

The State of the Nation's Intercity Rail

How Federal Investment Will Improve Travel Choice and Relieve Traffic Congestion

Beginning with passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, federal investment in the nation's transportation infrastructure shifted from a traditional highways-only approach to more balanced investment among transportation modes. ISTEA identified the need to coordinate and fund connections across all modes for an integrated transportation system, but lacked the funding to invest in rail projects in all but a few cases. Today, as the basic ISTEA structure is being renewed for another six-year period, what's still lacking is a dedicated source of federal funding for intercity rail improvements.

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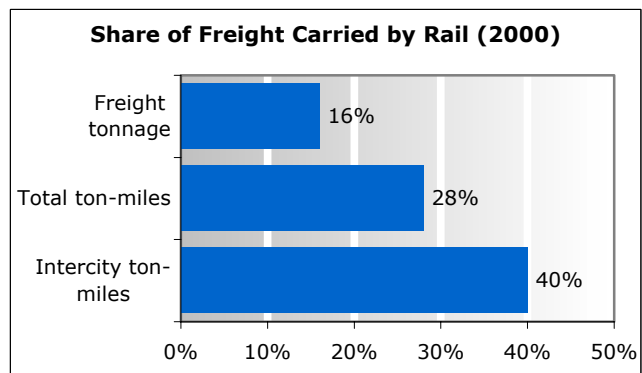
Two important trends underscore the pressing need to address America's rail infrastructure. First, as the economy and population grow, freight shipments are expected to increase dramatically. Second, the nation's airline industry remains in crisis and has experienced severe passenger declines on short-haul regional flights. How those trends are addressed – whether increased freight shipments are met by truck or rail, and whether regional air trips are shifted to highways or rail – will have significant consequences for the nation's economy and Americans' mobility. As ISTEA's successor, TEA-21, is renewed this year, a new dedicated program for rail would allow states and railroads to jointly invest in expanding the capacity of the nation's rail infrastructure when such investments can deliver significant public benefits.

Rail Is a Critical Component of the Nation's Transportation System

Nearly 14 billion tons of goods, valued at \$11 trillion, was shipped as freight in 2000. Of that, rail carried a significant share – 40 percent of intercity ton-miles, 28 percent of total ton-miles, and 16 percent of tonnage. Freight rail's importance is best illustrated by considering a world without it. Under that scenario, all of the freight now shipped by rail would instead be

shipped by trucks. Because moving freight by truck is generally more expensive than shipping by rail, shippers would have to pay a staggering \$69 billion extra per year – or \$1.4 trillion over the next twenty years – a cost which would be passed on to consumers. Ninety-two billion additional miles of truck travel would further clog already congested highways. It would also cause significant extra wear and tear on the road system, necessitating additional government expenditures on the highway system of \$64 billion over the next 20 years. Perhaps most worrisome to the average American, if all freight today were shipped by truck, it would take over 50 million trucks to carry it.

Since most of America's rail infrastructure is privately owned, the availability and quality of passenger service depends upon the ability of the freight rail companies to improve their infrastructure. As a result, expansion of rail capacity benefits the public by improving both freight and passenger mobility. Without a capital assistance program for rail infrastructure, federal investment in rail has been limited to Amtrak, less than \$1 billion until 2003. Meanwhile, TEA-21 doubled federal spending on highways and public transportation in less than ten years, with spending to exceed \$40 billion in 2004. The nation's air system received nearly \$13 billion in federal funds last year, including non-user fee support of \$3.2 billion in general funds to subsidize operations.



Nevertheless, despite the lack of investment, passenger rail plays a vital role in the travel industry, moving people within regions and between cities.

