



## SOUTHERN LEGISLATIVE CONFERENCE

OF

## THE COUNCIL OF STATE GOVERNMENTS

# HIGH-SPEED RAIL: UPDATE FROM THE SOUTHERN STATES

AN ISSUE ALERT FROM THE SLC

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The world's first high-speed train service—Japan's *Tokaido Shinkansen*, connecting Tokyo, Nagoya, Kyoto and Osaka—was inaugurated in 1964; in subsequent decades, the service has been expanded significantly to include trains that reach speeds up to 186 miles per hour. Spain's *Alta Velocidad Española (AVE)* high-speed train service began in 1992, linking Madrid and Seville; in the past 15 years the AVE network has expanded to nearly 1,250 miles across Spain from Malaga in the south to Barcelona in the northeast. In a similar vein, Germany's high-speed trains, the *InterCityExpress (ICE)*, criss-cross the country at speeds up to 155 miles per hour while France's *Train à Grande Vitesse (TGV)* trains connect cities across France and adjacent countries at record speeds.\* On January 1, 2004, the Shanghai Maglev Train, the world's first commercial high-speed Maglev train, began ferrying passengers between Shanghai's international airport and nearby Pudong (the eastern part of Shanghai) at speeds approaching 268 miles per hour.\*\*

Even as high-speed rail advanced tremendously in parts of Asia and Europe, rail travel in the United States has languished as the American love affair with the automobile, the impressive interstate highway system and affordable air travel ensured that America's rail system did not progress into the 21<sup>st</sup> century. However, this scenario is in the process of undergoing a radical transformation as a result of efforts initiated by the Obama Administration to include \$13 billion (\$8 billion in the 2009 *American Recovery and Reinvestment Act (ARRA)* along with an additional \$5 billion spread over the next five years) as seed money to fund

\* In April 2007, a TGV test train set the record for the fastest wheeled train in history, reaching 357 miles per hour.

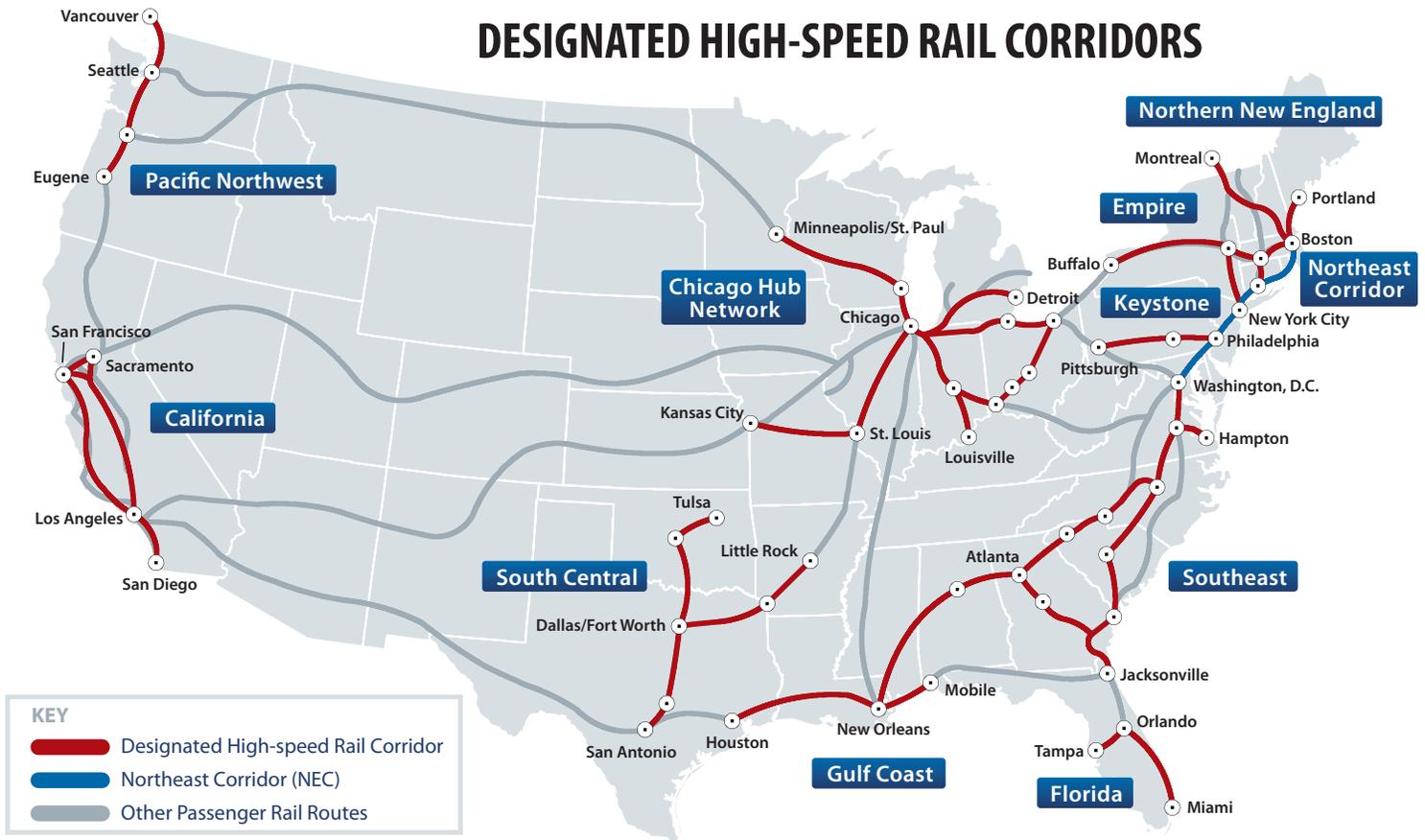
\*\* Maglev is a system of transportation that deploys a large number of magnets to lift, suspend, guide and propel vehicles, predominantly trains, using magnetic levitation.

