U.S. House of Representatives
Committee on Transportation and Infrastructure
Washington, DC 20515

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January 25, 2011

SUMMARY OF SUBJECT MATTER

To: **Members of the Committee on Transportation and Infrastructure**

From: **Subcommittee on Railroads, Pipelines, and Hazardous Materials**

Subject: **Hearing on "Developing True High Speed Rail in the Northeast Corridor – Stop Sitting on our Federal Assets"**

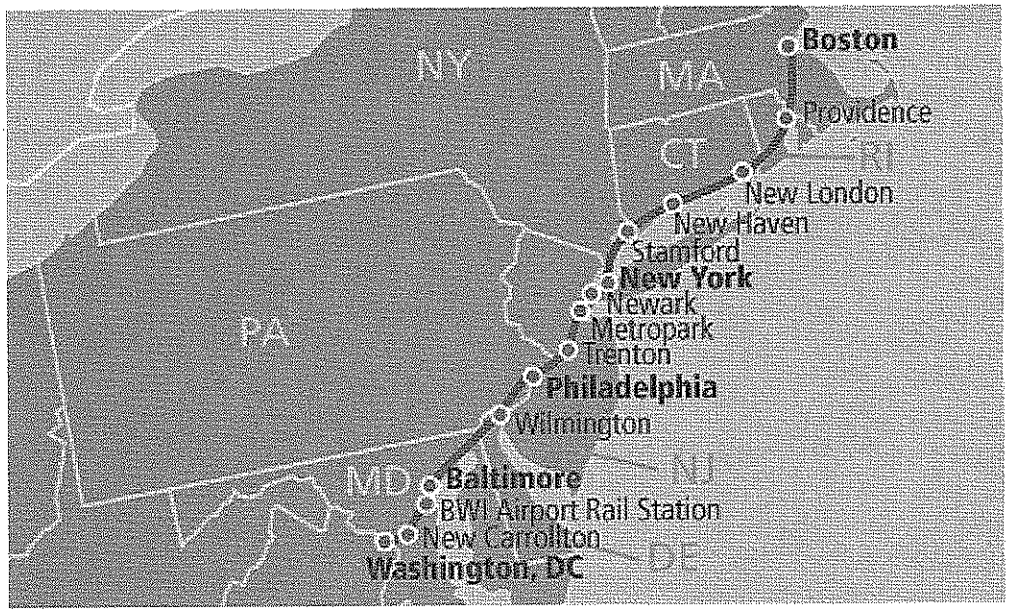
Purpose of Hearing

On Thursday, January 27, 2011, at 10:00 a.m., at Grand Central Station, Northeast Balcony, New York City, New York, the Committee on Transportation and Infrastructure is scheduled to meet to receive testimony regarding developing true high speed rail in the Northeast Corridor. The hearing will highlight the importance of high speed rail to economic development; opportunities and incentives for private sector investment in the Northeast Corridor; and the need for competition and public private partnerships.

Immediately following the hearing, Members will participate in an informal roundtable with government and private sector participants to continue and build upon the issues raised and discussed in the formal testimony at the hearing.

History of the Northeast Corridor

The Northeast Corridor (NEC) is one the most valuable transportation assets in the United States, providing the only continuous physical link, along with I-95, between the major population centers of Washington, DC, Baltimore, Philadelphia, New York City, and Boston. The Northeast mega-region is the most densely populated area in the United States, with 18 percent of the nation's population living in just 2 percent of its land area. Taken as a whole, the NEC region would be the sixth largest economy in the world with a GDP of $2.59 trillion, and a population equal to the United Kingdom.



Amtrak, the government-subsidized intercity passenger rail provider, owns and controls nearly the entire NEC. In 1976, Amtrak acquired most of the NEC assets from the freight rail operator Conrail as port of the disposition of the bankrupt Penn Central Transportation Company's assets. Conrail, the consolidated government-supported freight operator, did not want to operate passenger services and essentially donated this valuable property to Amtrak.

