

WhoWhatWhenWhereWhy

Linking populous regions more than 500 miles apart with high-speed rail once seemed unthinkable. That was before China deployed new advances in technology for its 818-mile Jinghu high-speed railway between Beijing and Shanghai, opening in 2011. Trains cruising at 220 mph with top speeds of 240 mph have brought China's two largest cities to less than four hours apart. Just as importantly, the rail line has linked them to 18 populous business centers in between, like Tianjin, Nanjing and Jinan.

This report proposes a high-speed rail corridor in the United States of similar length and with similar population, economic and travel affinity characteristics. Two of America's most populous regions are the Northeast and Midwest. Their economic capitals are New York City and Chicago, also two of America's largest cities – 880 miles apart. Add in the nation's capital plus five other metropolitan areas of more than 2.3 million people each, and you have a potent high-speed rail market.

In fact, in 2009, the group America 2050 identified 50 travel markets in the United States, each which could be suitable for developing high-speed rail. A single high-speed rail corridor linking the Midwest and Northeast would be able to serve one-fourth of the top 50 city-pairs America 2050 identified. Also, four of the Air Transport Association's top 40 airline travel markets, including #3 Chicago-New York, would be served (see charts at right).

America's top 50 high-speed rail markets:

(lists only those in proposed Midwest-Northeast HSR Corridor)

<u>Rank</u>	City-Pair	Score
1	New York-Washington	100.00
11	Chicago-Detroit	91.09
13	Chicago-Columbus	89.42
16	Chicago-Cleveland	88.71
19	Columbus-Washington	88.21
20	Cleveland-Washington	88.13
21	New York-Pittsburgh	88.03
24	Detroit-New York	87.47
26	Detroit-Washington	87.27
27	Cleveland-New York	87.25
28	Philadelphia-Pittsburgh	87.23
30	Pittsburgh-Washington	86.69
34	Detroit-Philadelphia	86.30
40	Cleveland-Philadelphia	85.99
49	Columbus-Philadelphia	85.24

SOURCE: America 2050

America's top 40 airline travel markets:

(lists only those in proposed Midwest-Northeast HSR Corridor)

<u>Rank</u>	O&D* Market	PDEW**
3	Chicago-New York	3,914
20	Chicago-Washington	1,664
35	Detroit-New York	1,335
40	Chicago-Philadelphia	1,267

* O&D = Origin and Destination

**PDEW = Passengers Daily Each Way

SOURCE: Air Transport Association, 2010



Above: South Korea's KTX high-speed rail line opened in 2004 between Seoul and Busan, with a branch now under construction to Gwangju-Songjeong. KTX moved mountains and built cities, including at this once-rural station at Cheonan-Asan near Seoul.

Left: Berlin's new \$1 billion central train station, or hauptbahnhof, unites high-speed and conventional trains on multiple levels. When this station opened in 2006, it became the largest in Europe. It sees 1,800 trains and 350,000 passengers daily.

Comparing HSR Corridors in China and the United States

Jinghu (Beijing-Shanghai) High-Speed Railway

Stations and their county-level city or district populations:

Beijing = 13.3 millionLangfang = 0.7 million Tianjin = 3.8 millionCangzhou = 0.5 millionDezhou = 0.4 millionJinan = 2 million Taishan = 0.6 million Oufu = 0.1 million Zaozhuang = 0.5 million Xuzhou = 1.8 million Suzhou = 0.2 millionBengbu = 1.1 millionChuzhou = 0.1 million Nanjing = 3 million Zhenjiang = 0.6 million Changzhou = 1 millionWuxi = 1.1 million Suzhou = 1 million Kunshan = 0.7 million Shanghai = 19 million

TOTAL = 51.5 million people along 818 miles (62,958 people per route-mile)

Midwest-Northeast (Chicago-New York + branches to Detroit and Washington DC) High-Speed Railway

Potential stations and their Consolidated Metropolitan Statistical Area populations:

Chicago = 9.7 million Fort Wayne = 0.6 million Toledo = 0.7 million Detroit = 5.7 million Cleveland = 2.3 million Akron-Canton = 1.1 million Youngstown-Warren = 0.7 million Pittsburgh = 2.9 million Altoona = 0.1 million Harrisburg = 0.5 million Baltimore = 2.7 million Washington DC = 5.4 million Philadelphia = 5.8 million New York = 22.2 million

TOTAL = 60.4 million people along 1,075 miles (56,186 people per route-mile)



Service Endpoints: Fastest Trip

Milwaukee-Gary Airport Local: 1 hour, 15 minutes Chicago-New York City Express: 4 hours, 20 minutes Chicago-Washington DC Express: 4 hours Chicago-Detroit Regional: 2 hours

Chicago-Pittsburgh Regional: 3 hours, 40 minutes Detroit-Washington DC Express: 3 hours, 50 minutes Detroit-New York City Express: 4 hours

Pittsburgh-New York City Regional: 3 hours, 15 minutes Connecting routes

Other city pairs: Fastest Trip

Chicago-Cleveland: 2 hours Detroit-Cleveland: 1 hour, 5 minutes Detroit-Pittsburgh: 2 hours Chicago-Philadelphia: 3 hours, 50 minutes Detroit-Philadelphia: 3 hours, 30 minutes Cleveland-New York City: 3 hours Cleveland-Washington DC: 2 hours, 45 mins Detroit-Baltimore: 3 hours, 30 minutes

KJPrendergast-All Aboard Ohio 2011

Implementation

All Aboard Ohio is first seeking a high-level feasibility study of linking the Midwest and Northeast-based high-speed rail systems with a rail corridor designed for up to 240 mph but regular cruising speeds of 220 mph as is now permitted by steel-wheel on steel-rail technologies. These speeds are comparable to maglev but offer far lower costs and much greater operational flexibilities. Feasibility studies of advanced high-speed rail have been undertaken or about to get underway for the Northeast Corridor, four Chicago-based Midwest routes (including to Cincinnati, Toledo and Cleveland), as well as an extension 110-mph Keystone train service west from Harrisburg to Pittsburgh. Because of the timelines associated with a project of this magnitude and the need for evolving the expansion of local, regional and intercity transit links, as well as scaling up center city densities, All Aboard Ohio seeks an interim service. This could constitute 4-8 daily round trips at 90 mph over enhanced rail freight corridors. After the 220 mph rail corridor is built, the interim service could remain in place as a local feeder service, or be reduced/removed to leave a greatly improved rail corridor for freight customers.

After planning, design, funding procurement, property acquisition and construction are completed, segments may enter service in phases, below.



MIDWEST-EAST COAST @ 220-MPH HIGH SPEED RAIL



For more information, please contact:



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