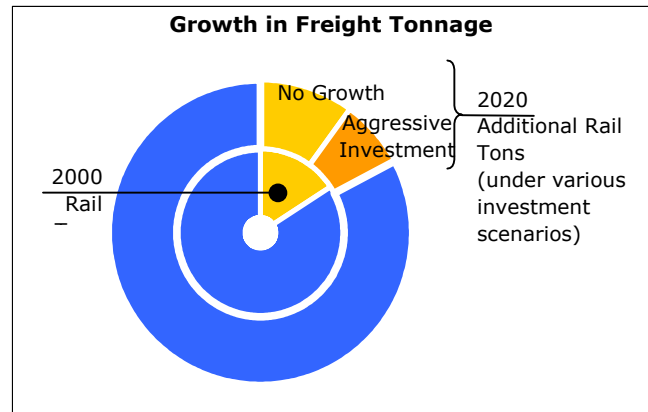
Amtrak, America's intercity passenger rail service, serves more than 500 stations in 46 states over 22,000 route miles. As many as 265 trains, serving 66,000 passengers, are operated every weekday. In 2003, more than 24 million trips were served by Amtrak, an all-time record. And over 5.5 billion passenger miles were carried by Amtrak in 2003. Where Amtrak has a large presence, such as the Northeast corridor running from Washington, DC to Boston, Amtrak consistently beats out the airlines and offers a popular alternative to automobile travel. From New York City to Washington, DC, Amtrak handles about 50 percent of the air and railroad passengers. Amtrak owns a small portion of the tracks its trains operate on, mostly in the Northeast corridor, but most service operates on tracks owned by freight rail companies. Similarly, commuter rail services in most cities lease operating rights on privately owned track. Commuter rail services carried 1.5 million passengers per day in 2001. That's 418 million trips that year not made over highways, reducing traffic congestion, and saving 9.5 billion passenger miles' worth of vehicle emissions.

The nation's rail system also plays an important role in conserving oil and reducing air pollution. One gallon of diesel fuel can move one ton of cargo 404 miles by train – the distance from Washington, DC to Boston – with almost four times the fuel efficiency of trucks. Lower fuel consumption, together with emissions-reduction technologies, contribute to making railroads responsible for 6 to 12 times less pollution per mile than trucks.

Finally, fewer trucks on the highways would mean safety improvements, as well. Trucks experience nearly 3 times as many fatalities per billion ton-miles and 6 times as many injuries as freight trains.

Emerging Trend: Freight is Growing

Emerging trends in both the freight and airline industries could have important consequences for the country's transportation system. By the year 2020, freight tonnage is expected to



increase tremendously. The American Association of State Highway and Transportation Officials (AASHTO) projects that it will grow by almost 8 billion tons or 57 percent over year 2000 figures. Even assuming a slight slippage of market share to highways, this growth will mean that freight rail must carry an additional 882 million tons, a growth of 44 percent. How much more of that growth freight rail could handle depends upon how much capital funding is available to upgrade rail infrastructure.

Emerging Trend: Air Service is Shrinking

More immediately, the airline industry is undergoing substantial restructuring brought about by reduced demand and the faltering economy, among other factors. As a result, many cities have experienced significant reductions in air service, particularly small and medium sized cities, some of which have lost service altogether. A new report from Reconnecting America, *Missed Connections II*, analyzed Official Airline Guide data and found that overall service to large hubs, which account for over half of air traffic, declined by 11 percent for weekly flights between September 2001 and 2003. Air passenger trips have declined as well, most steeply on short flights. Between 2001 and 2002, air passenger trips of less than 250 miles fell 26 percent, and there was a 15 percent reduction in trips from 250-500 miles. Given that 58 percent of all flights are less than 500 miles, this means fewer passengers on a significant share of flights.