Other than in the NEC, Amtrak relies almost entirely on the privately owned freight railroad network. The nation's freight railroads host Amtrak on approximately 22,000 miles of track, while Amtrak owns only 650 miles of track nationwide. Of the 437 total miles of the NEC, Amtrak owns and controls 363 miles, with states controlling the remained in portions of the route north of New York City.

Over the last three decades, Amtrak and the Federal Railroad Administration (FRA) have managed two major capital improvement projects to the NEC at a total cost to taxpayers of nearly $6 billion. However, despite these capital improvement projects, the NEC still falls far short of international high-speed standards. The Acela, Amtrak's high speed service, averages only 83 miles per hour between DC and New York and only 72 miles per hour between New York and Boston. Internationally, high-speed trains can average 150 mph and many nations are upgrading systems to achieve top speeds of 220 mph.

International Examples of High-Speed Rail

High-speed rail was first introduced with the Japanese Shinkansen, or so-called "bullet," trains which in 1964 began operating at speeds of more than 150 mph. In 1981, France inaugurated a 255 mile HSR line between Paris and Lyon, cutting travel time from four hours to two hours. In 1991, Germany unveiled a 203-mile HSR service between Hanover and Wurzburg and a 62-mile HSR service between Mannheim and Stuttgart. Since then, other nations have created additional HSR lines. In 1992, Italy and Spain started new services. In 1998, Sweden upgraded its rail lines to accommodate HSR and in 2000 the Netherlands started HSR service between Amsterdam and Brussels.

Today's HSR systems fall into two categories: steel-on-steel systems and magnetic levitation systems. The only magnetic levitation system in current revenue operation is the Shanghai Pudong International Airport line, a 19-mile alignment where the train reaches speeds of 268 mph, the world's fastest train in regular commercial service. Steel-on-steel HSR systems are vastly more common, and operate on exclusive rights-of-way through a combination of electrification and other advanced components, expeditious alignments, and state-of-the-art rolling stock. These HSR systems can attain performance well above what is capable with conventional rail technology.

France

France has 18,144 miles of track in revenue service, of which 963 miles were high speed lines. According to the Government Accountablity Office, France's system comprises the largest use of high speed rail trains in the world. In 2005, SNCF carried 974 million passengers, of which 95 million (10%) were TGV passengers; the remainder were regional passengers (roughly comparable to commuter rail and transit service in the U.S.).

France's major rail companies were nationalized in 1938 and put under the direction of the newly created Societe Nationale des Chemins de Fer Francais (SNCF), which operates intercity rail services on the French government-owned infrastructure. New infrastructure projects are contracted out on the basis of competitive tender.

France's high-speed rail system is composed of high-speed track (Lignes à Grand Vitesse, "high-speed lines," or LGVs) and high-speed trains (Trains à Grand Vitesse, "high-speed trains," or TGVs). In 1981, SNCF began high-speed operations with the opening of the Paris-Lyon TGV line. SNCF reports that its TGVs command a dominant share of the air-rail travel market in several of its corridors – over 90% in the Paris-Lyon market (with a travel time of less than 2 hours) and about 60% where the travel time is 3 hours (Paris-London, Paris-Marseilles).

Germany

Construction on the first German HSR lines began shortly after that of the French LGVs. The first generation of ICE trains were introduced in 1991, operating at a maximum speed of 155 mph on new tracks; a second generation was put into service in 1997, and operate at 174 mph on new track; and a third generation train was put into service in 2000, which can operate at speeds up to 186 mph on new track.

There are three distinct differences between the French and German HSR systems: (1) the ICE makes more stops at intermediate destinations, compared to the TGV trains, which tend to focus on connecting distant cities with few intermediate stops; (2) Germany focused on upgrading existing rail lines rather than build new high-speed rail track; and (3) most ICE services run on convention rail lines, with the exception of the Cologne-Frankfurt line, while the TGV mainly runs on dedicated HSR lines. Speeds on the conventional rail lines are limited to 125 mph.

