

Pennsylvania Train Is Electrified, But Congress Stalls

by Mary Jane Freeman

Electrified high-speed rail service, travelling between 90 and 110 mph, begins on Oct. 30 in the 104-mile Philadelphia-to-Harrisburg Keystone (rail) Corridor. Not yet at 150 or 300 mph, as in Europe or Asia, this will be the first electrified high-speed rail service established outside of the Northeast Corridor's Boston to Washington, D.C. route. This milestone, however, should have been realized decades ago, just as ten other designated high-speed corridors in the United States also should have been upgraded and built out.

The Pennsylvania project, conceived in the 1990s, wasn't acted on until 2004, when Democratic Governor Ed Rendell and rail development businessman David Gunn, who was then head of Amtrak, took the initiative to overcome obstacles put up by Congress and the Bush Administration, which had impeded the building of a 21st Century rail network in America. This project is the exception, rather than the rule in rail development. Congress has barely dribbled enough dollars to keep Amtrak running, and has failed to fund serious rail technology and infrastructure development, leaving ten other high-speed rail corridors, crossing 28 states, to languish.

U.S. rail development for two decades has been thwarted by a clique of fiscal conservative "reformers" out to privatize the nation's passenger rail network. The nation urgently needs rapid rail development to relieve air and highway congestion,

and to bring American transportation into the 21st Century. To make it happen and catch up for lost years, we must retool our rapidly disappearing auto plants to build the components for rail, putting hundreds of thousands of skilled auto workers back to work and creating tens of thousands more jobs building the nation's aged infrastructure. Lyndon LaRouche's Emergency Economic Recovery Act of 2006 would do just that.

The potential to reverse the stalemate in rail policy, and in Congress, also exists in the form of a bipartisan bill introduced in the U.S. Senate in July 2005. The bill, S. 1516, introduced by U.S. Senators Trent Lott (R-Miss.) and Frank Lautenberg (D-N.J.) titled, Passenger Rail Investment and Improvement Act of 2005, won widespread bipartisan support, but was thwarted by the GOP agenda set by Senator Bill Frist and the White House. It would reauthorize Amtrak, over ten years with annual dedicated funding of \$1.9 billion, and set up a Federal/State 80/20 funding match for states' projects. The bill sponsors would like to press for passage of the bill in the post-November lame duck session, but this requires support in the House which has not yet materialized. If it is not taken up then, Senators Lott and Lautenberg are prepared to re-introduce the bill in the 110th Congress in January.

The sad reality is that the United States could have built, by now, its first 21st Century rail corridors using magnetically levitated (Maglev) trains for freight and passenger service, had Congress acted two decades ago when the technology was invented by two Americans. Instead, Maglev was taken up by Japan and Germany, while all the United States did was to adopt the idea of incremental high-speed rail development. America was "Sputnik-ed" again. The United States lost the technological edge in this area and failed to nurture the skilled engineering workforce. Now, 20 years later, China has a Maglev test route in service travelling at 300 mph, while the United States barely has a national passenger rail system, its freight rail network lags behind most of Europe, and Maglev development is barely on the U.S. radar screen.



BEFORE ► AFTER

Amtrak

The "before" and "after" improvements made to the rail bed on the Keystone Corridor project. The catenary lines which carry the electrical current were replaced and reset. The "after" picture shows the continuous welded rail and new concrete ties put in place.

Partnership for Progress: The Keystone Corridor

The \$145 million Keystone Corridor overhaul project brings this historic route up to a state of good repair, and has made possible 110-mph service, which is the fastest outside the Northeast Corridor. The express trip from Philadelphia to Harrisburg will be 90 minutes, while the local service will take 105 minutes (**Figure 1**). The rail corridor, in existence since 1834 as part of the Pennsylvania Railroad, was electrified in the 1930s, and used electricity as its power source until the early 1990s when lack of funding for Amtrak led to the maintenance problems that ended use of electric trains on the route.

When David Gunn became Amtrak president, he had a vision for the Keystone Corridor's potential, and acted on it. In January 2004, he met with Governor Rendell to propose a new partnership with a renewed focus on improving the infrastructure, especially the electric service, along the corridor. Amtrak agreed to fund 50% of the infrastructure upgrade programs and to fund necessary equipment overhauls. Rendell recognized the regional benefits—traffic congestion mitigation and economic development potential—and so agreed to renew the state's funding commitment. In the end, the funding for the project was split among the state, Amtrak, the Federal Transit Administration, and Norfolk Southern railroad.

With the Gunn-Rendell impetus, the project replaced all the overhead catenary lines; put in 200 miles of continuous welded rail; installed over 200,000 concrete ties; improved the track beds; and upgraded all crossings and signal equip-

ment, including installing fiber optic cable for reliable communications and signal control. Refurbished push-pull electric train sets will eliminate the need to turn trains around at end points. A number of stations along the route also have been remodelled.

The investment was justified as ridership had grown by 12%, from 640,267 riders in 2004 to 730,360 in 2005. Amtrak will add four new roundtrips to the route and it is expected that the increased frequency of trains will, in Governor Rendell's words, "easily draw a million riders a year," and address "fuel consumption" issues. In announcing the new service Rendell remarked, "Our experience with the Keystone Corridor . . . shows that passenger rail is far from being relegated to our museums."

