

Putting America's Transportation System on Track

by Paul Weinstein Jr.

If America's air-travel system is any indication, the sky really is falling. Flights have been cancelled by the hundreds due to safety concerns. Five commercial airlines have gone out of business since March 31st, in large part because of rising fuel costs.¹ Six broad fare increases have gone into effect this year alone, along with new charges on everything from pillows to a second piece of luggage.

At Philadelphia International Airport, average passenger delays have grown to more than 20 minutes, while bottlenecks at airports in the New York metropolitan area have become so chronic that the federal government has imposed flight caps and installed a new "airport czar" to make sense of the mess.

While the laws of supply and demand will undoubtedly correct some of the problems the airline industry faces, the future for air travelers is not so bright. Most economists agree that airline mergers (such as the recently announced Delta-Northwest agreement), fewer flights, and more fuel-efficient planes will eventually help put the industry on stronger financial ground. Unfortunately, these very measures will also mean higher prices, less choice, and fewer amenities for passengers.

In the short term, passengers have two choices: fly less, or pay more for an inferior service. But if

the United States is serious about fixing the air-travel mess—not to mention congestion on our roadways—there is a real, long-term solution: high-speed rail (HSR).

For years, efforts to pass legislation that would make a significant investment in high-speed rail have been halted by a number of factors: the current administration's ideological opposition to government investments in infrastructure; the return of deficits; the lack of a direct source of funding; the hostility of the airline industry; and a wasteful and distracting debate over the future of Amtrak.

With the airline industry cutting routes and raising fares, the cost of a gallon of gas racing past \$4, and the unemployment rate rising, the time for a major investment in high-speed rail may finally be here.

In this policy brief, the Progressive Policy Institute provides the economic, environmental,

“One person with a belief is a social power equal to ninety-nine who have only interests.”

—John Stuart Mill

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and transportation arguments for HSR. In addition, we propose a plan that will:

- ❑ Target investment where demand is—regional and commuter rail;
- ❑ Build five new regional high-speed rail corridors; and
- ❑ Establish a Rail Trust Fund and identify deficit-neutral sources of direct funding.

What is High-Speed Rail?

High-speed rail is a type of passenger-rail transport that operates significantly faster than the normal speed of rail traffic. Official definitions of “high speed” are 124 miles per hour in the European Union, and 90 mph in the United States.² France’s *Train à Grande Vitesse* (or *TGV*, translated as “train of great speed”) between Paris and Strasbourg is the first railway in the world where trains can run at a maximum speed of 199 mph. Making full use of the higher speeds, a French TGV covers the 167.6 kilometers between the new stations at Lorraine and Champagne-Ardennes in just 36 minutes.³

High-speed rail is best suited for journeys ranging from two to three hours (100-400 miles), for which the train can beat both air and car travel. However, European transportation authorities treat HSR as being competitive with air-travel for trips lasting up to 4.5 hours, because of the time savings that come from not having to check in and go through airport security and other delays. With the addition of wireless Internet access and the ability to use cell phones, HSR could be competitive even further out on the time scale.

Currently, the only true high-speed rail train in the United States is Amtrak’s Acela, which operates along the Northeast corridor. While Acela is capable of reaching 150 mph, it actually only travels that fast on an 18-mile stretch in Rhode Island and a 10-mile stretch in Massachusetts. It also has not achieved Congress’s goal of a three-hour trip from Boston to New York, typically making the run in 3 hours and 20 minutes. But even running at much slower speeds, Amtrak provides 50 percent of all the non-highway passenger traffic between New York and Washington, and is currently running many sold-out trains along this route. This indicates the potential demand for affordable, convenient alternatives to driving and flying.⁴

Economic Benefits

With our economy likely headed into a recession and unemployment rates rising, one of the strongest arguments for a major investment in high-speed rail is that it will help produce new jobs and promote economic growth over the long term.

