

## Key Findings

- Initial funding commits the nation to a program whose eventual costs could exceed \$1 trillion.
- Outside of the Boston-to-Washington and Philadelphia-to-Harrisburg routes, Amtrak short-distance trains lose an average of \$37 per passenger and Amtrak expects the states to cover most of these operating losses.
- A hidden cost of rail is that it must be rebuilt about every 30 years. This means construction could leave states obligated to fund billions of dollars in rehabilitation costs.
- The fact that American freight railroads are profitable while European passenger lines are not suggests that freight, not passenger, is the highest and best use of a modern railroad in most places.
- It is far more cost-effective to save energy by encouraging people to drive more fuel-efficient cars than to build and operate high-speed rail.
- Considering the energy required for rail construction, improvements in auto and airline energy efficiencies, and the high energy cost required to move trains at higher speeds, high-speed rail will have little to no environmental benefit.
- Upgrading the 280 rail miles in Washington to 110-mph standards would cost nearly \$1 billion.
- The average Washingtonian will take a round trip on high-speed rail once every 8.5 years.

## Why the U.S. and Washington Should Not Build High-Speed Rail

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*The following report is a summary of an in-depth Policy Brief on High Speed Rail that can be found at [washingtonpolicy.org](http://washingtonpolicy.org).*

In February 2009, Congress dedicated \$8 billion of stimulus funds to high-speed rail projects. In April, President Obama released his high-speed rail “vision” for America, which includes 8,500 miles that the Federal Railroad Administration (FRA) had identified as potential high-speed rail routes in 2001. In June, the FRA announced its criteria for states to apply for high-speed rail grants out of the \$8 billion in stimulus funds.

Yet the FRA has no estimates how much high-speed rail will ultimately cost, who will ride it, who will pay for it, and whether the benefits can justify the costs. A realistic review shows that high-speed rail will be extremely costly and will add little to American mobility or environmental quality.

The best available data indicate that the FRA plan will cost about \$90 billion, or roughly one-fifth the inflation-adjusted cost of the Interstate Highway System that was approved in 1956. This plan will provide trains with average speeds of 140-150 miles per hour (mph) in California, 75-85 mph in Florida, and moderate-speed trains averaging 55-75 mph in Washington and 30 other states.

A true high-speed rail system, with average speeds of 140-150 mph connecting major cities in 33 states, would cost well over \$500 billion. Meeting political demands to close gaps in the system could bring the cost close to \$1 trillion. At twice the cost of the Interstate Highway System, such a true high-speed rail system would provide less than 1/10<sup>th</sup> the mobility offered by the interstates.

These costs include only the projected capital costs. States that decide to build moderate- or high-speed rail might be held responsible for cost overruns, operating losses, and the costs of replacing and rehabilitating equipment about every 30 years.

Upgrading Washington tracks from the Oregon to the British Columbia borders to run trains at 110 mph will cost taxpayers roughly \$1 billion, or about \$150 for every Washington resident. Subsidizing train operations will cost at least \$54 million per year. Yet the average Washingtonian will take a round trip on such trains only once every 8.5 years.<sup>1</sup>

Far from being an environmental savior, high- and moderate-speed trains are likely to do more harm to the environment than good. In intercity travel, automobiles are already as energy-efficient as Amtrak, and the energy efficiencies of both autos and airliners are growing faster than trains. The energy cost of constructing new high-speed rail lines will dwarf any operational savings. As the state of Florida concluded in 2005, “the environmentally preferred alternative is the No Build Alternative.”<sup>2</sup>

To add insult to injury, the administration is likely to require states that accept high-speed rail funds to regulate property rights in a futile effort to discourage driving and promote rail travel. These regulations will deny rural landowners the right to develop their land while they make urban housing unaffordable and disrupt neighborhoods through the construction of high-density housing.