up to 11 high-speed rail corridors connecting densely populated areas of the country. On June 17, 2009, the Administration released guidelines for states and regions to apply for federal funds under the ARRA with deadlines of July 10, 2009 (pre-application), and August 24, 2009 (final application). Federal officials noted that projects with established revenue sources and multistate cooperation efforts already identified would be front runners to secure federal funding.

Based on these federal initiatives, it now is possible to envisage a range of positive outcomes as a result of this renewed focus on 21<sup>st</sup> century rail travel in the United States. For instance, focusing on the more populated areas of the country will ensure greater efficiencies as people (and some goods) move more quickly between the nation's major population centers. Reducing the number of vehicles from the nation's highways will reduce congestion while lowering the emission of carbon monoxide into the environment, along with reducing air pollution and our dependence on imported oil. Finally, the research and development, construction and subsequent maintenance of these high-speed rail systems will lead to a host of direct and indirect economic benefits that will spur economic growth in the relevant cities and adjacent areas.

While details on the new federal proposals continue to emerge, it is apparent that two types of projects would receive funding: (1) new, dedicated corridors for high-speed trains that proceed at speeds exceeding 200 miles per hour along the lines of those available in Europe and Japan and (2) enhancing and upgrading existing rail lines to permit faster train travel at speeds of up to 110 miles per hour. Notwithstanding these new federal proposals and the tremendous degree of interest reaching all the way to President Obama, analysts have cited the current level of federal funding as only a down payment on a much more expensive proposition if the Administration's plans are to be fully real-

# DESIGNATED HIGH-SPEED RAIL CORRIDORS



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

ized. For example, experts point to the fact that if the entire U.S. rail system was retrofitted to accommodate consistent train speeds of up to 110 miles per hour (considered “moderate speed”), the cost would rise to about \$50 billion; if the system was built to accommodate speeds of up to 200 miles per hour (“high-speed”), the estimated cost leaps to \$500 billion. Experts also note the construction time period that would entail introducing a 21<sup>st</sup> century rail system in the United States, conservatively estimated as a decade from start to finish. Nevertheless, there is a great deal of enthusiasm percolating in a number of states regarding the improved potential for high-speed rail, particularly in states that had been pursuing this transportation mode for some decades now but were held back due to lack of funding, public support and federal leadership.

As evident in the map, the Obama Administration has designated high-speed rail corridors linking the most densely populated areas of the country covering the Pacific Northwest, California, South Central, Gulf Coast, Florida, Southeast, Chicago Hub, Keystone, Empire, Northeast and Northern New England.

Even before the recent federal forays into the high-speed rail arena, a number of states had initiated their own programs. Some of these state programs go back several decades and include several SLC states. For instance, transportation and elected officials in Alabama, Louisiana and

Mississippi coalesced to form the Southern High-Speed Rail Commission to promote passenger rail transportation on a regional basis some two decades ago. The Commission has been energized in recent months, with the enthusiasm for high-speed rail radiating from the federal government, and is in the process of gathering economic impact data to demonstrate the viability of a high-speed train from New Orleans through Birmingham to Atlanta. Experts indicate that such a service would generate an economic impact of between \$3 billion and \$5 billion. In Alabama, Representative Rod Scott has introduced a bill authorizing the Alabama Department of Economic and Community Affairs and the Southern High-Speed Rail Commission to develop a state rail plan and recommend funding.

