The Public Sector Takes a Fresh Look at Railroads

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Summary

In the United States, the public sector, in particular the Federal and State governments, have generally treated railroads different from other forms of transportation. Highways, aviation, inland waterways and transit have been viewed from the perspective of public works deserving of public investment. Railroads on the other hand, have been viewed from a commerce perspective requiring public regulation, with limited exceptions in times of crisis, arrangements driven by political compromise, or in efforts to preserve some minimal level of service. The Obama Administration proposes a significant shift, with a stronger role for rail transportation supported by levels of public investment on a par with other forms of transportation. The seminar will review the background on this policy shift and discuss the strategic approach proposed by the President to expand the role of high-speed intercity passenger rail transportation in the U.S., and some of the challenges this proposal will face on the track to success.
Outline

• Introduction

• Some observations on changes in the rail industry

• Why rail interests public policy decision makers today

• Obama Administration’s approach to rail transportation

• Challenges

• Questions
Introduction
Office of Passenger and Freight Programs
National Rail Plan
A Progress Report
Office of Research and Development - Disciplines

- Track & Rail Infrastructure
- Human Factors
- Signal & Train Control
- Vehicle/Track Interaction
- Motive Power & Equipment
- Hazardous Materials
Observations on Changes in the Rail Industry
What is Meant By Commerce vs. Public Works
Rail Industry and Regulation Before 1980

1 Rate Regulation
   Regulatory lag
   Difficult to cover inflation
   Marketing innovations discouraged
   No flexible pricing to meet competition

2 Abandonment
   “Public interest” outweighed cost of service
   Restructuring very difficult

3 Collective Ratemaking
   Rate bureau structure prevented independent action
   Rate competition discouraged
   Joint rate revenue shares often non-compensatory
Rail Industry and Regulation Before 1980

- Nine major carriers bankrupt
- Low industry return on investment
- Falling market share
- Rising rates
Rail Crisis and Congress’ Reaction(s)

1. Rail Passenger Service Act of 1970
2. Emergency Rail Services Act of 1970
3. Regional Rail Reorganization (3R) Act of 1973
4. Railroad Revitalization and Regulatory Reform (4R) Act of 1976
5. Milwaukee Road Restructuring Act of 1979
6. Rock Island Railroad Transition and Employee Assistance Act of 1980
7. Staggers Rail Act of 1980
Railroad Crisis Issues In Retrospect

1. Over Built
2. Over Reliant on Out-of-Date Business Model
3. Over Regulated
Rail Industry Before and After Staggers

1. Class I number of employees was reduced from 488,000 in 1975 to 164,000 in 2008

2. Class I capital expenditures rose dramatically from $1.8 billion in 1975 to $10.2 billion in 2008

3. Class I return on investment climbed significantly from 1.2% in 1975 to 10.7% in 2008

4. Class I miles of track declined from 311,000 in 1975 to 161,000 in 2008
Class I Railroad Capital Expenditures
($ billions)
U.S. Railroad Net Investment & Train Accident Rate
Before and After Staggers

--net investment cumulative in billions of $
--accident rate per million train miles
Intermodal Growth: TOFC/COFC

Association of American Railroads “Railroad Facts”
(2010 preliminary from AAR “Weekly Railroad Traffic, 2010 Annual Summary”)

Loadings in millions of units
Index of Railroad Rates After Inflation

Base Year 1972=100

Rail Industry Today

Why Rail Interests Public Policy
Decision Makers
2008 fatality comparison between modes.
Energy Efficiency

**Oil Consumption**
Americans consume twice as much oil per capita as E.U. citizens
*Source: U.S. Energy Information Administration; CIA World Factbook*

**Oil Dependency**
13.8m barrels/day for transportation alone
*Source: U.S. Energy Information Administration*

**Climate Change**
+14% GHG emissions (1990-2008)
*Source: U.S. Environmental Protection Agency*
Fuel Consumption

More efficient methods of transportation will reduce greenhouse gas (GHG) and other harmful emissions.
**Freight Transportation Mode Share**

- **Tons**
  - Truck: 75%
  - Rail: 15%
  - Water: 3.50%
  - Pipeline: 5.60%

- **Ton-miles**
  - Truck: 29%
  - Rail: 39%
  - Water: 12%
  - Pipeline: 20%

**Trucks move more tons (mostly over short distances)**

**Freight Rail has the largest share of freight per ton-mile**
Top Intermodal Corridors

Top 10 State-to-State Bi-Directional Intermodal Flows

- California ➔ Illinois
- California ➔ Texas
- Washington ➔ Illinois
- New Jersey ➔ Illinois
- Pennsylvania ➔ Illinois
- Ohio ➔ Illinois
- Texas ➔ Illinois
- California ➔ Tennessee
- California ➔ Kansas
- California ➔ Arkansas

**This map depicts linkages between mega regions to show intermodal rail movement, not the actual routes.**
Rail’s Potential

The US Leads in freight tonnage.

... but has limited passenger service

Freight (billion ton-miles)

Passenger (billion passenger-miles)
Population and Freight Growth

Studies project dramatic growth in population which will drive increased passenger mobility needs.

