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## Testimony

Before the Subcommittee on Railroads, Committee on  
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Representatives

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# INTERCITY PASSENGER RAIL

## The Congress Faces Critical Decisions About the Role of and Funding for Intercity Passenger Rail Systems

Statement of JayEtta Z. Hecker  
Director, Physical Infrastructure Issues



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Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to testify today on issues surrounding the future of the National Railroad Passenger Corporation (Amtrak) and intercity passenger rail, particularly high-speed rail. Our statement will focus on three areas: (1) the uncertain future of intercity passenger rail, (2) the expected large federal capital costs to develop and maintain intercity passenger rail, and (3) the need to assess whether the public benefits that might be realized justify such investments. This statement is based on our recent reports on Amtrak's financial condition and high-speed rail issues,<sup>1</sup> others' reports, and Amtrak's finance and capital plans.

In summary:

- It is very unlikely that Amtrak can operate a national intercity passenger rail system as currently structured without substantial federal operating support. Amtrak is required by law to achieve operational self-sufficiency by the end of 2002 or submit a plan for its own liquidation. The outlook for it achieving operational self-sufficiency is dim. Amtrak has moved just \$83 million closer to operational self-sufficiency in the last 6 years. By December 2002—just 17 months from now—Amtrak must make another \$281 million in financial improvements. Amtrak's financial performance has not improved so far this year: In the first 8 months of fiscal year 2001, its revenues increased by \$83 million over the same period last year but its cash expenses increased by \$120 million.
- The level of federal capital assistance that would be required to maintain and expand the nation's intercity passenger rail network far exceeds the amounts that have been provided in recent years. Amtrak has called for \$30 billion (in constant 2000 dollars) in federal capital support from 2001 through 2020 (an average of \$1.5 billion each year) to upgrade its operations and to invest as seed money in high-speed rail corridors. The proposed amount is nearly \$10 billion more than the \$20.4 billion (in 2000

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<sup>1</sup>*High Speed Rail Investment Act of 2001* (GAO-01-756R, June 25, 2001), *Intercity Passenger Rail: Assessing the Benefits of Increased Federal Funding for Amtrak and High-Speed Passenger Rail Systems* (GAO-01-480T, Mar. 21, 2001), *Intercity Passenger Rail: Decisions on the Future of Amtrak and Intercity Passenger Rail Are Approaching* (GAO/T-RCED-00-277, Sept. 26, 2000), *Intercity Passenger Rail: Amtrak Will Continue to Have Difficulty Controlling Its Costs and Meeting Capital Needs* (GAO/RCED-00-138, May 31, 2000), *Surface Infrastructure: High-Speed Rail Projects in the United States* (GAO/RCED-99-44, Jan. 14, 1999), Letter to the Chairman, Committee on the Budget, House of Representatives (Sept. 15, 1998), and *Amtrak: Issues for Reauthorization* (GAO/T-RCED-95-132, Mar. 13, 1995).

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dollars) that Amtrak has received in federal operating and capital support over the past 20 years (1982 through 2001). In addition, costs to fully develop the 10 federally designated high-speed rail corridors and Amtrak's Northeast Corridor could exceed \$50 billion over 20 years, according to a preliminary Amtrak estimate. Much of the funding could be expected to come from the federal government.

- A number of benefits to the public and the national transportation system have been attributed to intercity passenger rail service—such as reduced congestion and increased travel choices. Yet, intercity passenger rail plays a very small role in the nation's transportation system today. If that role is to expand, it is important for the Congress to have realistic assessments of the expected public benefits and resulting costs, as compared to investments in other modes of transportation. These assessments are important because intercity passenger rail systems—like other intercity transportation systems—are expensive.

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## Background

With the growth in the nation's highway and aviation systems in the previous decades, intercity passenger rail service lost its competitive edge. Highways have enabled cars to be competitive with conventional passenger trains (those operating up to 90 miles per hour), while airplanes can carry passengers over longer distances at higher speeds than can trains. The Rail Passenger Service Act of 1970 created Amtrak to provide intercity passenger rail service because existing railroads found such service unprofitable. Like other major national intercity passenger rail systems in the world, Amtrak has received substantial government support—nearly \$24 billion for capital and operating needs through fiscal year 2001.

