94a7ea20d_story.html.

⁸³ Mick Akers, "Despite funding issues, projections rosy for high-speed train linking Las Vegas, Victorville," *Las Vegas Sun*, August 7, 2017, <https://lasvegassun.com/news/2017/aug/07/despite-funding-issues-projections-rosy-for-high-s/>.

⁸⁴ Steer Davies Gleave, *High Desert Corridor: Investment Grade Ridership & Revenue Forecasts: Executive Summary*, March 2017, <http://www.xpresswest.com/pdf/HDC%20RR%20Forecasting%20-%20Executive%20Summary%202016.pdf>.

⁸⁵ For more information, see CRS Report R44654, *The High-Speed Intercity Passenger Rail (HSIPR) Grant Program: Overview*, by David Randall Peterman.

Appendix. Federal Funding for Amtrak

Table A-1. Federal Funding for Amtrak Since Inception
(in millions of dollars)

Fiscal Year	In Nominal Dollars	In 2017 Dollars
1971	\$140	\$737
1972	220	1,113
1973	59	290
1974	440	1,987
1975	677	2,783
1976	659	2,530
1977	801	2,872
1978	1,091	3,691
1979	1,244	3,867
1980	1,254	3,533
1981	1,276	3,235
1982	905	2,137
1983	895	2,012
1984	816	1,755
1985	712	1,477
1986	603	1,224
1987	624	1,225
1988	608	1,152
1989	604	1,100
1990	629	1,120
1991	815	1,395
1992	856	1,400
1993	891	1,410
1994	909	1,412
1995	972	1,468
1996	750	1,112
1997	843	1,223
1998	1,686	2,433
1999	1,701	2,430
2000	571	796
2001	520	708
2002	831	1,117
2003	1,043	1,371

Fiscal Year	In Nominal Dollars	In 2017 Dollars
2004	1,218	1,563
2005	1,207	1,503
2006	1,294	1,561
2007	1,294	1,522
2008	1,325	1,508
2009	1,490	1,690
ARRA	1,300	1,475
2010	1,565	1,749
2011	1,484	1,623
2012	1,418	1,519
2013	1,344	1,419
2014	1,390	1,446
2015	1,390	1,436
2016	1,390	1,423
2017	1,495	1,495
Total	\$47,250	\$81,048

Source: Annual nominal dollar amounts: Federal Railroad Administration; 2017 dollar figures calculated by CRS.

Notes: Nominal dollar amounts adjusted to constant 2017 dollars using the Total Non-defense Composite Outlay Deflators column from Table 10: Gross Domestic Product and Deflators Used in the Historical Tables: 1940-2022, published in the *Historical Tables* volume of the Budget of the United States Government, Fiscal Year 2018 (<http://www.whitehouse.gov/omb/budget/Historicals>).

Author Information

David Randall Peterman
Analyst in Transportation Policy

Disclaimer

This document was prepared by the Congressional Research Service (CRS). CRS serves as nonpartisan shared staff to congressional committees and Members of Congress. It operates solely at the behest of and under the direction of Congress. Information in a CRS Report should not be relied upon for purposes other than public understanding of information that has been provided by CRS to Members of Congress in connection with CRS's institutional role. CRS Reports, as a work of the United States Government, are not subject to copyright protection in the United States. Any CRS Report may be reproduced and distributed in its entirety without permission from CRS. However, as a CRS Report may include copyrighted images or material from a third party, you may need to obtain the permission of the copyright holder if you wish to copy or otherwise use copyrighted material.