- 25 years: 70 million more people
- 40 years: 100 million more people

The freight transportation system must move 40 tons of freight per person per year (including bulk commodities such as coal and grains as well as high-value consumer goods).

- 25 years: 2.8 Billion tons more
- 40 years: 4 Billion tons more
U.S. Mega Regions
By 2050, population projected to grow by 158 million people; 86% of new residents will live in one of mega-regions below.
DOT Strategic Goals

- Safety
- State of Good Repair
- Economic Competitiveness
- Livable Communities
- Environmental Sustainability
The Administration’s Vision
Vision for Freight Rail

Support the current freight rail market share and growth.

GOALS

Develop strategies to allow railroads to attract a greater share of freight traffic to intermodal rail.
**Vision for High Speed Rail**

**GOALS**

- **Provide at least 80% of Americans convenient access to high-speed rail network in 25 years**
- **Connect large urban areas up to 500 miles apart with 2-3 hour, electric-powered rail service**

- Balance the transportation network and provide complementary service between modes.
- Boost manufacturing and economic activity.
- Maximize the identified HSR corridors and stations as centers for new or revitalized economic and community development.
### Three Tiers of Passenger Rail Service

**Core Express** – Connect large urban areas up to 500 miles apart within 2-3 hours on electrified, dedicated track (125-250+ mph)

**Regional** – Connect mid-sized urban areas up to 500 miles apart with service on dedicated and shared track (90-125 mph)

**Emerging** – Connect smaller communities with service on shared track (up to 90 mph)

**Community Connections** – Connect the passenger rail system to communities by building intermodal stations linked to transit and other modes
## Key Milestones in the High Speed Rail Program

Substantial progress in just two years

<table>
<thead>
<tr>
<th>2008 / 2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oct 2008</strong>: PRIIA passed</td>
<td><strong>Jan</strong>: ARRA selections announced</td>
<td><strong>Feb</strong>: President’s FY12 budget released</td>
</tr>
<tr>
<td><strong>Feb</strong>: ARRA passed</td>
<td><strong>Apr</strong>: First ARRA funds distributed</td>
<td><strong>Mar</strong>: NOFA issued for $2.4 billion in ARRA and FY10 funds</td>
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<tr>
<td><strong>Apr</strong>: High-Speed Rail Strategic Plan released</td>
<td><strong>Apr/July</strong>: NOFAs issued for FY10 funds</td>
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<td><strong>June</strong>: NOFA issued for ARRA funds</td>
<td><strong>May/Aug</strong>: Applications received for FY10 funds</td>
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<tr>
<td><strong>Aug/Oct</strong>: Applications received for ARRA funds</td>
<td><strong>Oct</strong>: FY10 selections announced</td>
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US Department of Transportation
Federal Railroad Administration
HSIPR Applications – Strong Interest Throughout the U.S.

391 applications submitted by 38 States and DC requesting $65 billion

Includes all applications submitted on August 24, 2009, for Track 1 (ARRA Projects), Track 3 (Planning), and Track 4 (FY09 Approps Projects); applications submitted on October 2, 2009, for Track 2 (Corridor Programs); applications submitted on May 19, 2010, for FY 2009 Residual projects and FY 2010 Planning projects; and applications submitted on August 6, 2010, for FY 2010 Service Development Programs and Individual Projects.
$3.5 Billion for Core Express HSR (125 mph+)

$2.9 Billion for Regional HSR (90 – 125 mph)

$283 Million for Emerging HSR (up to 90 mph)

$1.2 Billion for Corridor Upgrades

$67 Million for Planning

136 Applications from 35 States + D.C.

HSIPR Program Selections (all funding rounds)
Project Development and Delivery

Individual Projects

FY 2010 Individual Projects Solicitation

Corridor Programs

FY 2010 Planning Solicitation

FY 2010 Corridor Programs Solicitation

Delivery

Agreements
- Host Railroads
- Operator
- Others (States, Users, Property)

Delivery
- Risk Management
- Organizational Capacity
- Implementation & Procurement
- Safety & Security

Financials
- Operating Forecast
- Capital Program
- Financing Strategy
Critical Success Factor: Railroad Stakeholder Agreements

Guiding principles for railroad agreements:

1. World-class freight rail system must be preserved & improved

2. Grants must benefit existing or future intercity passenger rail and fund the improvements needed to ensure a high-level of performance

3. Must achieve necessary balance to protect both private & public interests

4. Grants must achieve and maintain quantifiable performance outcomes, including:
   - Operating slots/frequencies
   - Trip times
   - Reliability (to the extent it is under a party’s control)
Within 25 years, our goal is to give 80 percent of Americans access to high-speed rail.