Amtrak operates a 22,000-mile passenger rail system, primarily over tracks owned by freight railroads. (See fig. 1.) Amtrak owns 650 miles of track, primarily in the Northeast Corridor, which runs between Boston and Washington, D.C. About 70 percent of Amtrak's service is provided by conventional trains; the remainder is provided by high-speed trains.<sup>2</sup> It offers high-speed service (up to 150 miles per hour) on the Northeast Corridor. About 22 million passengers in 45 states rode Amtrak's trains in 2000 (about 60,000 passengers each day), a small share of the commercial

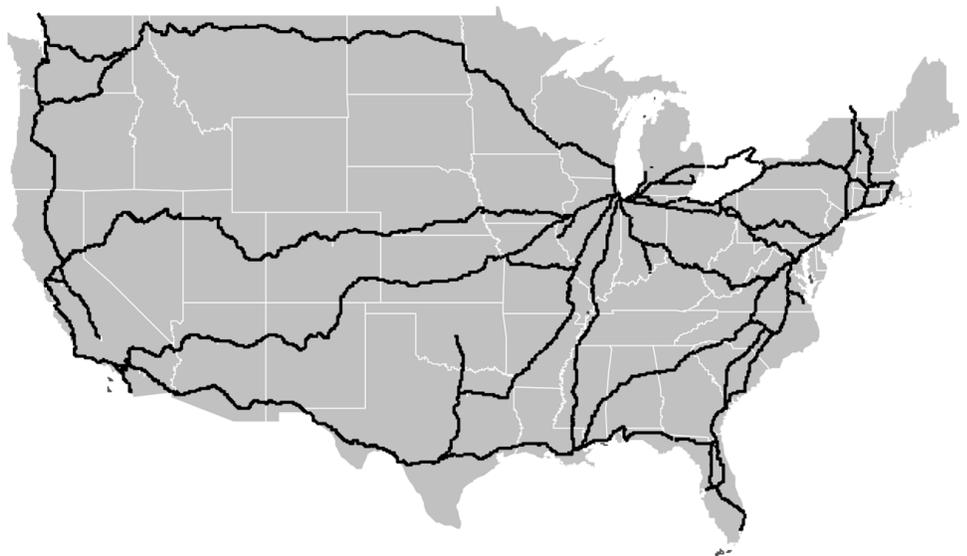
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<sup>2</sup>As measured by train-miles—the movement of a train for a distance of 1 mile. High-speed service is somewhat overstated because it includes some trains that operate at 90 miles per hour or more on the Northeast Corridor but at slower speeds off the corridor.

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intercity travel market. In comparison, in 1999, domestic airlines carried about 1.6 million passengers per day, and intercity buses carried about 983,000 people per day (latest data available).

**Figure 1: Amtrak's Route Network**



Source: Amtrak.

Proponents see high-speed rail systems (with speeds over 90 miles per hour) as a promising means for making trains more competitive with these other modes of transportation.<sup>3</sup> They see introduction of high-speed rail in various areas of the country as a cost-effective means of increasing transportation capacity (the ability to carry more travelers) and relieving air and highway congestion, among other things. The Federal Railroad Administration defines high-speed rail transportation as intercity passenger service that is time-competitive with airplanes or automobiles

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<sup>3</sup>High-speed rail systems are generally of three types: (1) incremental improvements to existing tracks, signaling systems, and grade crossings and modern trains that permit speeds between 90 and 150 mph on existing rights-of-way; (2) completely new infrastructure to support very-high-speed operations of 200 mph or more; or (3) magnetic levitation systems that permit speeds of around 300 mph. Typically, the cost to implement these options grows as the sophistication of the technology and the speed increase.

on a door-to-door basis for trips ranging from about 100 to 500 miles. The agency chose a market-based definition, rather than a speed-based definition, because it recognizes that opportunities for successful high-speed rail projects differ markedly among different pairs of cities.

High-speed trains can operate on tracks owned by freight railroads that have been upgraded to accommodate higher speeds or on dedicated rights of way. The greater the passenger train's speed, the more likely it is to require a dedicated right-of-way for both safety and operating reasons. Ten corridors (not including Amtrak's Northeast Corridor) have been designated as high-speed rail corridors either through legislation or by the Department of Transportation. (See fig. 2.)

**Figure 2: Designated High-speed Rail Corridors and Amtrak's Northeast Corridor**



Source: Federal Railroad Administration.

Designated corridors may be eligible for federal funds through several Department of Transportation programs. According to the Department, the designation also serves as a catalyst for sustained state, local, and public interest in corridor development. The 10 federally designated corridors are generally in various early stages of planning. Amtrak's Northeast Corridor is in operation and supports high-speed service up to 150 miles per hour.