Most of the major proposals for high-speed rail corridors project significant job growth. These projections usually include both direct job creation (temporary construction-related jobs during the building of the network) and indirect job creation (permanent jobs created as a result of the growth created by the building of the rail network). Based on estimates done in the past for high-speed rail projects, we believe that for every \$10 billion invested in high-speed rail, 40,000 construction-related and 112,500 permanent jobs will be created.⁵

This ratio of investment to job creation (\$65,573 per job) compares quite favorably to the recently enacted federal stimulus package. According to Treasury Secretary Henry Paulson, the \$150 billion stimulus will only create 500,000 jobs (a cost of \$300,000 per job).⁶

Demand for Passenger Rail at Record Highs

For years, critics have argued that investing in rail was unnecessary since demand was low, and since planes and roads met the transportation needs of the vast majority of Americans. For a long time, this argument had merit because of perpetual underinvestment in passenger rail, slow speeds, miserable on-time rates (especially on the freight-owned tracks outside the Northeast), and infrequently scheduled trains that departed or arrived at inconvenient times.

As a result, passenger miles traveled by air rose 205 percent from 1970 to 1990, while highway travel miles increased by 74 percent. Meanwhile, miles traveled by rail (excluding commuter and transit) remained basically unchanged.⁷

Since the mid 1990s, however, there has been a strong increase in rail demand and service, primarily along short- to medium-distance inter-city routes and commuter lines.

In eight of the last nine years, Amtrak has experienced increases in ridership, with the 2005 level of 25.4 million representing a 29 percent boost from 1996. These increases have been primarily driven by a few key routes where

HSR & Job Creation

Investment	Temporary Construction-Related Jobs	Permanent Jobs	Total Job Creation
\$10 Billion	40,000	112,500	152,500
\$20 Billion	80,000	225,000	305,000
\$30 Billion	120,000	337,500	457,500

Source: Author Calculations

there is a strong intra-city passenger rail presence, such as the Northeast corridor, the Chicago-anchored Midwest corridor, and the Pacific Coast.⁸

But Amtrak is only part of the story. From 1995 to 2005, commuter rail (service between central business districts and commuter towns that, compared to rapid transit, is less frequent and covers longer distances) usage grew by more than 20 percent, from 352 million to 423 million passenger trips. This growth rate is comparable to that for automotive travel during this period.

Nearly one-half of the 21 commuter railroads in North America did not exist 15 years ago. Most of those systems were based in large, densely populated Northeastern cities such as New York, Philadelphia, and Boston. Today, commuter railroads are located in metropolitan areas across the nation, including Miami, Los Angeles, Nashville, St. Louis, Charlotte, and Albuquerque, while new systems are in the advanced stages of planning and development in Detroit, Orlando, and Austin.⁹⁹

Environmental Benefits

A major investment in HSR would dramatically decrease congestion at our airports and on our highways as well. A single railroad track, just

six feet across, has the capacity of a superhighway 10 times wider. According to the San Francisco Bay Area Metropolitan Transportation Commission, a HSR system between Southern California and the Bay Area would attract enough passengers away from planes to replace approximately 200 shuttle flights each day. This would allow for more long-distance flights out of California's major airports, including increasingly profitable flights to Asia.

But just as important as reducing congestion, HSR can also reduce pollution and our dependence on foreign sources of energy. High-speed trains draw power from the electrical grid, which is fueled primarily by domestically produced energy sources, such as coal. Plus, trains require about one-third as much energy per passenger mile as automobiles and airplanes. Although nothing powered through the grid is entirely carbon-neutral, high-speed trains produce no direct emissions.

As for greenhouse gases, the carbon footprint of HSR is considerably lighter than that of planes and autos, with HSR producing half as much CO₂ emission as airplanes and one-sixth as much as cars. According to the California High Speed Rail Authority, the proposed HSR system from San Francisco to San Diego would eliminate nearly

Comparison of Energy/Environmental Impact of Modes of Transportation for a 400-Mile Trip

High-Speed Rail	Amtrak (Diesel)
Travel time: 4 hours, 35 minutes Energy used per passenger mile: 1200 Btu CO2 emissions per passenger mile: 0.48 pounds	Travel time: 7 hours, 5 minutes Energy used per passenger mile: 2709 Btu CO2 emissions per passenger mile: 0.46 pounds
Airplane	Car
Travel time: 2 hours, 20 minutes (including 1-hour check-in time) Energy used per passenger mile: 3264 Btu CO2 emissions per passenger mile: 1.06 pounds	Travel time: 7 hours, 6 minutes Energy used per passenger mile: 3445 Btu CO2 emissions per passenger mile: 0.77 pounds

Source: *Popular Mechanics*

18 billion pounds of greenhouse-gas emissions and reduce the state's dependence on foreign oil by up to 22 million barrels per year.¹⁰

Target Investment at Demand — Regional and Commuter Rail

We need to make a national investment in rail where it makes sense—namely, in densely populated corridors.