Japan

Japan is perhaps France's biggest rival when it comes to high-speed rail. It was the unveiling of Japan's first high-speed train, the Tokaido Shinkansen (New Trunk Line), that spurred France to develop the TGV. Construction began in 1959, and in 1964, the world's first high-speed rail line was unveiled to the public on the eve of the Tokyo Olympics, then operating at a speed of 200 km/h (about 125 mph).

Japan is an extremely densely populated country: more than 70% of the land surface is mountainous and thus uninhabitable or unsuitable for road travel and parking. In fact, drivers must prove they have a parking space before they can buy a car. With such a population density, the only practical possibility for transportation across the country is rail. In fact, after World War II, the Japanese government officially deemed rail as the preferred mode of travel.

In 1970, the construction of a nationwide Shinkansen railway network was authorized by law. By 1973, the Ministry of Transport approved construction plans for five additional lines and basic plans for 12 others. Despite the approval, financial considerations intervened; the cost of the five lines (five trillion yen, or roughly $18 billion US at the 1973 exchange rate), combined with the recession in the 1970s and early 1980s resulted in some lines being cancelled and others delayed until 1982. Today, Japan has eight Shinkansen lines, and is planning construction of five new Shinkansen lines to be completed by March 2016.

A Japanese consortium led by the Central Japan Railway Company has been researching new high-speed rail systems based on maglev technology since the 1970s. Test trains JR-Maglev MLX01 on the Yamanashi test line have reached speeds of 361 mph, making them the fastest trains in the world. These new maglev trains are intended to be deployed on new Tokyo-Osaka Shinkansen maglev route, called the Chuo Shinkansen, at an estimated total project of $84 billion.

Construction of new Shinkansen lines are paid two-thirds by the federal government and one-third by the prefecture (local) government. The private sector Japanese Railway Company operates the lines on a regional basis, and pays a usage fee to the government. As Shinkansen lines build up ridership and become self-sustaining, the regional JR Company has the option to buy the corridor infrastructure, as well as managing the train operations. This model has put Japan in the position of having the lowest international rail operations subsidy in the world on a per passenger basis.

The Need for Improved and Expanded High-Speed Rail in the Northeast Corridor

Without question, the NEC represents the best opportunity for true high speed rail in the United States. In general, the highest demand for high speed rail occurs in city pairs that are located 100 – 500 miles apart with large populations and economies, along with the presence of regional and local transit networks to provide connectivity for intercity passengers.

The Northeast Corridor region is home to four of the ten most populous metro regions in the nation – New York, Philadelphia, Washington, DC, and Boston. The region is home to 18 percent of the nation's population living in just 2 percent of its land area.

Some of high speed rail's competitive advantages over air travel include the ability to bring passengers directly into a city center and to attract riders through connecting local and regional transit networks. High speed rail systems attract greater numbers of riders if they end in central downtown locations and tie into existing commuter rail and transit systems. The Northeast Corridor region is home to eight commuter rail systems carrying approximately 350 million annual riders and is home to the busiest subway system in the nation (New York) and the second busiest (Washington, DC).

Business travel is also critical to sustaining the ridership of high speed rail systems, and business travel is highest in places with the most productive economies. Gross Domestic Product (GDP) per capita is the broadest measure associated with both economic productivity and personal income. The Northeast Corridor accounts for four of the ten most productive metro regions in the national and accounts for one-fifth of the nation's GDP.

Congestion reduction, both at airports and on highways, is another important motivating factor for building high speed rail. In the Northeast Corridor, the I-95 Corridor Coalition estimates that over 60 percent of the urban road miles of Interstate 95 are heavily congested. Additionally, the airspace above New York is the most complex and congested in the nation. All three New York metro airports are among the five airports in the nation with the worst on-time arrival rate. In total, there are five Northeastern airports in the bottom ten performing airports in the nation for on time performance, including Philadelphia and Boston.

In summary, the NEC typifies the ideal corridor for high speed rail and shares many similar attributes with successful existing corridors around the world. Population density in the NEC region is higher than anywhere else in the nation, higher than nearly anywhere in Europe, and is similar to some densities in Japan. The NEC is home to extensive transit and regional rail systems that complement intercity passenger rail traffic and productive economies with an extensive existing travel market. Additionally, New York and Washington, DC are separated by just over 200 miles with two major cities in between – Philadelphia and Baltimore.