How Rail Can Help Meet the New Challenges

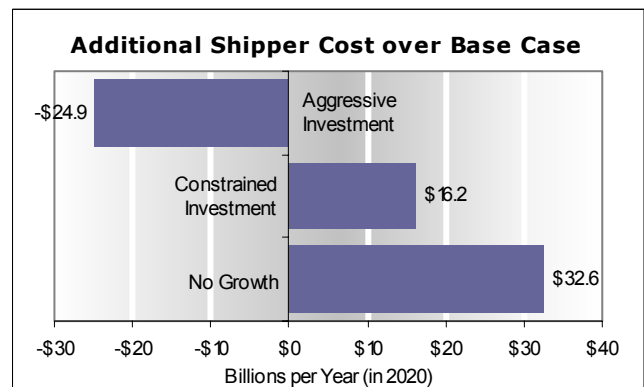
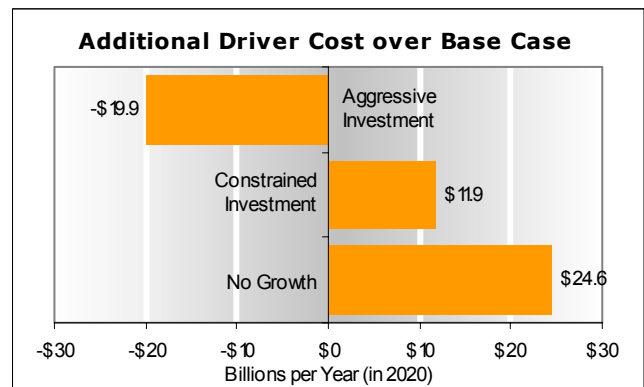
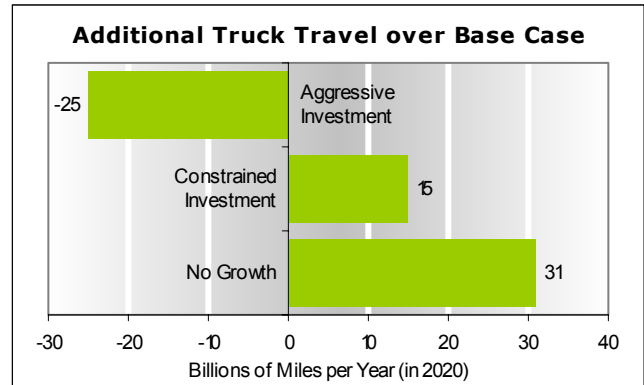
State Departments of Transportation eye these trends with concern. If the growth in freight tonnage cannot be met by freight rail, trucks

will absorb the increased demand. Likewise, if the shift of regional trips from air travel cannot be accommodated by passenger rail, highways will bear the additional traffic.

On the freight side, AASHTO's *Freight-Rail Bottom Line Report* examines three possible scenarios for handling the growth in demand – no growth, constrained investment, and aggressive investment – and evaluates the consequences of those scenarios against the base case. Two scenarios assume that federal investment in rail continues to be limited to the small amount that goes to Amtrak. Under the no growth scenario, the rail industry would invest the minimum to maintain existing conditions and lose significant market share. A constrained investment scenario assumes that railroads would invest \$2 billion per year in limited infrastructure upgrades, which is their current practice. However, the Surface Transportation Board reports that no major railroad has been able to cover its cost of capital since 1998, meaning that these investments form a heavy burden on the industry. Finally, aggressive investment assumes that significant federal spending of \$83 billion over 20 years (\$4.15 billion per year) would supplement industry spending on rail infrastructure.

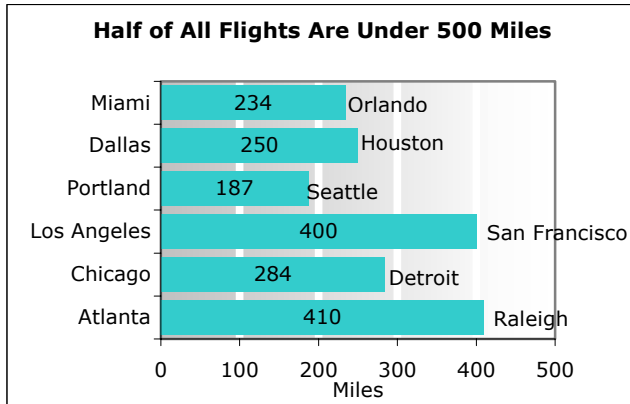
Under the aggressive investment scenario, a minimum federal investment would permit the rail industry to overhaul its infrastructure, allowing nearly 600 million tons of freight per year to be shifted off of trucks and onto rail by the year 2020. Such an increase in rail capacity would yield enormous public benefits when calculated out over twenty years. By 2020, rail could handle enough freight to fill almost 15 million trucks per year, reducing truck travel by 25 billion miles. The resulting reduction in traffic congestion would save drivers almost \$20 billion per year in time and fuel costs. The government would save too, avoiding \$17 billion in additional highway costs over 20 years. Finally, shippers would enjoy reduced shipping costs of \$25 billion per year, a savings which can then be passed on to consumers.

The AASHTO report concludes that freight shipments by truck will vastly increase under any scenario, but that trains will not be able to retain their market share without some public investment.



On the passenger side, Reconnecting America finds that trips of 100-400 miles are the most effective market for bus and rail service, and these services have become much more time-competitive as the time required for airport access, security, and transfers increases. Reconnecting America envisions airports and rail stations as travelports serving two types of ground-travel markets for these distances in lieu of air service: from city to city within a region, or to substitute for the spoke portion of a hub-and-spoke air journey, which is how most major airlines currently structure their services.