True High-Speed Rail Is Long Overdue

President Abraham Lincoln's vision to unite the nation with the transcontinental railroad was realized by 1869. Economic growth and new towns followed the building of the rail routes. Development of rail technologies continued, and by the 1930s America had 3,000 route-miles of electrified rail. In fact, Pennsylvania led the nation in building electrified rail routes.

In 1965, Congress passed the High Speed Ground Transportation Act defining a role for the Federal government in this type of rail travel. An early project was the continuous electrification between Washington, New York, and Boston—today's Northeast Corridor. In the mid-1960s, physicists Gordon T. Danby and James Powell invented superconducting magnetically levitated trains (maglev). But through the 1970s and 80s, the post-industrial society paradigm shift set in, and the technology was not developed in the United States. Instead, London and Wall Street bankers imposed market-based policies driving us from a production-based economy to a consumer-based one. The nation's rail policy shifted too. High-speed rail projects had to be "time-competitive" with air and auto trips of 100 to 500 miles which, as the Federal Rail Administration describes, "is a market-based, not a speed-based definition."

On May 3, 1990, Congress took testimony on the potential for U.S. development of third-generation Maglev systems—the Japanese had developed the first-generation prototype, and were then working on the second-generation technology. Dr. Danby, told the House Surface Transportation subcommittee, "Maglev is poised for commercial application worldwide while the U.S. is on the sidelines. . . . We can leapfrog to the forefront if we start now on a five-year construction program." He explained that the United States was fast losing the skilled engineering

FIGURE 1
Pennsylvania Keystone Corridor



Source: Amtrak.

This 104-mile historic rail route has been renovated and electrified. Trains traveling at up to 110 mph will begin service Oct. 30, 2006, resulting in express service travel time of 90 minutes between Philadelphia and Harrisburg. One third of the state's population lives within the six counties serviced by this line. Future plans include improvements for the Harrisburg to Pittsburgh leg of the route.

skills to do this: “. . . much of our industrial engineering culture has deteriorated . . . it almost makes you cry to see what totally financially oriented managers have done to much of our basic industry.” He passionately called on Congress to “restore our technical culture” for posterity, “I don’t want my children to only flip hamburgers in a ‘post-industrial’ decline of the U.S.”

Ten current members of Congress sat on that committee back in 1990, but failed to seize the advantage. Such “financially oriented managers” have today bankrupted the core of our auto and aerospace firms, leaving America with a huge deficit of next-generation skilled workers. Danby said then, “Maglev has much greater potential for widespread beneficial use than new high-speed rail.” He was right, yet Congress didn’t even build the high-speed rail service.

Corridors Designated but Not Built

In 1991, Congress finally designated five corridors for high-speed rail (HSR) development. By the close of the Clinton Administration, another five were added (**Figure 2**). The Northeast Corridor is the eleventh HSR corridor. Securing this designation made states eligible for minuscule amounts of Federal funds to aid in safety upgrades. Each state made differing levels of improvements based on available funds. Congress meanwhile repeatedly threatened to

shut down Amtrak as it also curtailed Federal funds for it and other rail projects.

From any rational or economical vantage point, new rail projects make sense. Comparative costs for constructing new limited-access highways or airport expansions versus rail, show that rail is highly cost efficient. For example, standard estimates to construct one lane mile of road is \$40 million. Estimated costs, per mile, for passenger rail are \$500,000 for trains at 110 mph, \$3 million for 125 mph, and \$5 million for 150 mph. Take these numbers and plug them into the projects: The Chicago Hub is a 3,000 mile project, for example. No state, or small group of states, can undertake such a capitol improvement project without Federal support.

Congress dallied for a decade but states, anxious to keep the potential for HSR corridors, spent millions to make incremental upgrades on the routes. This included eliminating at-grade rail/highway crossings, adding new signal technologies on the tracks and in trains, and renovating some stations. In many cases, feasibility, environmental impact, and economic impact studies for higher-speeds on the routes have been funded. Ridership has grown 10-15% in the last five years as upgrades were made even without improved on-time service, which depends on separating freight from passenger rail lines, or increased frequency of service, or refurbished rail cars. Spikes in fuel costs also added to this increase as commuters sought alternative travel options.

As of Fall 2006, except for the Keystone Corridor, no other state project has electrified rail routes. *EIR* detailed the status in the California, Chicago Hub, and Ohio Hub corridors in its May 19, 2006 issue. *EIR*’s June 10, 2005 issue published a plan with a bill of materials to create a 42,000 route-mile electrified rail network, the impact of which would radiate through the economy and lay the basis for finally building U.S. Maglev corridors.

It is time for Congress to act in the interest of the general welfare of the millions of Americans who have lost their jobs, particularly in the manufacturing sector, over this decade. LaRouche’s Economic Recovery Act of 2006 calls on Congress to do just that: Restore millions of jobs and spawn a new generation scientists and engineers to rebuild the nation’s infrastructure of rail, locks and dams, water systems, schools, and hospitals, as the first step in rescuing the nation’s economy and to build it into the 21st Century.

FIGURE 2
Nationally Designated High-Speed Rail Corridors



Source: U.S. Department of Transportation, Federal Railroad Administration, 2000.

The 11 rail corridors shown here were designated for high-speed rail service between 1991 and 2000. None of them, except the Northeast Corridor and now, the first leg of the Keystone Corridor, have trains running at high speed. The lack of vision and Federal funds from successive sessions of Congress have left the 28 states where the corridors lie to fend for themselves to keep the corridors alive. These passenger rail corridors must be rapidly built, electrified, and expanded as a component of an infrastructure-building led economic recovery.