History of the Federal High-Speed Rail Programs

Early Legislation

In 1965, Congress passed the High-Speed Ground Transportation Act, which began a Federal effort to develop, and demonstrate where possible, contemporary and advanced HSGT technologies. The HSGT program also included a comprehensive multimodal transportation planning effort focusing on long-term needs in the Northeast Corridor "megalopolis," as well as a pioneering research and development program in such advanced technologies as tracked air-cushion vehicles, linear electric motors, and magnetic levitation (Maglev) systems. The HSGT program was authorized for a total of $90 million, and funds appropriated for this program went primarily for research, development and planning.

When HSGT Act appropriations ended in 1975, the focus of Congressional efforts shifted to upgrading the Northeast Corridor infrastructure with the objective of enhancing reliability and allowing shorter trip times, particularly between New York City and Washington, D.C. The Railroad Revitalization and Regulatory Reform Act of 1976 authorized federal funding for the Northeast Corridor Improvement Project (NECIP), a major engineering and construction effort to improve major sections of the NEC main line.

In the 1980's, at least six States formed high-speed rail entities, and ultimately Florida, Ohio, Texas, California, and Nevada awarded franchises to private sector consortia to build and operate intercity high-speed rail or Maglev systems. For a variety of reasons, none of these original proposals has yet led to construction, though the current California and Florida high-speed rail programs are based on this early work and development.

ISTEA and the Swift Rail Development Act

In 1991, Congress passed the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), which established a program to fund safety improvements at highway-rail grade crossings on corridors that were "designated" as high-speed intercity passenger rail corridors based on their present utility and their potential for future development. At present, up to eleven corridors are authorized for designation, of which the Secretary of Transportation and/or the Congress have designated ten corridors:

1. California Corridor
2. Pacific Northwest Corridor
3. South Central Corridor
4. Gulf Coast Corridor
5. Chicago Hub Network
6. Florida Corridor
7. Southeast Corridor
8. Keystone Corridor
9. Empire Corridor
10. Northern New England Corridor

The Northeast Corridor (NEC) is notably absent from the list of designated high-speed rail corridors. The reason for this is that by the time ISTEA was passed, the NEC had already undergone extensive renewal and upgrading, and was already free of grade crossings south of New York and largely free of them to the north. Thus, there was no reason to "designate" it under what was, in ISTEA, essentially a grade crossing upgrade program.

The Swift Rail Development Act of 1994 was the first federal authorization for high-speed rail corridor planning activities for the establishment of high speed rail service in the United States, with a modest authorization level of $35 million a year.

Passenger Rail Investment and Improvement Act of 2008

In October 2008, President Bush signed the Passenger Rail Investment and Improvement Act (P.L. 109-432). Two new capital grant programs were authorized in PRIIA, the intercity passenger rail service grants to states (49 U.S.C. 24402), and the high-speed rail corridor development grants (49 U.S.C. 26106). The state capital grants were authorized for a total of $1.9 billion over five years; the high-speed rail grants were authorized for a total of $1.5 billion over five years (fiscal year 2009-2013). The purpose of the intercity passenger rail capital grants to States was to improve existing or establish new passenger rail services. These are not high-speed rail projects, but can be discrete stand-alone improvements such as straightening a curve, replacing a bridge, or double-tracking a section of track that will result in significant improvements to intercity passenger rail service.

The purpose of the PRIIA high-speed rail corridor development program was to provide grants to States to establish passenger rail corridors with service of at least 110 miles per hour. FRA was directed to give greater consideration to applications for projects that make direct intermodal connections with other transportation modes; allow for improvement to conventional intercity rail, freight, and commuter rail operations; and that encourage partnered financial participation with donated land, contributions from other benefiting rail carriers, and financial commitments from the States and the private sector.