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## The Future of Intercity Passenger Rail is Uncertain

Amtrak's future is uncertain, in part, because it has made limited progress toward achieving operational self-sufficiency, as required by the Amtrak Reform and Accountability Act of 1997. The act prohibits Amtrak from using federal funds for operating expenses, except for an amount equal to excess Railroad Retirement Tax Act payments, after 2002.<sup>4</sup> If the Amtrak Reform Council (an independent council established by the act) finds that Amtrak will not achieve operational self-sufficiency, the act requires that the railroad submit to the Congress a liquidation plan and the Council submit to the Congress a plan for a restructured national intercity passenger rail system.

Amtrak has made little progress in reducing its need for federal operating assistance—i.e., closing its “budget gap”—in order to reach operational self-sufficiency.<sup>5</sup> In fiscal year 2000, Amtrak closed its budget gap by only \$5 million, achieving very little of its planned \$114 million reduction. Results for the first 8 months of fiscal year 2001 (October 2000 through May 2001) are not encouraging: Amtrak's revenues increased by about \$83 million (6 percent) over the same period in 2000, but its cash expenses increased by about \$120 million (7 percent).<sup>6</sup> Overall, in the last 6 years (fiscal years 1995 through 2000), Amtrak has reduced its budget gap by only \$83 million. By the end of 2002, about 17 months from now, Amtrak will need to achieve about \$281 million in additional financial improvements to reach operational self-sufficiency. Although Amtrak has undertaken a number of actions to reach and sustain operational self-sufficiency by the end of 2002, we believe that it is unlikely that it will be able to do so.

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<sup>4</sup>Amtrak participates in the railroad retirement system, under which each participating railroad pays a portion of the total retirement and benefit costs for industry employees. According to Amtrak, excess railroad retirement tax act payments are expected to be \$196 million in 2003.

<sup>5</sup>Amtrak defines its budget gap as the corporation's net loss (total revenues less total expenses) less capital-related expenses, including the depreciation of its physical plant, other noncash expenses, and expenses from its program to progressively overhaul railcars (i.e., to conduct limited overhauls of cars each year rather than comprehensive overhauls every several years).

<sup>6</sup>Results are preliminary, subject to audit. Revenues increased from about \$1.32 billion to \$1.4 billion. Cash expenses (total expenses less depreciation and other noncash expenses) increased from about \$1.63 billion to \$1.75 billion.

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## Intercity Passenger Rail Systems Will Require Substantial Amounts of Federal Capital Support

Intercity passenger rail systems, like other intercity transportation systems, are expensive. The level of federal financial assistance that would be required to maintain and expand the nation's intercity passenger rail network far exceeds the amounts that have been provided in recent years. In February, Amtrak's capital and finance plans called for \$30 billion (in constant 2000 dollars) in federal capital support from 2001 through 2020 (an average of \$1.5 billion each year, with \$955 million in fiscal year 2002) to upgrade its operations and to invest as seed money in high-speed rail corridors. The proposed amount is nearly \$10 billion more than the \$20.4 billion (in 2000 dollars) that Amtrak has received in federal operating and capital support over the past 20 years (1982 through 2001).<sup>7</sup> The amount is also nearly three times the annual amount that the Congress provided Amtrak in recent years (e.g., \$571 million for 2000 and \$521 million for 2001 that could be used for both capital and operating expenses).

Additionally, fully developing high-speed rail corridors would require substantial amounts of federal capital assistance. Overall cost figures are unknown because corridor initiatives are in various stages of planning. However, the capital costs to fully develop the federally designated high-speed rail corridors and the Northeast Corridor could be \$50 billion to \$70 billion over 20 years, according to a preliminary Amtrak estimate. The federal government could be expected to provide much of these funds. However, estimates of the costs and the financial viability of high-speed rail systems can be subject to much uncertainty, especially when they are in the early stages of planning.<sup>8</sup>

Some of the federal funding (as much as \$12 billion) for high-speed rail projects could be provided if the High-Speed Rail Investment Act of 2001 (H.R. 2329) is enacted. (A similar bill, S. 250, was introduced in the Senate.) Amtrak views the bill as an important first step in providing seed money and helping build partnerships with states, localities, and freight

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<sup>7</sup>In nominal dollars, the Congress provided Amtrak with about \$16.8 billion from 1982 through 2001.

