

# Vision For ***HIGH-SPEED RAIL*** In America



U.S. Department of Transportation  
Federal Railroad Administration



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April 2009  
HIGH-SPEED RAIL STRATEGIC PLAN  
*The American Recovery and Reinvestment Act*





**U.S. Department  
of Transportation**

Office of the Secretary  
of Transportation

1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Members of Congress:

It is with great enthusiasm that I submit this strategic plan for high-speed rail. In the last century, a national vision led to the creation of the world's most advanced highway and aviation networks – helping spur unprecedented economic growth and urban development. Now, President Obama is ready to make a renewed commitment to the Nation's travelers – not just to upgrade and maintain our aging highway and aviation systems, but to build a world-class network of high-speed passenger rail corridors.

We face a complex set of challenges in the 21<sup>st</sup> century – building a robust, green economy, gaining energy independence, reversing global climate change, and fostering more livable, connected communities. These new challenges require creative new transportation solutions. A combination of express and regional high-speed corridors, evolving from upgraded, reliable intercity passenger rail service, has proven effective in addressing many of these challenges around the world and in selected U.S. corridors. The President is committed to bringing this successful approach to key travel corridors across America.

We begin that process here, and will further develop and refine it in the coming months through our budget and policy proposals. Throughout the process of advancing this new transportation vision, the President has asked me to reach out to you, our State partners, other key stakeholders and the public. We will, therefore, be seeking feedback and suggestions that help lead us to a successful implementation of this high-speed rail initiative.

I look forward to working with Congress as we embark on this exciting new journey to transform America's transportation system.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ray LaHood', written over a horizontal line.

Secretary Ray LaHood



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# Executive Summary

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In the 20<sup>th</sup> century, the United States built highway and aviation networks that transformed the country – fueling unprecedented economic expansion, fostering new communities and connecting cities, towns and regions. Strong public-sector leadership along with private industry partnerships were the lynchpins to that success. States forged the path by identifying the needs and investing in key portions of the system, private industry brought innovation and resources, and the Federal Government provided an integrating vision, the policy roadmap and a funding framework that enabled the realization of a national system.

We now face a new set of transportation challenges – creating a foundation for economic growth in a more complex global economy, promoting energy independence and efficiency, addressing global climate change and environmental quality, and fostering livable communities connected by safe, efficient, modes of travel. The existing transportation system requires significant investment simply to rebuild and maintain critical infrastructure and modernize aging technologies. Meeting our 21<sup>st</sup> century challenges will require new transportation solutions as well.

**A New Transportation Vision.** President Obama proposes to help address the Nation’s transportation challenges by investing in an efficient, high-speed passenger rail network of 100- to 600-mile intercity corridors that connect communities across America. This vision builds on the successful highway and aviation development models with a 21<sup>st</sup> century solution that focuses on a clean, energy-efficient option (even today’s modest intercity passenger rail system consumes one-third less energy per passenger-mile than automobiles, for example<sup>1</sup>).

Developing a comprehensive high-speed intercity passenger rail network will require a long-term commitment at both the Federal and State levels. The President proposes to jump-start the process with the \$8 billion down payment provided in the American Recovery and Reinvestment Act (ARRA) and a high-speed rail grant program of \$1 billion per year (proposed in his fiscal year (FY) 2010 budget). These first steps emphasize strategic investments that will yield tangible benefits to intercity rail infrastructure, equipment, performance, and intermodal connections over the next several years, while also creating a “pipeline” of projects to enable future corridor development.

A major reshaping of the Nation’s transportation system is not without significant challenges. After decades of relatively modest investment in passenger rail, the United States has a dwindling pool of expertise in the field and a lack of manufacturing capacity. Federal and State Governments face a difficult fiscal environment in which to balance critical investment priorities, and many will have to ramp up their program management

## *Strategic Transportation Goals*

- Ensure safe and efficient transportation choices
- Build a foundation for economic competitiveness
- Promote energy efficiency and environmental quality
- Support interconnected livable communities

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<sup>1</sup> Based on United States Department of Energy, 2007 Transportation Energy Data Book – for Amtrak and auto transportation; HSR can be even more energy-efficient.

infrastructure. The country's success in creating a sustainable transportation future, however, demands that we work to overcome these challenges through strong new partnerships among State and local governments, railroads, manufacturers and other stakeholders, along with the renewed Federal commitment proposed here.

**Proposed Funding Approach.** In order to meet the goals of the Recovery Act while initiating a transformational new program, we propose to advance three funding “tracks”:

- *Projects.* Provide grants to complete individual projects that are “ready to go” with preliminary engineering and environmental work completed.<sup>2</sup>
- *Corridor programs.* Enter into cooperative agreements to develop entire phases or geographic sections of corridor programs that have completed corridor plans and environmental documentation, and have a prioritized list of projects to meet the corridor objectives; this approach would involve additional Federal oversight and support.
- *Planning.* Enter into cooperative agreements for planning activities using non-ARRA appropriations funds, in order to create the corridor program and project pipeline needed to fully develop a high-speed rail network.

As President Obama outlined in his March 20, 2009, memorandum, *Ensuring Responsible Spending of Recovery Act Funds*, program evaluation will be based on “transparent, merit-based selection criteria.” Criteria will include:

- *Public Benefits.* The extent to which the project or corridor program provides specific, measurable, achievable benefits in a timely and cost-effective manner, including: (1) contributing to economic recovery efforts, (2) advancing strategic transportation goals (outlined above), and (3) furthering other passenger rail goals articulated in recently-passed authorizing legislation.
- *Risk Mitigation.* The extent to which the project or corridor program addresses critical success factors, including: (1) fiscal and institutional capacity to carry out projects, (2) realistic financial plans for covering capital and operating costs, (3) formal commitments from key stakeholders (e.g., railroads and neighboring States), and (4) adequate project management oversight experience and procedures.

**Next Steps.** This Strategic Plan is just the first of several steps intended to further refine and elaborate on this high-speed rail corridor vision – including the program guidance (due June 17), the President's detailed fiscal year 2010 budget request, the National Rail Plan called for by Congress, and discussions over upcoming surface transportation legislation. The U.S. Department of Transportation (DOT) intends to seek structured input from stakeholders and the public throughout the process of developing and implementing the strategy.

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<sup>2</sup> Environmental review and preliminary engineering expenses needed to prepare projects for construction will also be eligible.



# Introduction

After 60 years and more than \$1.8 trillion of investment,<sup>3</sup> the United States has developed the world's most advanced highway and aviation systems. Yet these systems face mounting congestion and rising environmental costs. Moreover, the Nation's current transportation system consumes 70% of our oil demand – much of it from overseas sources – and contributes 28% of greenhouse gas emissions.

The highway and aviation networks will always remain indispensable elements of the country's transportation system, and significant investment is needed in those modes to rebuild essential infrastructure and modernize aging technologies. But it is also clear that the existing infrastructure is insufficient to handle the Nation's future passenger and freight mobility demands. A new approach is needed – one that responds to today's economic, energy, and environmental challenges.

## Strategic Transportation Goals

Transportation investment strategy must address several strategic goals in the coming years:

- Ensure safe and efficient transportation choices. Promote the safest possible movement of goods and people, and optimize the use of existing and new transportation infrastructure.
- Build a foundation for economic competitiveness. Lay the groundwork for near-term and ongoing economic growth by facilitating efficient movement of people and goods, while renewing critical domestic manufacturing and supply industries.
- Promote energy efficiency and environmental quality. Reinforce efforts to foster energy independence and renewable energy, and reduce pollutants and greenhouse gas emissions.
- Support interconnected, livable communities. Improve quality of life in local communities by promoting affordable, convenient and sustainable housing, energy and transportation options.