While the House and Senate should be applauded for passing legislation that would provide Amtrak with dollars to make much needed improvements in existing passenger-train service, the time has come for Congress to make additional funds available for regional high-speed corridors and commuter rail. Such an investment would greatly benefit the whole network. One need only look to Europe to see the strength of a rail system that boasts a mesh of high-speed, medium-distance rail corridors along with local train service through densely populated regions.

The fact is, more than one-third of all U.S. passenger rail traffic is where rail is currently available and reliable: in the Northeast and along with the inter-city corridors of California and the Midwest. The primary focus of our new rail system should be on providing similar service to other major corridors.

Amtrak may also continue supplementing these efforts with carefully identified long-haul passenger routes serving less-populated rural areas, which might be more affordably served by rail than by the current system of highly subsidized rural air routes. These rural rail extensions may be politically necessary to advance HSR in some states. Passenger rail and HSR should receive the same level of federal support as highways and airports, which currently receive subsidies amounting to 80 percent of their overall cost.

Furthermore, the next administration needs to develop a transportation policy that integrates our air and rail networks. In the past, airlines have seen rail as a potential competitor, and they have opposed federal subsidies for high-

speed systems. This has resulted in an air-traffic system that is overwhelmed by short-haul flights.

With higher fuel prices and an aviation grid that has reached its limits, the time is right to create a rail network that serves as a passenger feeder to our airports. For example, someone traveling from Peoria, Ill, to Paris would no longer fly a commercial prop plane to Chicago, but instead take a fast train that would stop at O'Hare and then transfer to an international flight to France. To ensure the process is seamless, the rail network and airlines could have code-sharing agreements and even combined fares; a single ticket would get you from central Illinois to the City of Light.

To create these new intermodal transportation hubs, funds would be redirected from airport expansion to the construction of rail lines that link directly to air terminals. This last point is crucial. Direct rail connections to airports are far more useful—and more popular—than rail systems that force passengers to navigate a combination of trains and buses before ever reaching an airplane.

Build Five High-Speed Rail Corridors

To get this process started, the federal government should identify five priority corridors to be built out in the next 10 years. These corridors would be chosen based on a number of factors: distance; geography (the flatter the terrain, the faster the train); the availability of state, local, and private funding; and a high probability of use (densely populated corridors with significant levels of highway and airborne traffic).

Those states that are already committing to building HSR obviously would have some advantage in this process. For example, California is arguably the furthest along in its efforts to build a bullet train that connects most of its major cities. If its HSR bond authority can be enacted, the state should be one of the five corridors. Funding improvements to make the Northeast Corridor (Boston-New York City-

Washington) a true HSR network would be a second corridor, and the third would be the area currently covered by the Midwest Regional Rail Initiative (Minneapolis-Chicago-St. Louis-Detroit).

Other possible options for the final two bullet train corridors include Florida (Tampa-Orlando-Miami), Texas (San Antonio-Houston-Dallas), Pennsylvania (Pittsburgh-Philadelphia), or the Southwest (Los Angeles-Phoenix), where federal funds could be used to restart state efforts to build HSR.

These high-speed routes on dedicated passenger-rail tracks could be operated by a number of entities: Amtrak; regional government-sponsored corporations; state and local cooperatives; and, if feasible, private companies.

The selection of operators would depend on a number of factors. First, who could do it most affordably? While profits would be nice, most rail operations do require both capital and operating subsidies. It would be good to know which potential operators would require the least financial support from taxpayers. Second, how much investment would the operator be willing to put into the project? Third, what standard of efficiency and quality would the operator be willing to meet? Obviously, if state governments are contributing a significant portion of the funds for the project, they would have a major influence in determining who would operate it.