<sup>8</sup>For example, in 1999, we found that ridership estimates for the proposed Florida Overland Express project—to establish high-speed rail service between Miami, Orlando, and Tampa—may have been overstated by as much as 30 percent. It was unclear whether the project could achieve its financial objectives of paying all operating costs, repaying bondholders, and repaying federal loans if ridership was lower than estimated by the project. (See [GAO/RCED-99-44](#).) The project was later discontinued. Subsequently, Florida voters approved a ballot initiative ordering the state to support a new high-speed rail effort.

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railroads critical to the development of high-speed passenger rail in the United States. According to Amtrak and Federal Railroad Administration officials, several federally designated corridors could be ready for infrastructure investment in the next year or so.

We agree that the bill offers the potential to facilitate the development of high-speed rail systems outside the Northeast Corridor. However, issues remain to be addressed if corridors are to realize the benefits that proponents see for them, including how to complete projects where costs grow beyond the bond funds made available for them. Further, in applying the bill's public benefit criteria, the Secretary and others will have to address issues raised by a project that, by itself, is insufficient to provide high-speed rail service on a corridor (or a portion of the corridor). In these situations, one approach could be to require applicants for bond funding to demonstrate that other resources could reasonably be expected to be available to initiate such service<sup>9</sup> or that the project would result in a "useful asset" even if no other funding is provided.<sup>10</sup>

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## The Public Benefits of Intercity Passenger Rail Need to Be Examined

There is growing interest in and enthusiasm for intercity passenger rail by states, particularly for high-speed rail systems. Proponents see opportunities for increasing ridership—such as a quadrupling of riders on corridors other than the Northeast Corridor (from 10 million to 40 million passengers annually) by 2020. Proponents see a number of public benefits—such as reduced congestion, improved air quality, increased travel capacity, and greater travel choices—from further developing and expanding such systems. According to the Federal Railroad Administration, 34 states are participating in the development of high-speed rail corridors and these states have invested more than \$1 billion for improvements of local rail lines for this purpose. As the Congress moves forward to define the role of intercity passenger rail in our nation's transportation framework, it needs realistic appraisals of the level, nature, and distribution of public benefits that can be expected to accrue.

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<sup>9</sup>In other contexts, the Transportation Equity Act for the 21st Century requires states and metropolitan planning organizations to prepare short- and long-range transportation plans including, among other things, resources that can be reasonably be expected to be made available to implement them.

<sup>10</sup>The useful asset concept is embodied in an Office of Management and Budget circular (A-11), on the planning, budgeting, and acquisition of capital assets.

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## Reducing Congestion and Improving Air Quality

A public benefit cited to support the expansion of high-speed passenger rail service is its potential to help relieve congestion in air travel and on our nation's highways. Such service might have some impact on congestion if it were targeted to areas where roads are at or near their design capacity, for example. As more traffic uses these roads, travel time increases sharply and the delays are felt by all travelers. Expectations for the extent to which intercity passenger rail can reduce congestion must be realistic. For example, in 1995, we reported that each passenger train along the busy Los Angeles-San Diego corridor kept about 129 cars off the highway (about 2,240 cars each day)—a small number relative to the total volume.<sup>11</sup>

Intercity passenger rail cannot be expected to ease congestion at airports when long distance travel is involved because rail travel is not time-competitive with air travel.<sup>12</sup> For example, the scheduled travel time for the approximately 700-mile distance between Washington, D.C., and Chicago is about 2 hours for air and about 18 hours for conventional Amtrak passenger trains. High-speed rail proponents believe that one potential for high-speed rail is to replace shorter intercity air service, thus freeing up airport capacity for longer-distance travel. High-speed rail may work best for relatively short trips (of several hundred miles or less) where it connects densely populated cities with substantial travel between the cities. Amtrak's Metroliner service, which travels up to 125 miles per hour between New York City and Washington, D.C., is an example. The Metroliner is one of only two Amtrak routes that made an operating profit in 2000.<sup>13</sup> Notably, the Federal Railroad Administration is supporting the development of high-speed rail corridors that are competitive in travel time with air and highway travel.

Another advantage cited for intercity passenger rail is that it is energy-efficient, thus improving air quality. For example, the Congressional Research Service reported that Amtrak is much more energy-efficient than

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<sup>11</sup>See [GAO/T-RCED-95-132](#).

<sup>12</sup>For a comparison of travel times for Amtrak, bus, and air travel for several city pairs, see our September 15, 1998, letter cited in footnote 1.