As Figure 1 illustrates, each transportation mode plays a critical role in intercity passenger transportation, but the comparative advantage of each varies by market factor.

**Figure 1**  
Potential Modal Comparative Advantage by Market<sup>4</sup>

Intercity Distance Mile			
Population Density	0-100	100-600	600-3,000
Light	1) Auto	1) Auto 2) Conventional Rail	1) Auto 2) Air
Moderate	1) Auto 2) Commuter Rail	1) High Speed Rail 2) Auto	1) Auto 2) Air
High	1) Commuter Rail 2) Auto	1) High Speed Rail 2) Air	1) Air

<sup>3</sup> In constant 2009 dollars.

<sup>4</sup> Not intended to be definitive “rankings” but simply to illustrate where modes tend to better meet strategic goals; modes not listed in markets can play important “niche” roles – e.g., bus and long-distance rail.

## High-Speed Rail

High-speed intercity passenger rail can play a critical role in certain travel markets, but the United States has historically failed to invest in this mode. The President proposes a long-term strategy intended to build an efficient, high-speed passenger rail network of 100- to 600-mile intercity corridors, as one element of a modernized transportation system.

In the near term, this proposal lays the foundation for that network by investing in intercity rail infrastructure, equipment and intermodal connections, beginning with an \$8 billion down payment provided under ARRA, and continuing with a high-speed rail grant program of \$1 billion per year (as called for in the President's FY 2010 budget proposal).

The near-term investment strategy seeks to:

- Advance new express high-speed corridor services (operating speeds above 150 mph on primarily dedicated track) in select corridors of 200–600 miles.
- Develop emerging and regional high-speed corridor services (operating speeds up to 90–110 mph and 110–150 mph respectively, on shared and dedicated track) in corridors of 100–500 miles.
- Upgrade reliability and service on conventional intercity rail services (operating speeds up to 79–90 mph).

### Definitions:

#### High-Speed Rail (HSR) and Intercity Passenger Rail (IPR)\*

**HSR – Express.** Frequent, express service between major population centers 200–600 miles apart, with few intermediate stops. Top speeds of at least 150 mph on completely grade-separated, dedicated rights-of-way (with the possible exception of some shared track in terminal areas). Intended to relieve air and high-way capacity constraints.

**HSR – Regional.** Relatively frequent service between major and moderate population centers 100–500 miles apart, with some intermediate stops. Top speeds of 110–150 mph, grade-separated, with some dedicated and some shared track (using positive train control technology). Intended to relieve highway and, to some extent, air capacity constraints.

**Emerging HSR.** Developing corridors of 100–500 miles, with strong potential for future HSR Regional and/or Express service. Top speeds of up to 90–110 mph on primarily shared track (eventually using positive train control technology), with advanced grade crossing protection or separation. Intended to develop the passenger rail market, and provide some relief to other modes.

**Conventional Rail.** Traditional intercity passenger rail services of more than 100 miles with as little as one to as many as 7–12 daily frequencies; may or may not have strong potential for future high-speed rail service. Top speeds of up to 79 mph to as high as 90 mph generally on shared track. Intended to provide travel options and to develop the passenger rail market for further development in the future.

\* Corridor lengths are approximate; slightly shorter or longer intercity services may still help meet strategic goals in a cost-effective manner.

This near-term strategy emphasizes making investments that yield tangible results within the next several years, while also creating a “pipeline” that enables ongoing future corridor development.

## Benefits of Passenger Rail

Rail is well positioned to address many of the Nation’s strategic transportation goals:

*Safe and efficient transportation options.* Rail is a cost-effective means for serving transportation needs in congested intercity corridors. In many cases, modest investment on existing rights-of-way can result in high-speed rail (HSR) and intercity passenger rail (IPR) service with highly competitive trip times, while also providing ancillary benefits to energy-efficient freight rail service. IPR and HSR also have a strong track record of safety in the United States and overseas. In Japan, for instance, the Tokaido Shinkansen trains have operated without a derailment or collision since the inception of operations in 1964.

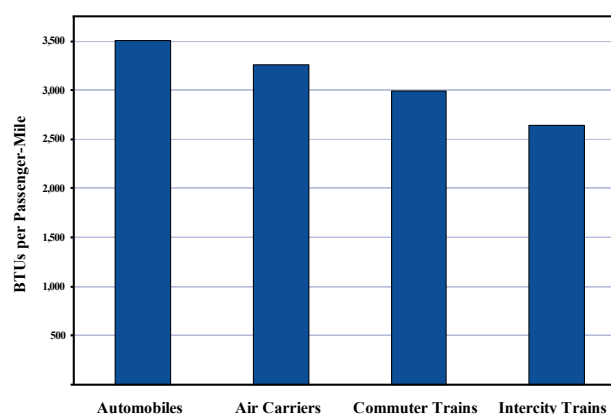
*Foundation for economic competitiveness.* America’s transportation system is the lifeblood of the economy. Providing a robust rail network can help serve the needs of national and regional commerce in a cost-effective, resource-efficient manner, by offering travelers convenient access to economic centers. Moreover, investment in HSR/IPR will not only generate high-skilled construction and operating jobs, but it can also provide a steady market for revitalized domestic industries producing such essential components as rail, control systems, locomotives, and passenger cars.

### *Energy efficiency and environmental quality.*

Rail is already among the cleanest and most energy-efficient of the passenger transportation modes (see Figure 2). A future HSR/IPR network using new clean diesel or electric power can further enhance rail’s advantages. According to one recent study, implementation of pending plans for the federally designated HSR corridors could result in an annual reduction of 6 billion pounds of CO<sub>2</sub> (2.7 MMTCO<sub>2</sub>).<sup>6</sup>

*Interconnected livable communities.* Rail transport has generally been associated with “smart growth” because it can foster higher-density development than has typically been associated with highways and airports. Rail is uniquely capable of providing both high-speed intercity transportation and its own efficient local access and egress system. For example, in the Boston region, Amtrak’s Acela serves two downtown stations connected to public transit – South Station and Back Bay – as well as a suburban station at Route 128. Yet just a few miles down the line to the west, Acela achieves speeds up to 130 miles per hour, and then 150 miles per hour.

**Figure 2**  
Energy Efficiency of  
Passenger Transportation Modes<sup>5</sup>



<sup>5</sup> U.S. Department of Energy, “Transportation Energy Data Book,” Edition 26, May 2007.