Several regions have efforts underway to serve these markets with new intercity passenger rail



service, freeing up slots for longer-haul flights at hub airports. Early success stories include new rail service between Boston and Portland, Maine, compensating for a 26 percent reduction in airline seat capacity between 2000 and 2001. Another example of where passenger rail is beginning to replace air and highway trips is the Capital Corridor service from San Jose to Sacramento. Since 1991, the service has grown to serve over 1 million passengers on 9 daily round trips, and more frequent service is planned for 2004 to meet growing demand. In the Pacific Northwest, sleek new trains on the Cascades Line serving Seattle, Vancouver, and Portland, Oregon have seen ridership almost triple since 1993 to nearly 700,000 in 2003.

The Southeast High Speed Rail Corridor (SEHSR), a partnership of four states, is one of nine federally-designated high speed rail corridors where plans for new regional passenger rail service are in development. The SEHSR proposes rail terminals connected to airports as part of downtown revitalization, focusing regional and commercial life in the region's centers and fostering a characteristic sense of place. The project has attracted the enthusiastic support of such business institutions as the Atlanta Chamber of Commerce that see it as a valuable way to reduce demand and travel delay on regional highways, such as I-95, already operating at peak capacity.

Job Creation and Economic Stimulus

The freight rail and rail supply industry make an important contribution to the U.S. economy, with more than \$57 billion in sales in 2002. Beyond significant benefits for taxpayers, drivers, and the shipping industry, public investments in freight rail have the potential to

help the nearly 10 million Americans who are unemployed get back to work. Freight rail currently employs over 175,000 Americans earning good wages averaging nearly \$60,000 per year. The companion rail supply industry consists of nearly 500 businesses employing more than 150,000 Americans. Major public investments in improving the country's freight rail infrastructure could help boost employment in this industry. Plans for improving and expanding rail infrastructure in the Midwest are expected to create 4,000 construction jobs and 2,000 permanent jobs, not counting additional job creation spurred throughout the economy. The plans for rail infrastructure improvements and passenger service in North Carolina as part of the SEHSR are projected to create more than 31,000 construction jobs. Over twenty years, the project is expected to create 800 permanent new jobs, nearly 19,000 permanent jobs from businesses that choose to locate or expand because of the rail corridor, and \$700 million in new state and local tax revenues.

Opportunity for Federal Rail Investment

Accommodating the growth in freight tonnage, and the shift from air travel for short-haul trips will require significant federal investment. The rail system, which now suffers from antiquated bridges, low-ceiling tunnels, missing connections, outdated signal systems, single track lines, and inadequate terminal capacity will require a major overhaul just to maintain its current market share of freight tonnage and passenger travel. Unfortunately, the rail industry alone does not have the resources to make all of these upgrades.

Highway capacity is already maxed out in most major metro areas, and the negative impacts of adding highway capacity make it a tough sell to the public. For the state DOTs stuck with the choice of stifling economic growth by not supporting the increase in freight, crowding the roadways with even more truck traffic, or battling public opposition to build new highways, greater public investment in improving the nation's rail system has emerged as a very promising alternative.

It seems clear from AASHTO's analysis that investing in the nation's rail infrastructure is the best way to accommodate the tremendous expected growth in freight tonnage. Meanwhile,

states and regions poised to implement plans for new passenger rail service await the commitment of a secure, multi-year source of federal funding for implementation. Such an investment would yield tremendous public benefits, including savings to drivers and shippers, less traffic congestion, less demand for new highway capacity, reduced dependence on foreign oil resulting from improved energy efficiency, and greater highway safety.

As Congress considers renewal of the nation's surface transportation law, TEA-21, an opportunity is at hand to realize the original vision of ISTEA to build an intermodal transportation system for America. While identifying a source of federal funds has remained a challenge, some recent proposals for a new dedicated federal program for rail

infrastructure have garnered bi-partisan support.

As the next six-year transportation investment law takes shape, STPP makes these policy recommendations:

- Create a federal rail capital investment program
- Adopt a policy to meet a significant percentage of the projected increase in freight traffic by rail
- Eliminate existing barriers to intermodal passenger transportation services
- Provide for state and regional intermodal policy and planning
- Give intermodal terminals at airports, downtown hubs, and ports federal funding eligibility

Sources

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<http://www.transact.org>

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