The White House claims the high-speed rail plan “mirrors that of President Eisenhower, the father of the Interstate Highway System, which revolutionized the way Americans traveled.”<sup>3</sup> Just as Eisenhower borrowed his 40,000-mile interstate highway plan from an existing proposal developed years before by the Bureau of Public Roads, Obama’s 8,500-mile high-speed rail network was identical to one proposed by the Federal Railroad Administration (FRA) in 2001.<sup>4</sup>

But there are four crucial differences between interstate highways and high-speed rail. First, the Bureau of Public Roads gave President Eisenhower a reasonable estimate of how much the interstates would cost. But the FRA has not offered anyone an estimate of how much its high-speed rail network will cost.

Second, the Bureau of Public Roads had a plan for paying for interstate highways: through gas taxes and other highway user fees. In fact, the entire system was built on a pay-as-you-go basis out of such user fees; not a single dollar of general taxpayer money was spent on the roads. In contrast, the FRA has no financial plan for high-speed rail; no source of funds; and no expectation that passenger fares will cover all of the operating costs much less any of the capital costs.

The third key difference is that the interstates truly did revolutionize American travel, while high-speed rail will never be more than a tiny, but expensive, part of the American transportation network. In 2007, the average American traveled 4,000 miles—more than 20 percent of all passenger travel—and shipped 2,000 ton-miles of freight over the interstates.<sup>5</sup>

Finally, since interstate highways serve all major cities in all 50 states, it is likely that the majority of Americans travel over an interstate at least once if not several times a week. In contrast, high-speed trains will mainly be used by a relatively wealthy elite.

By comparison, the most optimistic analysis projects that, if the FRA high-speed rail network is completely built by 2025, the average American will ride this system just 58 miles per year—about 1/70<sup>th</sup> as much as the Interstate Highway System.<sup>6</sup> That is hardly revolutionary. Moreover, considering the premium fares to ride high-speed trains and the fact that trains will mainly serve downtown areas, most of that use would be by the wealthy and by bankers, lawyers, government workers, and other downtown employees whose employers pay the fare, while all other taxpayers would share the cost.

The FRA is not proposing to build 200-mph bullet trains throughout the U.S. Instead, in most places it is proposing to upgrade existing freight lines to allow passenger trains to run as fast as 110 mph—which means average speeds of only 55-75 mph. This would actually be slower than driving for anyone whose origin and destination are not both right next to a train station.

Yet even true high-speed trains have not been particularly successful in France or Japan. While the trains may be enjoyed by tourists who do not want to rent a car, the average residents of France and Japan ride them less than 400 miles per year—barely 2 percent as much as the average American travels each year.<sup>7</sup> The expenditure of tens and even hundreds of billions of dollars on high-speed rail has not relieved traffic congestion in France and Japan on any highways or prevented the continuing decline of rail's importance as a mode of passenger transportation.

Moreover, the environmental benefits of high-speed rail are greatly exaggerated. Amtrak today is a little more energy efficient than flying and about the same as intercity driving. But airline and auto energy efficiencies have been growing much faster than Amtrak's, so by the time any high-speed rail lines opened for business, any energy savings they provide will be negligible. Since the FRA's moderate-speed trains will be powered by Diesel engines and greenhouse emissions from petroleum-powered vehicles are almost exactly proportional to energy consumptions, the greenhouse-gas savings will also be negligible.

To make matters worse, high-speed rail is likely to be accompanied by land-use regulation whose benefits are dubious and whose costs are high. High-speed rail, various urban transit programs, and transit-oriented housing programs are all a part of the administration's so-called "livability" campaign. As Transportation Secretary Ray LaHood recently admitted, the purpose of this campaign is to "coerce people out of their cars."<sup>8</sup>

High-speed rail is a technology whose time has come and gone. What might have been useful a century ago is today merely an anachronism that will cost taxpayers tens or hundreds of billions of dollars yet contribute little to American mobility or environmental quality.

The most ardent supporters of high-speed rail predict that the FRA plan will carry the average American less than 60 miles per year and the average Washingtonian even less than that. By comparison, the average American travels by automobile more than 15,000 miles per year. The environmental benefits of high-speed rail are similarly miniscule, and when added to the environmental costs of building high-speed rail lines are probably negative.