<sup>6</sup> Joint 2006 study by the Center for Clean Air Policy and Center for Neighborhood Technology, <http://www.cnt.org/repository/HighSpeedRailEmissions.pdf>

# Background and Context

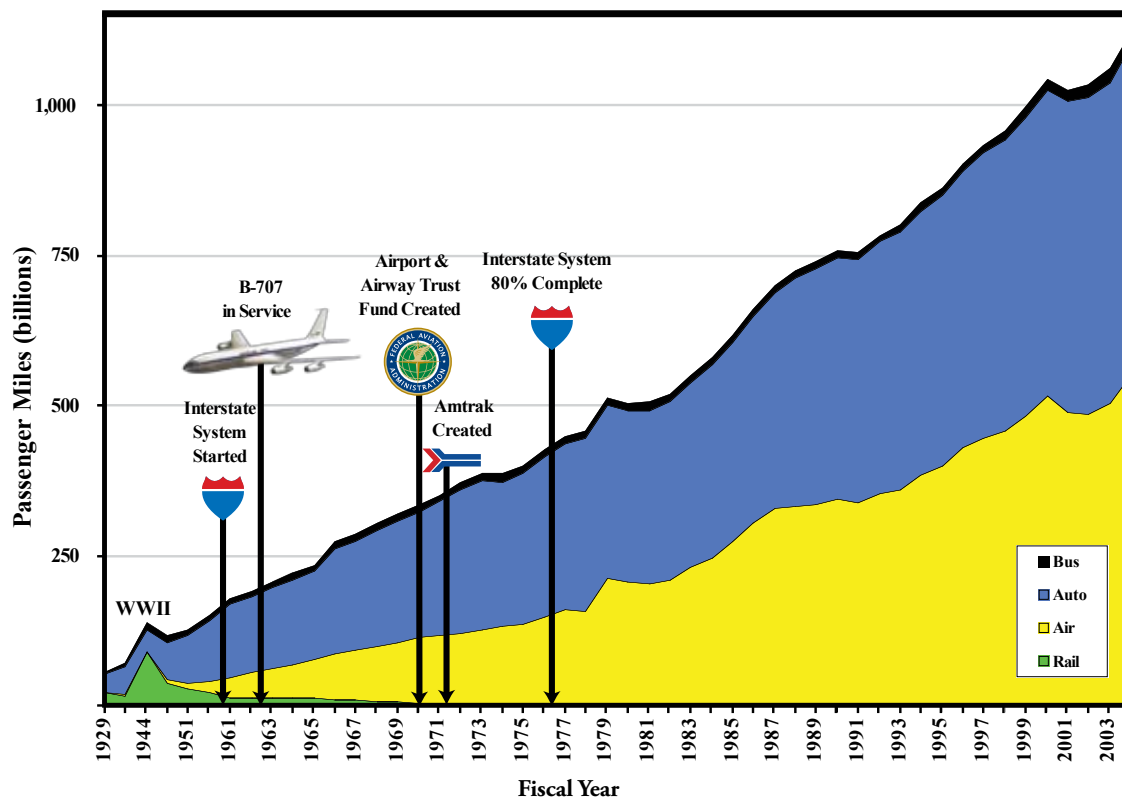
In order to understand the proposed approach for launching high-speed rail in America, it is important to briefly review the history of intercity passenger rail, the challenges in implementing the new vision, and the legislative underpinnings for it.

## Historical Perspective

While it was once the preeminent mode of travel, intercity passenger train travel in America has played a relatively minor role in the second half of the 20<sup>th</sup> Century. As Figure 3 displays, with the expansion of the highway and aviation systems, total intercity travel in the United States has grown dramatically. Intercity passenger rail traffic, however, after peaking during World War II, collapsed in the late 1950s and 1960s, reaching a low point of 4.3 billion passenger-miles in 1972, after the private railroads got out of the business.

*Figure 3*

U.S. Intercity Travel Trends by Modal Share, 1929-2004 <sup>7</sup>

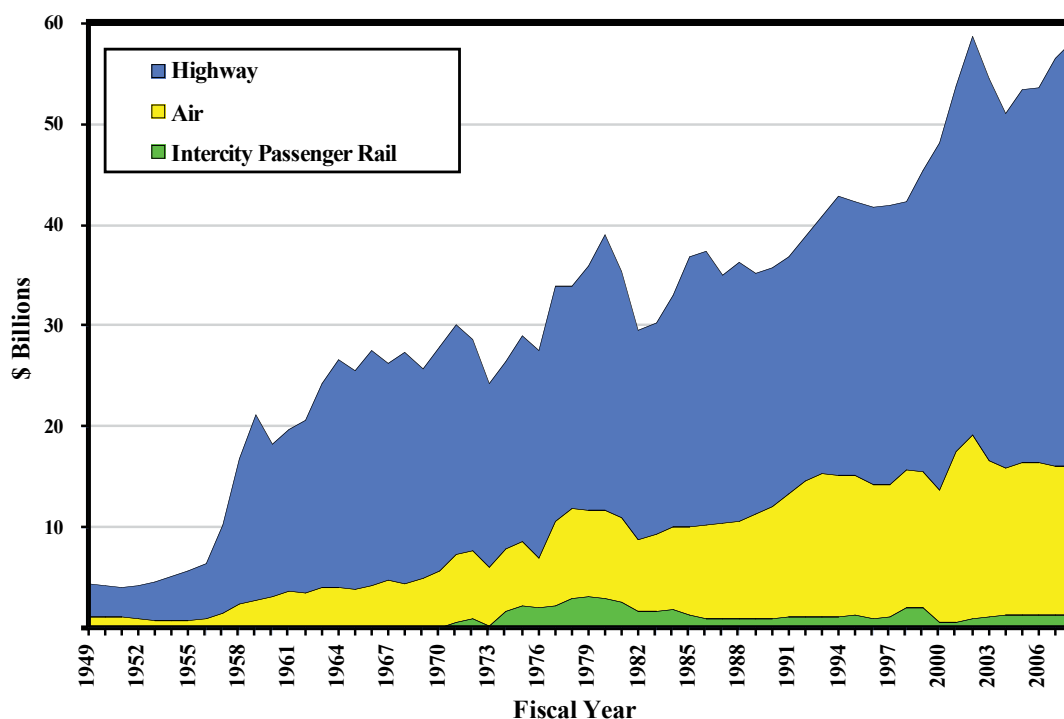


Much of this growth in intercity travel has been fueled by an aggressive public investment strategy. For six decades, Federal transportation policies have focused most intercity transportation investments in the highway

<sup>7</sup> Estimates based on data from U.S. DOT and Association of American Railroads and the American Travel Survey (1995).

and aviation systems. As Figure 4 displays, passenger rail has represented less than 3 percent of the rapidly growing Federal investment in intercity transportation, and until this year, that share has been shrinking.

**Figure 4**  
Federal Investment in Intercity Transportation, 1949-2008  
(2009 Constant Dollars. Time Axis Not to Scale.)



## Funding and Ownership

In 1970, Congress created the National Railroad Passenger Corporation (Amtrak) to preserve remaining passenger service over a national system of routes. Amtrak was formed as a private, for-profit Federally-sponsored corporation. The company was granted rights of access to tracks owned by the private railroads at incremental cost, along with operating priority over freight trains, in exchange for relieving the railroads of their direct passenger service obligations and associated financial losses.

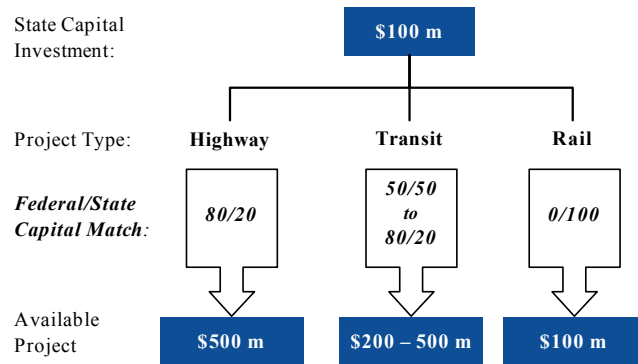
Moreover, Amtrak relies almost exclusively on annual Federal appropriations to cover both its capital needs and operating deficits, making long-term planning decisions difficult. Amtrak's capital investments have largely failed to keep up with the needs of its existing fleet and infrastructure, and aside from the Northeast Corridor (NEC) Improvement Project, few upgrades to the system have been made. States like California, Illinois, North Carolina, Washington and others have independently sponsored rail services and capital investments, but significant modernization of rail systems and service has remained out of reach of many States. While other modes have historically benefited from dedicated Federal funding for infrastructure investment, rail has had no such Federal capital matching source. Figure 5 illustrates how State capital dollars can be leveraged by Federal matching dollars for each mode.<sup>8</sup>

<sup>8</sup> Federal matching funding (i.e., leverage) varies by specific project; these numbers are examples.