Florida is another SLC state that has a long history in pursuing high-speed rail. Voters in Florida passed a constitutional amendment in November 2000 requiring the state to build a high-speed rail system only to repeal it a few years later (November 2004), after several prominent business concerns became evident and former Governor Jeb Bush voiced concerns about the costs involved. The plan as envisaged at its inception was ambitious and sought to link the state’s top 20 cities in a high-speed rail grid. The first leg of the elevated high-speed rail line was supposed to connect Tampa and Orlando and the required environmental impact and engineering study already has been completed; some of the study for the second phase, connecting Orlando

to Miami, also has been completed. Construction for the first phase would create at least 25,000 jobs, inject as much as \$9 billion into the economy and immediately provide drivers an alternate to chronically traffic-choked Interstate 4. Advocates of the high-speed rail option also indicate that a major complaint voiced during the repeal of the constitutional amendment has been nullified (the complaint that passengers would have no way to get around once they stepped off the high-speed rail train); officials in both Tampa and Orlando indicate that their cities are now pursuing commuter rail options.

North Carolina has focused on high-speed rail for several decades now and, since the 1990s, the state has pursued the Southeast High-Speed Rail Corridor, a track linking Charlotte through Raleigh and Richmond, Virginia, to Washington, D.C., a 450-mile span. Beyond the development of the high-speed rail option in the state, North Carolina also will seek to upgrade its existing rail infrastructure with federal stimulus funds available under the ARRA. Specifically, the state will seek to “double-track” (run one track in each direction) the active 26-mile corridor between Greensboro and Charlotte, which now carries six passenger trains and more than 40 freight trains each day. In addition, North Carolina will explore purchasing locomotives, improving the rail station at Cary, building grade separations (bridges that separate cars and trains at rail crossings), straightening tracks and dropping them below a busy section in Research Triangle, developing new sections of rail corridors and restoring an abandoned CSX rail line between Raleigh and Richmond. Rail travel time between Raleigh and Charlotte has been slashed from four hours in 1990 to a little over three hours currently (with seven stops), and plans are underway to reduce the trip time further (to two hours and 15 minutes) once the upgrades are in place.

In Texas, in May 2009, the state Senate approved a measure that would create a high-speed rail corporation to begin planning for a 200 mile per hour system linking the state’s five largest urban areas (Dallas, Fort Worth, Houston, San Antonio and Austin). The measure directed the corporation to deploy federal funds at the inception of the project and then seek private financing for construction, such as revenue bonds paid off with passenger fares. In fact, Texas had considered—and then shelved due to financial constraints—a high-speed rail system linking these five cities some 20 years ago. Additional movement on the high-speed rail issue in Texas involved the passage of H.B. 646, which authorized the governor, on behalf of the state, to execute the Southern High-Speed Rail Compact, thereby allowing Texas to participate in the interstate commission that will assist in conducting a feasibility study of rapid-rail service between the member states: Texas, Mississippi, Louisiana, and Alabama.

Virginia is another SLC state that is tracking the high-speed rail option closely. Among the more recent news alerts is

the possibility that it will explore routes on both sides of the James River. One possible route will link Richmond to Norfolk (through Petersburg), and the other route will connect Richmond to Newport News (through Williamsburg). The state’s department of rail and public transportation has estimated that the South side route (Richmond to Norfolk) will cost an estimated \$475 million to build and the Peninsula route (Richmond to Newport News) \$330 million.

Several states outside the region also are aggressively pursuing high-speed rail. Of these, California ranks as the state with the most progress on this front. In fall 2008, voters approved borrowing \$9 billion to begin building a train system that will reach speeds up to 220 miles per hour and connect the state’s 25 major cities from as far north as Sacramento and San Francisco to Los Angeles and San Diego in the south. The most current estimated cost to build the 800-mile system in California is about \$45 billion, although experts note that once built, the system will not require operating subsidies and will generate over \$1 billion in annual profits.

Nevada is also very interested in introducing a high-speed rail option connecting Southern Nevada and Southern California. Nevada’s efforts pivot around introducing the *DesertXpress*, a high-speed rail service between Victorville, California, and Las Vegas along the Interstate 15 corridor. The project is in the final stages of conducting an environmental impact statement and construction could begin next year. Among the options being considered are the 150 miles per hour *DesertXpress* at a cost of \$19.5 million per mile and the Maglev option with speeds of up to 300 miles per hour (\$44.9 million per mile). Ohio also is moving toward faster passenger trains, initially on existing CSX and Norfolk Southern freight tracks, with trains running at speeds of up to 79 miles per hour with subsequent track upgrades to permit speeds up to 120 miles per hour. Deploying federal monies of approximately \$400 million for the initial work, Ohio hopes to link Cleveland, Columbus, Cincinnati and Dayton with fast trains. Wisconsin is another state that is proactively exploring high-speed rail, and Governor Jim Doyle spent time in Spain earlier this year studying the AVE system. The Midwest Regional Rail System (Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio and Wisconsin) has worked on rail issues for several decades now and promotes a network—with Chicago as its hub—that links at least 12 metropolitan areas within 400 miles. The 2016 Olympics in Chicago is another factor propelling the System’s high-speed rail efforts.