High-Speed Rail Funding and Program Implementation

ARRA and FY 2010 Appropriations and DOT Awards

The American Recovery and Reinvestment Act of 2009 provided appropriations of $10.5 billion under a consolidation of the two PRIIA passenger rail capital grant program, calling the grants "High Speed and Intercity Passenger Rail" (HSIPR). Combining these two separately authorized programs meant that the distinction between the two program functions and targeted benefits was also lost. The HSIPR program is often referred to as the "high-speed rail grants", but only a few of the grants awarded by the Department of Transportation using these funds are truly high-speed, as defined in the underlying authorization.

The Northeast Corridor is the spine of the region's passenger rail network; 10.4 million passengers traveled this corridor in fiscal year 2010, making it by far the busiest intercity rail service in the United States. (Amtrak's total national ridership in FY 2010 was 28.7 million passengers.) Despite the high ridership and need for added capacity and capital improvements on the Northeast Corridor, the Department of Transportation's awards process under the High Speed and Intercity Passenger Rail grants bypassed the Northeast Corridor almost entirely. Out of $12.5 billion appropriated for the HSIPR grants, only $165 million was awarded for projects on the Northeast Corridor (1.3 percent).

The American Recovery and Reinvestment Act of 2009 provided $8 billion for HSIPR grants. Of this, a total of only $109.1 million was awarded to projects on the Northeast Corridor: $60 million to complete engineering and environmental work for a new tunnel in Baltimore; $9.4 million for station and track improvements at Baltimore-Washington International station; $38.5 million for the final design of a new bridge to replace the Portal Bridge in New Jersey; and $1.2 million for track design work in Rhode Island.

The FY 2010 Consolidated Appropriations Act provided $2.5 billion for HSIPR grants. Of this, a total of $45.8 million was awarded to projects on the Northeast Corridor: $32.5 million to fund an environmental study and preliminary engineering for the South Station expansion in Boston; and $13.3 million to install 1.5 miles of high-speed rail track, construct additional crossovers, and replace a bridge near Wilmington, DE. Additionally, FRA will be the lead agency on the Northeast Corridor-wide environmental impact statement that the agency has determined is needed before more significant federal funds flow to the NEC. FRA awarded itself $10 million from FY 2010 high-speed rail planning funding for this effort.

Plans for True High-Speed Rail Service on the NEC

Northeast Corridor Infrastructure Master Plan

In June 2010, Amtrak released the Northeast Corridor Infrastructure Master Plan, prepared by a working group made up of Amtrak, representatives of the State departments of transportation of 12 northeastern States and the District of Columbia, eight commuter railroads and three freight railroads that use the NEC. The Master Plan goes beyond the NEC "Spine" from Washington DC to Boston, and includes other intercity lines such the Philadelphia to Harrisburg, PA route, the New York City to Albany, NY route, and the New Haven to Springfield, CT route. The Master Plan calls for $52 billion in capital investment over 20 years to maintain the current NEC system in a state of good repair, integrate intercity, commuter and freight service plans, and move the NEC forward to meet expanded service, reliability, frequency, and trip-time improvements envisioned by the Northeastern States and other stakeholders. Under this plan, express service between Washington DC and New York City (with 2 stops) would take 2 hours and 15 minutes, compared to the 2 hours and 45 minutes current travel time for Acela. The annual number of riders is estimated to increase from 13 million to 23 million, and the average number of weekday NEC intercity trains would increase from 154 to 210.

University of Pennsylvania Study of High-Speed Rail in the Northeast Corridor

In Spring 2010, the University of Pennsylvania School of Design released a report called "Making High-Speed Rail Work in the Northeast Megaregion". This report outlined a bold new proposal for world-class high-speed rail in the Northeast Corridor, creating two dedicated high-speed rail tracks from Boston to Washington. The report found that this new capacity would enable the Northeast Corridor to achieve significant improvements in capacity, reliability and travel times. Proposed new HSR service will cut travel times in half, with one-and-a-half-hour service between New York and Washington, D.C., and one-hour-45-minute service between New York and Boston. It will enable a six-fold increase in the frequency of intercity service and a ten-fold increase in the capacity of the system. The study estimated the capital costs of the new alignment at $98 billion.