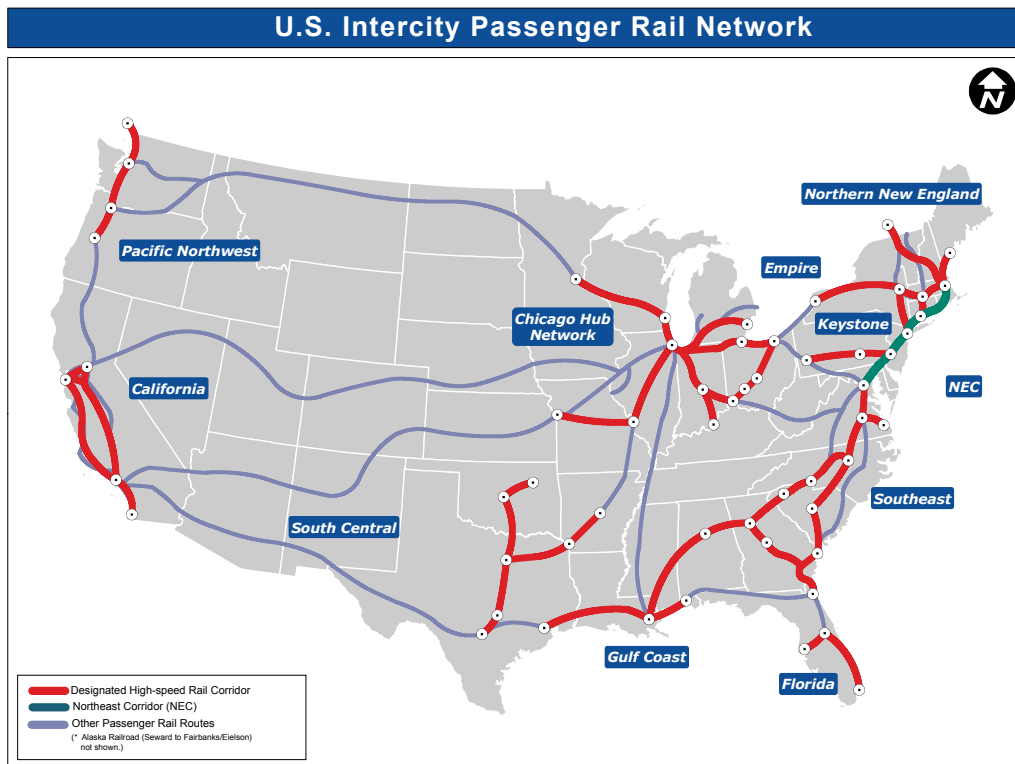
## Designated High-Speed Rail Corridors

Over the past two decades, the Federal Government has taken small steps to lay the groundwork for an expansion of HSR and IPR, but has provided little funding for these efforts. In 1991, the Intermodal Surface Transportation Efficiency Act (ISTEA) established a program to fund safety improvements at highway/rail grade crossings on corridors to be “designated” as high-speed intercity passenger rail corridors; the maximum funding for the program in most years was about \$5 million. Of the 11 authorized high-speed corridor designations, several successive Secretaries of Transportation have designated 10 (displayed, along with other intercity passenger routes, in Figure 6).<sup>9</sup>

**Figure 5**  
Example: Historical Federal Funding Leverage by Mode



**Figure 6**  
Designated High-Speed Rail Corridors and the North East Corridor



<sup>9</sup> See [www.fra.dot.gov/us/content/618](http://www.fra.dot.gov/us/content/618) for more information. Note that corridor designations were made based on State applications for corridors expected to achieve 90 mph – to address highway-rail grade crossings; since the NEC already operated above 90 mph and had few grade crossings, no State applied.

## International Examples

After leading the world in rail development during the 19<sup>th</sup> and early 20<sup>th</sup> centuries, the United States has more recently lagged behind other countries in developing modern intercity passenger rail. Over the last several decades, many countries in Europe and Asia have developed HSR systems. Figure 7 highlights several examples of HSR system characteristics around the world.

*Figure 7*

International Examples of HSR<sup>10</sup>

	Japan	France	Germany	UK	China	US
Date of initiation	1964	1981	1988	2003	2007	1969/2000
System length (route-miles)	1,360	1,180	798	70	588	457
Top operating speed (mph)	188	199	186	186	186	125/150
HSR ridership (millions)	300	100	67	8	No Data	11

HSR in Europe often developed gradually, moving by stages from “emerging” to “regional” to “express,” as conventional rail services reached capacity. For example, in the 1950s and 1960s, the French National Railways introduced high-speed services at up to 125 mph, including the Mistral and the Capitole, over existing trackage in the Paris–Lyon and Paris–Toulouse markets. After those services had proven their value, the French wholly or partially replaced them with TGV<sup>11</sup> services in the 1980s. In the United States, an analogous approach marked the NEC, in which the Metroliners of the late 1960s and 1970s proved the concept that passengers would ride trains that competed with air on door-to-door travel times – thus leading to the Northeast Corridor Improvement Project.

## Current Challenges

Against this backdrop of limited historical investment and unique institutional arrangements, there are a number of challenges inherent in advancing a new passenger rail vision.

*Lack of Expertise and Resources.* The relatively small investment in passenger rail in recent decades and growing retirements of personnel throughout the rail sector have resulted in a shrinking pool of experts in the field, including engineers skilled in signal, track, and rolling stock design, along with experienced rail planners and managers. A renewed investment program will eventually bring more expertise back into the industry, but that process is likely to lag behind the need to plan, implement and manage a major new program. Moreover, the Federal and State agencies responsible for administering this effort will need to aggressively build capacity to manage their new portfolios; and the freight railroads and Amtrak will need to identify resources to support the new effort without diverting from their core operating and maintenance responsibilities.

<sup>10</sup> International data from: GAO report, High-Speed Passenger Rail (GAO-09-317); UIC High-Speed Department, “High-Speed Lines in the World” [www.uic.asso.fr/uic/spip.php?article573](http://www.uic.asso.fr/uic/spip.php?article573); and Jane’s World Railways 2007-2008. International ridership data is from 2007, except for Germany and U.K., which are from 2005. Amtrak data from FY 2008; represents both NEC Regional (predecessor service began in 1969) and Acela services.

<sup>11</sup> “Train à grande vitesse” or “high-speed train.”

*State Fiscal Constraints.* The current economic downturn has left many States in a precarious fiscal condition. Many lack resources to make capital investments or take on potential rail operations expenses. In spite of these fiscal constraints, some States have continued to invest in passenger rail, even without Federal support, and many have funded operating costs for running intercity passenger rail services. While an expansion of passenger rail and development of HSR fits well into the transportation vision of many States, decisionmakers will have been confronted with difficult budget decisions to advance these programs in coming years, even with an expanded Federal commitment.