<sup>13</sup>According to Amtrak, the Metroliner's revenues exceeded its operating expenses by \$65 million. The other Amtrak route with revenues exceeding operating expenses was the Heartland Flyer, with service between Oklahoma City and Dallas. On this route revenues exceeded operating expenses by \$700,000. Payments by states comprised most of the revenue (\$5.3 million); the remainder (\$1.4 million) came from train operations.

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air travel.<sup>14</sup> However, it also found that Amtrak is much less energy-efficient than intercity bus transportation and about equal in energy efficiency as automobiles for trips longer than 75 miles. Our 1995 analysis of the Los Angeles-San Diego corridor found that the increase in emissions from added automobiles, intercity buses, and aircraft would be very small if existing diesel-powered trains were discontinued.

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## Increasing Transportation Capacity

Another cited advantage is that an investment in intercity passenger rail can do more to increase transportation capacity than a similar expenditure in another mode. For example, Amtrak recently suggested that a dollar invested in intercity rail can increase capacity 5 to 10 times more than a dollar invested in new highways, depending on location.<sup>15</sup> However, a 1999 study of the costs of providing high-speed rail, highway, and air service in a particular corridor reached different conclusions.<sup>16</sup> This study found that the investment costs (per passenger-kilometer traveled) of providing highway and high-speed rail service between San Francisco and Los Angeles were about the same, but both were substantially higher than the cost of providing air service for the same route.

When considering increasing transportation capacity, federal, state, and other decisionmakers will need to understand the extent to which travelers are using existing capacity and are likely to use the increased capacity in various modes. If new capacity is underutilized (e.g., because it is not cost competitive or convenient), then the expected benefit will not be fully realized.

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## Offering Travel Choice

Another benefit ascribed to expanding intercity passenger rail is increasing travel choices—as an alternative to air, automobile, or bus travel. For example, the Federal Railroad Administration estimates that the development of the designated high-speed rail corridors could

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<sup>14</sup>Congressional Research Service, *Amtrak and Energy Conservation* (Jan. 19, 1999). The analysis was based on Btu per passenger mile results and took into account variations in load factors, congested routes, and other factors that would affect the outcomes in particular circumstances.

<sup>15</sup>Strategic Business Plan, Feb. 2001.

<sup>16</sup>Included in these costs were the social costs of accidents, air pollution, noise, and congestion. See David Levinson, Adib Kanafani, and David Gillen, "Air, High-speed Rail, or Highway: A Cost Comparison in the California Corridor," *Transportation Quarterly*, Vol. 53, No. 1 (Winter 1999).

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ultimately give about 150 million Americans (representing slightly over half of the nation's current population) access to one of these rail networks. Yet travel choice entails more than physical access. To offer travel choice, rail must be competitive with other travel modes: it must take travelers where they want to go; be available at convenient times of the day; be competitive in terms of price and travel time; and meet travelers' expectations for safety, reliability, and comfort. For example, travelers may view a rail system more favorably if it offers multiple trips—rather than one or two round trips—each day and if it arrives and departs at convenient hours.

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## Observations

The Congress is facing critical decisions about the future of Amtrak and intercity passenger rail because operating a national intercity passenger rail system as currently structured without substantial federal operating support is very unlikely. Thus, the goal of a national system much like Amtrak's current system and the goal of operational self-sufficiency appear to be incompatible. In fact, Amtrak was created because other railroads were unable to profitably provide passenger service. In addition, Amtrak needs more capital funding than has been historically provided in order to operate a safe, reliable system that can attract and retain customers. Developing high-speed rail systems is also costly, requiring additional tens of billions of dollars.

If intercity passenger rail is to have a future in the nation's transportation system, the Congress needs to be provided with realistic assessments of the expected public benefits and resulting costs of these investments as compared with investments in other modes of transportation. Such analyses would provide sound bases for congressional action in defining the national goals that will be pursued, the extent that Amtrak and other intercity passenger rail systems can contribute to meeting these goals, state and federal roles, and whether federal and state funds would likely be available to sustain such systems over the long term.

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Mr. Chairman, this concludes our testimony. We would be pleased to answer any questions you or Members of the Subcommittee might have.

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## Contact and Acknowledgments

For information about this testimony, please contact JayEtta Z. Hecker at (202) 512-2834 or at [heckerj@gao.gov](mailto:heckerj@gao.gov). Individuals making key contributions to this testimony were Helen Desaulniers, James Ratzenberger, and Teresa Russell.