Establish a Rail Trust Fund and Identify Deficit-Neutral Sources of Direct Funding

Of course, creating a network of regional HSR corridors requires significant resources. The House and Senate have recently passed important legislation that would double the funds for Amtrak over the next five years. That will allow Amtrak to actually invest in improvements for the first time in years, rather than just skimming by. But even with that modest largesse, Amtrak will not be able to deliver a bullet train that can hit

speeds of 200 miles per hour.

What is needed is a dedicated source of direct funding that is deficit-neutral. Without this, true HSR in the United States will continue to be nothing more than a dream. Roads and airports have direct sources of financing, in the form of gas and ticket taxes, tolls, and other forms of user fees. If passenger rail is going to succeed once again in the United States, it too needs its own direct source of funds.

That is why Congress should establish a Rail Trust Fund (RTF) that would finance the construction and maintenance of our national passenger rail system, including HSR. The RTF would receive its funding from a variety of sources:

- ❑ A ticket tax on all passenger-rail systems, including commuter-rail networks (but not rapid transit). A \$5 per-ticket charge on Amtrak's passenger network could raise \$175 million a year. A smaller charge on commuter systems (around \$1 per ticket) could raise more than \$400 million each year;
- ❑ In return for letting freight companies use the new and improved rail lines during off-hours, where feasible, those companies would be charged fees worth an additional \$200 million per year;
- ❑ States would be required to match the federal contribution for any major rail investment at the same level as they do for highway and airport projects to ensure a level playing field. States that offered greater matches could receive priority funding; and
- ❑ Federal dollars to help support HSR (and traditional passenger rail) should also come from a mandatory national system to cap and trade emissions of carbon dioxide and other greenhouse gases. A portion of the proceeds generated from auctioning the

carbon-emission rights should be reserved for rail development. If those rights were to reach \$25 a ton (akin to the expected prices on the 2008-2012 European trading market), the value of trading allowances would be approximately \$100 billion annually, or just under 1 percent of U.S. GDP.¹¹

The RTF would make investments based in part on a formula and in part through a competitive process. Financing from the RTF could be made in the form of grants, loans, and the creation of a bonding authority. Regional or commuter-rail systems could be awarded additional capital based on the merit of the project proposed, and on the amount

of any matching state, local, and private investment.

Conclusion

If we choose to live in the past, passenger rail will just keep creaking along. But if we take a regional approach, high-speed trains and traditional rail can serve an important transportation role in the 21st century. But such a breakthrough will not come cheap. The funds needed to make HSR a reality are not small, and choosing five corridors to start the process will take political courage. However, the economic, environmental, and transportation benefits of high-speed rail are clearly worth the expense and the effort.

Endnotes

¹ "Today in the Sky", *USA Today*, March 31 through August 1, 2008. The five airlines being reference here are Aloha, ATA, Eos, Skybus, and ExpressJet.

² http://www.uic.asso.fr/gv/article.php3?id_article=14 & <http://www.fra.dot.gov/us/content/199>.

³ "New lines boost rail's high speed performance," *Railway Gazette International*, September 4, 2007.

⁴ James Dao, "Acela, Built to Be Rail's Savior, Bedevils Amtrak at Every Turn", *The New York Times*, April 24, 2005.

⁵ For estimates on job creation for specific high speed rail projects see California High Speed Rail Authority and Midwest High Speed Rail Association.

⁶ Remarks by Secretary Henry M. Paulson, Jr., before the National Association of Business Economists, March 3, 2008.

⁷ U.S. Department of Transportation, Bureau of Transportation Statistics.

⁸ Ibid. http://www.lightrailnow.org/facts/fa_lrt_cha.htm.

⁹ http://www.lightrailnow.org/news/n_lrt_2006-09a.htm http://www.lightrailnow.org/news/n_abq_2006-07a.htm <http://trimet.org/commuterrail/>.

¹⁰ California High Speed Rail Authority http://www.cahighspeedrail.ca.gov/news/ENVIRONMENT_lr.pdf.

¹¹ Thanks to Jan Mazurek for this information.

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