*Partnerships with Private Railroads.* Although Federal law provides Amtrak a right of access to private railroad facilities, that access has been constrained by the capacity of rail lines and by freight traffic. With the prospect of significant public funding flowing through States to support capital investments – often in existing, privately owned rail lines – for expanded and improved passenger services, partnerships will be needed between States and the private railroads that own the infrastructure. Whether for comprehensive corridor improvement programs or discrete projects, State-railroad agreements will be needed to ensure that public investments will fulfill, and continue to be available for, their intended purposes.

*Multi-State Partnerships.* Most intercity passenger rail corridors, including designated high-speed rail corridors, cross State boundaries. Viable HSR corridor strategies will, therefore, require a multi-State partnership in many cases. To successfully plan, fund, build and operate these corridors, the States involved will need to act in a coordinated fashion, through an interstate compact, a multi-State agreement, or other instrument. Any such multi-State understanding will require the backing of several political and administrative entities within each State.

*Need for High-Speed Rail Safety Standards.* While most high-speed systems overseas have a good safety record, usually on dedicated track, U.S. railroad safety standards are designed to keep passengers and crew safe in a mixed operating environment with conventional freight equipment, which is much heavier than comparable foreign equipment. The advent of Positive Train Control (PTC), crash energy management, and other advances provides the United States with an opportunity to revise its safety approach in a manner that accelerates the development of high-speed rail while preserving and improving upon a strong safety regime. This will be a challenge for the Federal Railroad Administration (FRA) as it seeks to administer its critical safety responsibility and facilitate high-speed rail development. The systems approach required to ensure safety of new HSR corridors will necessitate consideration of additional changes in several regulations, including equipment, system safety, and collision and derailment prevention.



## Legislative Foundation

Until last year, the legislative debate surrounding intercity passenger rail has focused primarily on institutional and structural policy priorities regarding Amtrak, and limited efforts to improve services centered primarily on the Northeast Corridor. Beginning in FY 2008, however, Congress established a new framework for intercity passenger rail development with the passage of four key pieces of legislation:

- The FY 2008 Appropriation Act, which established a new IPR State Grant Program.<sup>12</sup>
- The Rail Safety Improvement Act of 2008 (RSIA).<sup>13</sup>
- The Passenger Rail Investment and Improvement Act of 2008 (PRIIA).<sup>14</sup>
- The American Recovery and Reinvestment Act of 2009 (ARRA).<sup>15</sup>

**IPR Capital Assistance to States.** The major shift in Congressional direction for intercity passenger rail development began with the establishment of a new pilot program for joint Federal-State IPR capital investment, known as Capital Assistance to States – Intercity Passenger Rail Service (“State Grant Program”). Under this program, \$30 million in Federal funding was made available to States on a competitive basis, subject to a 50-percent non-Federal match. The law established basic eligibility and evaluation criteria, and allowed up to 10 percent of the funding to be used for rail corridor planning grants. Although Federal-State IPR capital investment programs had been contemplated before (e.g., under the original proposals for the Swift Rail Development Act of 1994), the FY 2008 program marked the first time any such proposal had been enacted into law.

**Rail Safety Improvement Act of 2008 (RSIA).**<sup>16</sup> RSIA reauthorizes and augments FRA’s safety programs. Notably, from an intercity passenger rail development perspective, RSIA requires implementation of PTC systems on every main line over which intercity rail passenger or commuter rail passenger service is regularly provided.<sup>17</sup> Each Class I railroad carrier and each regularly scheduled intercity or commuter railroad must install PTC systems by December 31, 2015, for governing operations on: (1) its main line over which intercity rail passenger or commuter rail passenger service is regularly provided; (2) its main line over which hazardous materials that are poisonous- or toxic-by-inhalation are transported; and (3) such other tracks as the Secretary designates by regulation or order. Addressing the practical requirements of this provision remains a financial challenge for passenger and freight rail operators.

**Passenger Rail Investment and Improvement Act of 2008 (PRIIA).** Enacted as part of the same bill as RSIA, PRIIA represents the most sweeping Congressional action on intercity passenger rail since those that created Amtrak and the Northeast Corridor Improvement Project during the 1970s. In addition to reauthorizing

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<sup>12</sup> Included in Division K of Public Law 110-161.

<sup>13</sup> Division A of Public Law 110-432.

<sup>14</sup> Division B of Public Law 110-432.

<sup>15</sup> Public Law 111-5.

<sup>16</sup> Public Law No. 110-432, Division A, enacted Oct. 16, 2008.

<sup>17</sup> “Positive Train control” means a system designed to prevent collisions between trains, overspeed derailments (derailments caused when a train exceeds speed limits), incursions into established work zone limits (i.e., for roadway workers maintaining track), and the movement of a train through an improperly positioned switch.

Amtrak, PRIIA builds upon the experience of the FY 2008 State Grant Program by establishing three new competitive grant programs for funding high-speed and intercity passenger rail capital improvements:

- *Intercity Passenger Rail Service Corridor Capital Assistance* (Section 301).<sup>18</sup> Under this section, the broadest of the three new grant programs established under PRIIA, States (including the District of Columbia), groups of States, interstate compacts, and public IPR agencies established by one or more States may apply for grants to fund up to 80 percent of the cost of capital improvements to benefit all types of IPR service. In order to be eligible for funding under this program, proposed projects must be included in a State Rail Plan.
- *High-Speed Rail Corridor Development* (Section 501).<sup>19</sup> Although similar in structure, criteria, matching requirements, and conditions as Section 301, eligibility for this program is restricted to projects intended to develop high-speed rail corridors. Such projects must be located on a Federally designated HSR corridor, and be intended to benefit IPR services reasonably expected to reach speeds of at least 110 miles per hour. Participant eligibility for this program is also broadened from Section 301 to include Amtrak.
- *Congestion Grants* (Section 302).<sup>20</sup> This program authorizes grants to States or to Amtrak (in cooperation with States) for financing up to 80 percent of the capital costs of facilities, infrastructure, and equipment for high-priority rail corridor projects necessary to reduce congestion or facilitate ridership growth in IPR transportation. The program incorporates the same grant conditions as those applicable under Sections 301 and 501.

In addition to establishing these new grant programs, PRIIA includes a number of other relevant provisions, including:<sup>21</sup>

- *Rail Planning*.<sup>22</sup> PRIIA attempts to put rail on an equal footing with planning for other transportation modes by requiring State Rail Plans as a prerequisite to receiving grant funding. These plans are to be comprehensive documents intended to lay out the State's vision, objectives, service goals, capital investment plans, and project funding priorities for all passenger and freight rail services. PRIIA also requires DOT to develop a National Rail Plan that is consistent with approved State Rail Plans and outlines the national rail policies and priorities to promote an integrated, cohesive, efficient, and optimized rail system for the movement of goods and people.
- *Public-Private HSR Concepts* (Section 502). PRIIA encourages public-private partnerships through a call for proposals for the financing, design, construction, operation and maintenance of high-speed rail services operating within one of the designated HSR corridors or the NEC. FRA published a Request for Expressions of Interest in the Federal Register on December 16, 2008, initiating the process.

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<sup>18</sup> 49 U.S.C. Chapter 244.

<sup>19</sup> 49 U.S.C. § 26101 *et seq.*

<sup>20</sup> 49 U.S.C § 24105.