To manage such a large project, the UPenn study advised approaching Northeast Corridor high-speed rail as a long-term investment, giving the private sector an opportunity to invest in the HSR through public-private partnerships, and allowing the government to recoup a significant portion of its investment in high-speed rail. Different public financing mechanisms were discussed, including establishing a Northeast Corridor Commission Trust Fund, new interstate tolls, user fees, value added tax, and station area sales taxes to capture the value of development around high-speed rail stations. The private financing model envisioned in the UPenn study has the public sector financing and building the system, and the private sector partially repaying the government through a long-term operating lease, or concession agreement, though the report outlined opportunities for the private sector to fund station construction and development, rail equipment, and train operations.

A Vision for High-Speed Rail in the Northeast Corridor

In September 2010, Amtrak released its "Vision for High-Speed Rail in the Northeast Corridor", a proposal that, like the UPenn study, lays out a true high-speed rail alternative for the Northeast Corridor utilizing a dedicated right-of-way for 220-mph service, with 96 minute trip time from

Washington DC to New York, and 93 minute trip time from New York to Boston. The plan is estimated to cost $117 billion and would take 30 years to fully implement. Amtrak estimates ridership on the Northeast Corridor to grow by 44 percent at full build-out of the NEC Vision Plan, and for revenues to generate an annual operating surplus of $900 million.

Private Sector Financing and Public-Private Partnership Models

The Federal government cannot carry the full financial burden of public infrastructure projects. Private industry must step up and help fill the gaps in HSR funding and operations.

Recent U.S. Treasury estimates show $400-$500 billion in available uncommitted capital in the U.S. investment community. The investment community has indicated strong interest in participating in high-speed rail development. The following are some examples of private sectoring financing models and public-private partnerships that could be utilized in financing high-speed rail on the Northeast Corridor.

Great Britain HS1

The British high-speed rail line running 67 miles from London to the British end of the Channel Tunnel known as HS1 was built by the British government. In 2009, the UK government auctioned off a 30-year concession for the right to own and operate the corridor. The sale generated approximately $3.4 billion dollars and was sold to a consortium of two Canadian pension funds - Borealis Infrastructure and Ontario Teachers' Pension Plan. The concession sale is estimated to return 40 percent of the construction cost to the British treasury. At the end of the concession period (in 2040), the railway reverts back to the government, which anticipates re-bidding it for an equal or higher price. Over time, the UK government plans to recoup much of its upfront capital costs by using the concession model.

Denver Eagle P3

The Denver Regional Transit District is partnering with a consortium of privates companies to design-build-operate-maintain and finance two new light commuter rail lines (the East Corridor and the Gold Line) and a new commuter rail maintenance facility under a single contract. Under this public-private partnership, RTD will retain all assets while shifting much of the risk of building the projects on time and on budget to the private partners. In return, RTD will make lease payments to the private partner over a number of years, allowing the agency to spread out large upfront costs over a longer period of time. The total cost of the Eagle P3 projects is $2 billion. The Federal Transit Administration will pay one-half of the capital costs, and approximately $848 million of the cost will be financed through private equity, with the remainder coming from local sales tax revenues and other local funding sources. This project is expected to break ground in May 2011 under a full funding grant agreement.

The government cannot solely be relied upon to carry the full financial burden of public infrastructure projects. Private industry must step up and help fill the gaps in HSR funding and operations.

Successful public-private partnerships share financial between the public and private partners. The private sector is incentivized to participate in financing a project when risk is minimized and there is a consistent federal or state partner. Incentives such as guaranteed loans, tax credits, and possibly deferring payments on loans until profits are made may also make private financing more attractive. Private sector financing will allow high-speed rail projects to be developed and constructed with less reliance on public funds, which can speed up the process and result in lower-cost projects. In these arrangements, the public partner retains some control and management of the overall rail program to ensure that public requirements and governments standards are met.

HEARING WITNESSES

The Honorable Michael Bloomberg
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