Given such tiny benefits, the real impetus behind high-speed rail is the desire to change Americans' lifestyles: increasing the share of families living in multi-family housing while discouraging new single-family homes, and increasing the share of travel taking transit and intercity rail while discouraging driving. Such behavioral efforts will be costly and produce few environmental or social benefits.

Based on these findings, Washington should apply for its share of the \$8 billion in stimulus money solely for incremental improvements to existing rail lines, including safer crossing gates and better signaling. It should not plan to purchase new locomotives and railcars for passenger service that will be both expensive to operate and provide no environmental benefits. Nor should the

Federal Railroad Administration commit the federal government to funding expensive new high-speed lines such as the proposed lines in California or Florida. The United States can do many things to cost-effectively improve transportation networks in ways that save energy, reduce accidents, and cut toxic and greenhouse gas emissions. High-speed rail is not one of those things.

## Endnotes

<sup>1</sup> Trips are based on “High Speed Rail and Greenhouse Gas Emissions in the U.S.,” p. B-2, [tinyurl.com/m4a5fs](http://tinyurl.com/m4a5fs). 2025 state populations used in per-capita calculations are based on Census Bureau projections; [tinyurl.com/yf2qbp](http://tinyurl.com/yf2qbp).

<sup>2</sup> Final Environmental Impact Statement Florida High Speed Rail Tampa to Orlando (Washington: Federal Railroad Administration, 2005), p. 2-38, [tinyurl.com/6ysffl](http://tinyurl.com/6ysffl).

<sup>3</sup> “President Obama, Vice President Biden, Secretary LaHood Call for U.S. High-Speed Passenger Trains,” White House, Washington, DC, April 16, 2009, [tinyurl.com/d4whzy](http://tinyurl.com/d4whzy).

<sup>4</sup> “High-Speed Rail Corridor Descriptions,” Federal Railroad Administration, 2005, [tinyurl.com/6s94zd](http://tinyurl.com/6s94zd).

<sup>5</sup> Highway Statistics 2007 (Washington: Federal Highway Administration, 2008), table VM-1; *National Transportation Statistics* (Washington: Bureau of Transportation Statistics, 2009), table 1-46a.

<sup>6</sup> “High Speed Rail and Greenhouse Gas Emissions in the U.S.” Center for Clean Air Policy and Center for Neighborhood Technology, Washington, DC, 2006, p. 1, [tinyurl.com/m4a5fs](http://tinyurl.com/m4a5fs); “National Population Projections,” Census Bureau, 2008, [tinyurl.com/car7xw](http://tinyurl.com/car7xw).

<sup>7</sup> High-speed rail passenger kilometers are from “Traffic Volume and Passenger Revenues,” East Japan Railway Company, Tokyo, 2008, [tinyurl.com/daqgpx](http://tinyurl.com/daqgpx); “Transportation Data,” Central Japan Railway Company, Nagoya, 2008, [tinyurl.com/d4lko8](http://tinyurl.com/d4lko8); and “Results for the Year Ended March 31, 2008,” West Japan Railway Company, p. 29, [tinyurl.com/cuxocc](http://tinyurl.com/cuxocc). *Panorama of Transport* (Brussels, BE: European Commission, 2007), pp. 107, 110, [tinyurl.com/23py4r](http://tinyurl.com/23py4r). “High Speed Rail and Greenhouse Gas Emissions in the U.S.” Center for Clean Air Policy and Center for Neighborhood Technology, Washington, DC, 2006, p. 1, p. B-3, [tinyurl.com/m4a5fs](http://tinyurl.com/m4a5fs).

<sup>8</sup> Alan Wirzbicki, “LaHood Defends Mass Transit Push,” *Boston Globe*, May 21, 2009, [tinyurl.com/ovszpq](http://tinyurl.com/ovszpq).

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