<sup>21</sup> See <http://www.fra.dot.gov/downloads/PRIIA%20Overview%20031009.pdf> for more information.

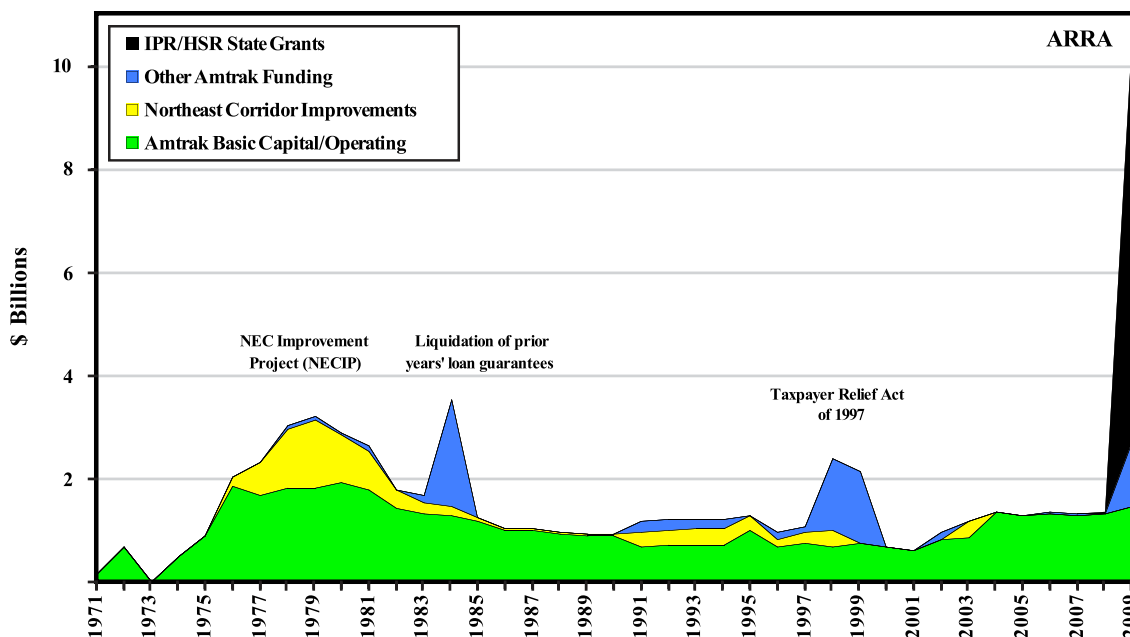
<sup>22</sup> Sections 303 and 307 – 49 U.S.C. Chapter 227 and § 103(j)(2)-(3).

PRIIA states that eligible projects are to be advanced to commissions for review; and that meritorious projects are to be recommended to the DOT Secretary and subsequently to Congress for action.<sup>23</sup>

**American Recovery and Reinvestment Act of 2009.** The \$8 billion HSR/IPR funding contained in ARRA represents the first appropriations for Sections 301, 302 and 501 of PRIIA, and a major “jump start” for the widespread development of improved intercity passenger rail service. In keeping with the urgent nature and underlying purposes of ARRA, the Act waives the non-Federal matching funding requirements for all three programs, suspends the requirement that proposed projects be included in a State Rail Plan (along with the eligibility of State Rail Planning costs for ARRA funding), and allows for the issuance of interim guidance to govern the procedures and conditions for the programs. ARRA further directs the Secretary of Transportation to give priority to projects that support the development of HSR service, and requires that the Secretary submit to Congress this Strategic Plan describing how the funding will be used to further that objective. Unlike funding for other programs provided through ARRA, the law allows the intercity passenger rail development funding to remain available for obligation until September 30, 2012.

**Annual Appropriations.** Since Amtrak’s inception, funding for intercity passenger rail has been provided through the annual appropriations process, often without even the benefit of an authorization that sets longer-term planning parameters. Moreover, funding has focused on basic operating and capital maintenance requirements, with capital improvement funds primarily dedicated to the NEC. Any development of other corridors around the country has historically relied on State funding. Starting with the FY 2008 and FY 2009 appropriations, and now with ARRA, the Federal Government is committing for the first time to become a substantial partner in high-speed intercity passenger rail investment. Figure 8 shows Federal funding over the last four decades for Amtrak and recently for States.

**Figure 8**  
Federal Funding for Intercity Passenger Rail, 1971-2009



<sup>23</sup> See 73 FR 76443.

# Proposed Strategy

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While the \$8 billion provided in ARRA is a substantial Federal commitment to high-speed rail development, it represents only a down payment on a longer-term passenger rail development strategy. Coupled with reliable funding of Amtrak assets and services, an ongoing annual investment program is needed to build a 21<sup>st</sup> century transportation network that includes a central role for high-speed passenger rail in corridors of 100–600 miles. President Obama has proposed to begin that ongoing investment in his FY 2010 budget proposal, which calls for high-speed rail funding of \$1 billion per year for 5 years.

ARRA directs funds toward projects that will aid in near-term economic recovery, while laying a foundation for longer-term economic stability and competitiveness. The approach we propose for the HSR/IPR program seeks to do just that. Unlike other established programs funded by ARRA, the \$8 billion in HSR/IPR funding represents the first commitment of Federal funds towards discretionary grant programs authorized just last year in PRIIA (summarized above). As a new program, the strategy for its implementation must address a unique set of challenges. A sustainable program that builds out a modern high-speed rail network to meet the President's strategic transportation goals will require substantial planning efforts on the part of States and the Federal Government. PRIIA lays the groundwork for these efforts through its requirements for State Rail Plans and a National Rail Plan. In the meantime, the strategy for deploying ARRA funding will have to rely on existing plans to establish project funding priorities.<sup>24</sup>

States have had little time to prepare for a Federal capital matching program for intercity passenger rail of this magnitude. Nonetheless, some States have been putting together corridor plans and even investing some of their own resources in development of those corridors. Other States have identified incremental projects that yield benefits to existing intercity passenger rail services (e.g., relieving infrastructure bottlenecks, adding frequencies, or upgrading equipment). Yet others are at just the early stages of planning but, with some assistance, can be in a position to develop services in the coming years.

## Funding Approach

DOT's implementation of the \$8 billion HSR/IPR program must recognize these realities while meeting the goals of ARRA, and at the same time, the strategy must help advance the longer-term goal of developing a national HSR/IPR network of corridors. In order to meet these diverse constraints, our strategy establishes three approaches, or "tracks," for funding under ARRA and annual appropriations:

1. *Projects.* Grants to complete individual projects eligible under Sections 301 (IPR projects) and Sections 302 (congestion projects) described above, for the benefit of existing services<sup>25</sup>. Eligible projects include infrastructure, facilities and equipment. In order to qualify, these projects must: (a) be "ready to go" (i.e., environmental work required by law (National Environmental Policy Act, or NEPA) and preliminary engineering (PE) are complete),<sup>26</sup> and (b) demonstrate "independent utility."<sup>27</sup> For projects that meet the

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<sup>24</sup> As described in the Legislative Foundation section above, State rail planning is not eligible for funding under ARRA.

<sup>25</sup> Project eligibility for Section 301 funding provided under ARRA is limited by the statute to include only construction and rehabilitation projects as defined in 49 U.S.C. § 24401(2)(A) and (B), thus excluding both state rail planning projects (under 49 U.S.C. § 24401(2)(C)) and liability costs (under 49 U.S.C. § 24401(2)(D)).