—President Barack Obama, January 25, 2011
How We Plan to Implement the Program

Phase 1
“Down Payment”
ARRA, FY 2009-2011
Finalize national vision; seed corridor investments & pipeline of planning; build Federal & State capacity; conduct national environmental review; establish implementation policies & standards

Phase 2
“Launching the National Rail System”
FY 2012-2017
Develop initial backbone of network; establish U.S. Rail Equipment Pool; refine vision, standards, and policies; continue focus on capacity-building and R&D

Phase 3
“Development & Refinement”
FY 2018-2035
Develop remaining network; refine vision, standards, and policies

Phase 4
“SGR & Expansion”
FY 2036 and beyond
State-of-good-repair activities; network extensions and corridor upgrades
What can be Done in 20 Years…

***Trip times in Europe were reduced by an average of 1:38 in just 20 years according to the European Union***
6-Year Investment Relatively Modest Versus our Competitors

- U.S. HSR System (FY 2012-2017): $8,700, 0.05% of GDP
- U.S. Interstate System (1963-1972): $19,100, 0.47% of GDP
- Spain HSR System (2010-2020): $12,800, 0.87% of GDP
- China HSR System (2010-2020): $70,000, 1.22% of GDP

**Average Annual Investment**

**% of GDP**
## FY 2012 Budget Proposal for Passenger Rail Programs

<table>
<thead>
<tr>
<th>Category</th>
<th>FY 2010 Enacted ($M)</th>
<th>FY 2012 Request ($M)</th>
<th>Mission</th>
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<tbody>
<tr>
<td>Network Development</td>
<td>$2,500</td>
<td>$4,000</td>
<td>Develop infrastructure, stations, and equipment for new or upgraded corridors; build institutional capacity; provide transitional operating support</td>
</tr>
<tr>
<td>High-Speed Corridor Development</td>
<td>2,418</td>
<td>3,137</td>
<td></td>
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<tr>
<td>Station Development</td>
<td>0</td>
<td>240</td>
<td></td>
</tr>
<tr>
<td>U.S. Rail Equipment Development</td>
<td>2</td>
<td>245</td>
<td></td>
</tr>
<tr>
<td>Capacity-Building &amp; Transition Assistance</td>
<td>80</td>
<td>378</td>
<td></td>
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<tr>
<td><strong>System Preservation &amp; Renewal</strong></td>
<td>$1,565</td>
<td>$4,046</td>
<td>Maintain publicly-owned assets; eliminate SGR/ADA backlog; provide support for national service priorities (e.g. long-distance trains)</td>
</tr>
<tr>
<td>Amtrak Operating &amp; Capital</td>
<td>1,280</td>
<td>0*</td>
<td></td>
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<tr>
<td>Public Asset Backlog Retirement</td>
<td>285</td>
<td>2,982</td>
<td></td>
</tr>
<tr>
<td>National Network Service</td>
<td>0</td>
<td>914</td>
<td></td>
</tr>
<tr>
<td>State of Good Repair &amp; Recapitalization</td>
<td>0</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$4,065</td>
<td>$8,046</td>
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Network Development Program ($4B)

High-Speed Corridor Development

Core Express – Connect large urban areas up to 500 miles apart within 2-3 hours on electrified, dedicated track (125-250+ mph)

Regional – Connect mid-sized urban areas up to 500 miles apart with service on dedicated and shared track. (90-125mph)

Emerging – Connect smaller communities with service on shared track (up to 90mph)

Station Development

Link the passenger rail system and other transportation modes to communities through modern intermodal stations

U.S. Rail Equipment Development

Establish a standardized and interoperable rail fleet, which will lower costs and stimulate domestic manufacturing

Capacity-Building & Transition Assistance

Develop the rail industry’s capacity and expertise, and assist new corridors and existing State-supported services with transitional operating support
System Preservation & Renewal Program ($4.046B)

Public Asset Backlog Retirement

Eliminate the backlog of maintenance needs on publicly-owned and controlled assets, including the vital Northeast Corridor, and bring all stations served by Amtrak into ADA compliance.

National Network Service

Support the continued operations of long-distance services and maintain national passenger rail facilities and systems.

State of Good Repair & Recapitalization

Ensure public assets are functioning as designed to provide safe and reliable passenger rail service, and replacing those assets at the end of their useful life.
Next Steps

1 **Short-Term: Launch**
   - Get ARRA and FY10 projects underway
   - Recompete $2.4 billion in ARRA and FY10 funds

2 **Mid-Term: Refine**
   - President’s FY 2012 budget request
   - Surface Transportation Reauthorization
   - National, regional, and state planning process

3 **Long-Term: Sustain**
   - Technical assistance
   - Capacity building
   - Long-range planning
Challenges
Challenges - Technical

1. Ability to provide high quality, reliable service on infrastructure shared with high axle load freight service

2. Safety

3. Capacity

4. Ride quality

5. Engineering a green field route

6. Accessing our urban cores

7. Translating overseas experience to North American conditions

8. Developing the technology that will support a U.S. manufacturing base
Challenges – Programmatic

1. Expectation Management.
   - What is high-speed rail anyway?
   - When will I see a high-speed train in my town?
   - Passenger rail not a priority of freight railroads
   - Are improving freight and improving passenger competing priorities?

2. New Relationships

3. Capacity Building

4. The dependability of the Federal Government as a partner
Challenges – Political

What is the role of the Federal Government in transportation and how are we going to pay for it?
Questions?