In considering high-speed rail options, Maglev, magnetically levitated propelled vehicles, has generated considerable interest with proponents citing several positive outcomes: lower energy (electric) cost per passenger kilometer compared to cars and aircraft (approximately 1.8 kilowatt hour per kilometer or 70 percent less energy than conventional transportation); zero carbon emissions except for the elec-

tricity; technology tried and tested by German and Japanese companies; reduced dependence on imported energy sources; high acceleration and deceleration capacity of the Maglev vehicle given the lack of surface contact or friction; and an elevated design that enables the Maglev system to deploy along existing rights-of-way with minimal disruption and displacement of current cityscape.

In the second half of the last century, America's transportation focus shifted dramatically to highway and aviation travel resulting in the development of the world's foremost systems in these modes of transportation. During this period, American investments and technological advances in rail travel (both passenger and freight) lagged behind the rest of the world and even diminished our competitiveness in the global economy. The Obama Administration seeks to fundamentally transform this scenario with federal investments to revitalize a once thriving transportation mode to achieve an array of critical goals: reduce highway conges-

tion; expand faster travel options; lower carbon emissions; diminish reliance on foreign energy; and enhance economic growth in America's major cities and adjacent regions. The \$8 billion initial funding outlay available to states under the ARRA is only a down payment on a much larger investment that every level of government and the private sector will have to make to upgrade our nation's rail system. While there is widespread enthusiasm across the country for this vision, several states are ahead of others in being prepared to move toward high-speed rail. California is the state best positioned to act expeditiously on this front with Florida also ranking high in planning and preparedness. Federal authorities have indicated that states with demonstrable revenue sources (as in California's \$9 billion state bond approval) and multistate cooperation efforts (as in the Midwest Regional Rail System, Southern High-Speed Rail Commission and Southeast High-Speed Rail Corridor) remain front runners in the race to secure the initial round of federal funds.

## HIGH-SPEED RAIL PRE-APPLICATION REQUESTS BY STATE UNDER THE ARRA, JULY 16, 2009

State	Preliminary Submission Amounts (\$ Millions)	State	Preliminary Submission Amounts (\$ Millions)	State	Preliminary Submission Amounts (\$ Millions)
Alabama	\$787	Kentucky	†	Ohio**	\$5,845
Alaska	†	Louisiana**	\$202	Oklahoma	\$1,992
Arizona	\$237	Maine	\$106	Oregon	\$2,130
Arkansas	\$1	Maryland**	\$11,205	Pennsylvania	\$6,820
California*	\$24,199	Massachusetts	\$2,072	Rhode Island	TBD
Colorado	\$1	Michigan	\$563	South Carolina	\$115
Connecticut**	\$3,185	Minnesota**	\$933	South Dakota	†
Delaware	\$258	Mississippi	†	Tennessee	†
District of Columbia	\$26	Missouri	\$124	Texas**	\$3,159
Florida	\$2,014	Montana	TBD	Utah	†
Georgia	\$296	Nebraska	†	Vermont	\$121
Hawaii	†	Nevada*	\$10,064	Virginia	\$2,484
Idaho	\$5	New Hampshire	\$258	Washington	\$1,817
Illinois**	\$3,562	New Jersey	\$852	West Virginia	\$0
Indiana**	\$166	New Mexico**	\$21	Wisconsin	\$1,842
Iowa	\$228	New York*	\$9,697	Wyoming	†
Kansas	\$17	North Carolina**	\$5,140	<b>GRAND TOTAL</b>	<b>\$102,541</b>
		North Dakota	†	<b>TOTAL STATES</b>	<b>40</b>

Source: U.S. Department of Transportation, Federal Railroad Administration, Office of Passenger and Freight Programs, Pre-application Raw Data Statistics, July 16, 2009.

Notes: † indicates no submission was made by the state; TBD indicates that the state submitted a pre-application, but did not specify the amount requested; \* includes funds submitted by non-public entities; \*\* indicates that the state submitted on behalf of other states.

IMPORTANT NOTE: The information above should be considered draft preliminary – for discussion purposes only. It is simply a summary of raw pre-application information and does not reflect screening for eligibility or readiness.