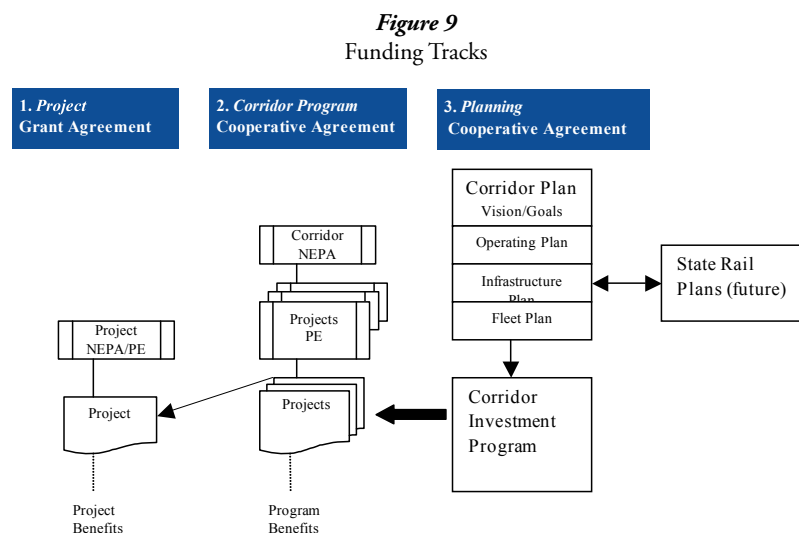
<sup>26</sup> Environmental documentation to comply with the National Environmental Policy Act and related laws require completion of preliminary engineering design sufficient to evaluate environmental effects.

<sup>27</sup> "Independent utility" means the project is usable and provides benefits even if no additional transportation improvements in the area are made.

independent utility test but have not yet completed NEPA and PE, funding is available to conduct NEPA and PE work to make projects ready to go and, therefore, eligible under a subsequent grant solicitation. For rolling stock proposals, DOT will encourage acquisition of new, standardized, interoperable equipment that incorporates modern safety features.<sup>28</sup> Under this track, funds would be obligated for successful applications under standard grant agreement terms and conditions, including ARRA oversight and reporting procedures.

2. *Corridor programs.* Cooperative agreements to develop entire segments or phases of corridor programs eligible under Section 501 (HSR) and Section 301 (IPR), benefiting existing or new services. In order to qualify, these corridor programs must: (a) be based on a corridor plan that establishes service objectives and includes a prioritized list of projects to achieve those objectives;<sup>29</sup> and (b) have completed sufficient corridor/section/phase programmatic or project environmental (NEPA) documentation and sufficient planning to provide reasonable project cost and benefit estimates. For corridor programs that do not qualify under (a) and (b) above, funding is available to complete this work and make corridor programs eligible for subsequent solicitations. Under this track, funds for selected applications of a corridor program phase and/or geographic section would be set aside at the outset, and provided at pre-specified milestone approval points. This approach would involve a higher level of Federal oversight and support than under even the heightened scrutiny inherent in standard ARRA grant agreements.
3. *Planning.* Cooperative agreements for planning activities (including development of corridor plans and State Rail Plans) eligible for funding under Section 301 of PRIIA, using non-ARRA funds. This third track provides States an opportunity to prepare themselves for any funding remaining in subsequent rounds of ARRA, and/or future year appropriations. It is intended to help create the pipeline for future corridor development needed to build out a national HSR/IPR network.

Figure 9 illustrates this three-track funding approach.



<sup>28</sup> DOT plans to work with stakeholders to develop a process for facilitating this rolling stock approach.

<sup>29</sup> Corridor plans are an integrated set of studies that address: travel demand forecasts, existing rail line conditions, conceptual engineering, forecasts of future rail operations and simulation modeling, rail service plans, capital and operating financial plans, and a funding plan.

# Project Selection

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As President Obama outlined in his March 20, 2009, memorandum, *Ensuring Responsible Spending of Recovery Act Funds*, implementing agencies are to “develop transparent, merit-based selection criteria that will guide their available discretion in committing, obligating, or expending funds under the Recovery Act.” DOT is committed to carrying out this requirement through clear selection criteria and evaluation procedures.

The detailed application guidance to be issued by June 17, 2009, will provide specific instructions for applicants. In this strategic plan, we provide an overview of the criteria that will be used to evaluate applications along the three tracks outlined above. The forthcoming guidance will describe in more detail the application prerequisites for each program track along with the specific criteria that will be used to evaluate applications.

## Prerequisites

Applications for project or program funding (i.e., tracks (1) and (2), respectively) will need to address several elements critical to the success of high-speed rail and intercity passenger rail programs and projects. The scope and specificity of each depends on stage of development (e.g., final design/engineering, construction) and the application track (i.e., corridor program vs. project), but all applications will need to address these prerequisites in some fashion. Prerequisites include:

- *Planning and Project Development.* Although the State rail planning requirements of PRIIA are waived, applicants must demonstrate that their project or corridor program: (a) is consistent with any overall plan for developing the corridor, segment of the corridor or terminal area; (b) has “independent utility” – that is, can achieve benefits regardless of whether other complimentary projects are implemented; and (c) addresses all safety and other regulatory requirements. Projects will need to have PE and environmental work completed before construction can be approved.<sup>30</sup>
- *Stakeholder Agreements.* Applicants will need to have in place, or describe clearly how they will reach, written agreements to clarify roles and responsibilities and to ensure project success with: (a) other States involved in the corridor; (b) the infrastructure owners/host railroads; (c) the operator of the proposed service; and (d) any other stakeholders critical to project success. For corridor program applications, DOT strongly recommends reaching “master agreements” to cover the delivery of projects (in phases if relevant) over the course of the corridor development process.
- *Financial Plan.* Applicants will need to provide operating financial forecasts, based upon a rigorous approach to estimating ridership/revenue and operating and maintenance costs, and identify how they will cover operating losses, if any. The operating expenses funding proposal should identify any existing legislative commitments and/or a previous record of covering operating costs of intercity passenger rail services, recognizing that the role of the Federal Government under ARRA and PRIIA is to provide capital funding. The plan should also detail project capital costs, how they were estimated, and whether any non-Federal sources of funding will be included.

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<sup>30</sup> PE and NEPA are eligible expenses under ARRA HSR/IPR grants; planning is not eligible under ARRA, but is eligible under FY 2009 appropriations IPR grants.

- *Project/Risk Management Plan.* As called for in PRIIA,<sup>31</sup> and reinforced in the accountability requirements of ARRA, applicants will need to demonstrate that they have the capability to effectively manage corridor programs and projects. These plans will need to include items such as staff resources, budget, schedules, control/change order procedures, quality control processes, oversight provisions, and reporting mechanisms. The plans will also need to address the specific accountability, certifications, risk management and reporting procedures specified in ARRA. Demonstrated experience in successfully managing programs and projects of similar complexity and scrutiny will be helpful in making such a showing.

## Selection Criteria

As the President's March 20 memo specified, project selection criteria are intended to advance projects that deliver programmatic results, achieve economic stimulus, achieve long-term public benefits, and satisfy transparency and accountability objectives. In order to ensure these objectives are met, HSR/IPR grant applications will be evaluated based on the following criteria, which will be detailed further in the upcoming guidance:

*Achieving Public Benefits.* The extent to which the project or corridor program provides specific, measurable, achievable benefits in a timely and cost-effective manner in relation to public sector and Federal investment costs. Applications will be evaluated on how well their project or corridor program:

- Contributes to economic recovery efforts by creating and/or saving jobs.
- Advances the President's strategic transportation goals to ensure safe and efficient transportation choices, build a foundation for economic competitiveness, promote energy efficiency and environmental quality, and support interconnected livable communities.
- Furthers other high-speed and intercity passenger rail goals outlined above and in PRIIA.

*Mitigating Risks.* Applications will be evaluated on the extent to which their project or corridor program addresses critical success factors (i.e., mitigates risk factors), including the approaches and procedures used to meet the prerequisites (listed above):

- Fiscal and institutional capacity to carry out and manage the project.
- Financial projections and plans to cover cost.
- Commitments from key stakeholders, including, notably, other States involved in the corridor, and the host railroads that own any existing required rail infrastructure.
- Experience and procedures for managing project financial, management, and construction risks.

*Other Criteria.* Other key considerations include:

- Timeliness of achieving benefits.
- Sufficiency of the reporting and management approach.
- Completeness and quality of the application.

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<sup>31</sup> Through the requirements specified in 49 U.S.C. § 24403.

# Implementation Schedule

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The proposed schedule for implementing this program seeks to balance the constraints facing potential applicants with the imperatives of ARRA and of developing a sustainable program for high-speed rail development. It contemplates two rounds, each with several solicitations, and subsequent rounds if funds are not completely obligated in the initial rounds.<sup>32</sup> Figure 10 summarizes the application solicitation schedule, along with the policy development activities and outreach (described below in “Next Steps”).

**Round 1.** This round covers all three tracks outlined above, using both ARRA and FY 2009 appropriations funds.

- *Solicitation 1.1 –Projects.* This solicitation is aimed at projects (track 1 above) that can either: (i) start immediately – i.e., planning, engineering, environmental and other preliminary work has all been completed; or (ii) require PE/NEPA work in order to develop firm cost estimates and construction plans, and thus be ready-to-go in future rounds. Eligible projects include capital projects funded under ARRA that are eligible under Sections 301 and 302 of PRIIA, or capital project funded under the FY 2009 Omnibus Appropriations Act (State Grant Program).
- *Solicitation 1.2 – Corridor Development Programs.* This solicitation is aimed at corridor programs (track 2 above) that have completed the preliminary planning, environmental, and other pre-construction work required to proceed.<sup>33</sup> Eligible programs include phases and/or sections of comprehensive corridor development plans funded under ARRA that are eligible under Sections 501 and 301 of PRIIA.
- *Solicitation 1.3 –Planning.* This solicitation is aimed at State corridor planning efforts (track 3 above). Eligible projects include planning activities eligible under the FY 2009 Omnibus Appropriations Act (State Grant Program).

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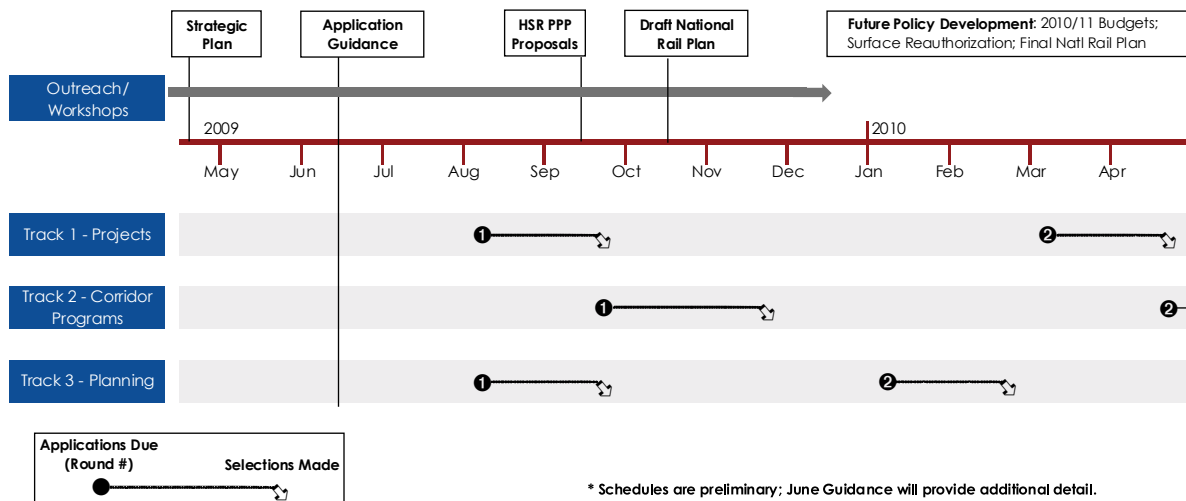
<sup>32</sup> Schedules are preliminary and subject to revision in application guidance document to be released in June.

<sup>33</sup> Applicants may include, under the umbrella of the corridor development program applications, projects that they may also have applied for in solicitation 1.1.



**Round 2.** This round provides an opportunity for resubmission of revised applications that were unsuccessful in Round 1, along with new proposals – likely including the same target projects and eligibility criteria. If FY 2010 appropriations for HSR/IPR projects are available, they would be coordinated with the ARRA solicitations (as in Round 1). Subsequent solicitations may be added to other future funding opportunities if ARRA funds remain available.

**Figure 10**  
HSR/IPR Implementation Timeline



## Next Steps

This Strategic Plan is just the first of several products intended to further refine and elaborate on the vision for a new national network of high-speed intercity passenger rail corridors. The DOT intends to seek structured input from stakeholders and the public starting after the release of this plan and throughout the process of developing and implementing the strategies to achieve this vision.

In the coming months, DOT will be completing several Congressionally mandated tasks, and will be initiating several others intended to advance this strategy (see Figure 11).

*American Recovery and Reinvestment Act of 2009.* DOT will be taking the following actions to comply with ARRA and advance the strategy outlined in this document:

- Issue Interim Guidance. DOT will issue guidance detailing eligibility requirements, application prerequisites, evaluation criteria and other procedures by June 17 as required in ARRA.
- Issue Solicitations. DOT will issue solicitations for applications under ARRA and FY 2009 appropriations per the timeline outlined above.

- Provide Progress Reports. As directed in ARRA and in Administration policy, DOT will be providing frequent, regular reports on progress in implementing the Act.

*FY 2010 Budget.* The President will be issuing his detailed budget request for FY 2010 in the next month. This budget will detail the request for a 5-year, \$5 billion program of high-speed rail grants as outlined in the President's budget blueprint issued in February.

*Surface Transportation Reauthorization.* Further discussions on the development of this new program may be included in upcoming discussions on reauthorization of surface transportation programs. As the President indicated in his budget proposal, the Administration intends to work with the Congress to reform surface transportation programs, both to put the system on a sustainable financing path and to make investments in a more sustainable future, enhancing transit options and making our economy more productive and our communities more livable.

*National Rail Plan.* Under PRIIA Section 307, DOT is to develop a National Rail Plan that is consistent with approved State Rail Plans and national rail needs to promote an integrated, cohesive, efficient, and optimized national rail system for the movement of goods and people. The National Rail Plan will expand upon the vision outlined in this document, including identifying specific corridor goals and measures of success. The plan will likely provide an opportunity to revise the high-speed rail designations, including a new category of approved corridors, i.e., those corridors for which a detailed corridor plan and institutional framework are in place to permit development of a successful corridor that meets the national rail goals.

*Figure 11*

