





# **FACT SHEET**







The U.S. Congress and President Obama have made high-speed rail (HSR) a key component of our nation's transportation future by including \$8 billion for HSR in the American Recovery and Reinvestment Act of 2009 (ARRA). The president has committed to request \$1 billion a year for the next five years for HSR in the budgets he will present to Congress. This presents the West with an opportunity to invigorate our economy, create thousands of jobs, and improve our environment and our collective quality of life.

## **Federal Vision**

The Administration's vision is to build a network of high-speed rail corridors across America.

The proposal is to transform the nation's transportation system by rebuilding existing rail infrastructure while launching new high-speed passenger rail services in 100-600 mile corridors that connect U.S. communities. The idea is similar to how interstate highways and the U.S. aviation system were developed in the 20th century: a partnership between public sector and private industry, including strong federal leadership that provides a national vision.

#### **Western Vision**

The Western High Speed Rail Alliance (WHSRA) has been formed by the leadership of the Denver Regional Council of Governments, Maricopa Association of Governments, Regional Transportation Commission of Southern Nevada, Regional Transportation Commission of Washoe County and Utah Transit Authority. The Alliance was founded and exists for the purpose of determining the viability of developing and promoting a high-speed rail network to provide high-speed rail connections throughout the Rocky Mountain and Intermountain West regions with eventual possible connections to the Pacific Coast and other areas of the United States. The members of the alliance agree to work jointly for the acquisition of funding to conduct studies of high-speed rail options, to develop plans for high-speed rail infrastructure, and to construct high-speed rail facilities throughout the region as is considered appropriate and feasible.

The Western High Speed Rail Alliance shares a common vision of future high-speed rail infrastructure serving the region with links to other regions that will provide efficient, cost-effective rail operations for passenger and freight customers, and enhance economic growth through reduced air, rail and highway congestion.





# What Is High-Speed Rail?

The International Union of Railways (UIC) defines high-speed rail as services that regularly operate at or above 155 mph on new tracks, or 125 mph on existing tracks. A number of characteristics are common to most high-speed rail systems. Most are electrically driven via overhead lines, although this is not necessarily a defining aspect, and other forms of propulsion, such as diesel locomotives, may be used, as on Britain's HST services. A definitive aspect of high-speed rail is the use of continuous welded rail, which reduces track vibrations and discrepancies between rail segments enough to allow trains to pass at speeds in excess of 125 mph.

#### **Benefits of High-Speed Rail**

HSR promotes economic expansion (including new manufacturing jobs), creates new choices for travelers in addition to flying or driving, reduces national dependence on oil, and fosters urban and rural community development.

### **High-Speed Rail Is Green**

Today's intercity passenger rail service consumes one-third less energy per passenger mile than cars. It's estimated that if we built high-speed rail lines on all federally designated corridors, it could result in an annual reduction of 6 billion pounds of  $CO_2$ . Eurostar, a high-speed railway passenger service connecting London with Paris and Brussels, found that the environmental benefit of taking the train instead of a plane is probably much greater than 90 percent.





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#### **Population Growth**

The Western HSR program has been designed to meet the region's significant growing needs – by the year 2030, the U.S. Census Bureau estimates that Nevada will add 2.3 million new residents (114% increase); Arizona will add 5.6 million new residents (109% increase); Colorado will add 1.5 million new residents (35% increase); and Utah will add 1.25 million new residents (56% increase).

Most (88%) of the nation's population growth between 2000 and 2030 will occur in the South and West, which will be home to the 10 fastest growing states over the period. The share of the population living in those regions will increase from 58 percent in 2000 to 65 percent in 2030, while the population in the Northeast and Midwest is projected to decline from 42 percent to 35 percent.

To fully meet the region's growing transportation needs in a sustainable manner, and to provide residents with multiple travel choices, both roadway and transit facilities must be planned and construction schedules linked to occur in concurrent phases.

### **Comparison with Other Modes of Transport**

High-speed rail is often viewed as an isolated system and simply as advantageous or disadvantageous as compared to other transport systems, but all transport systems must work together to maximize benefits. A good HSR system has capacity for nonstop and local services, and has good connectivity with other transport systems. All of this depends on design, implementation, maintenance, operation and funding. Operational smoothness is often more indicative of organizational discipline than technological prowess.

High-speed rail has the potential for high capacity on its fixed corridors, i.e., double-decked E4 Series Shinkansen can carry 1,634 seated passengers, and even more if standing passengers are allowed, and has the potential to relieve congestion on other modes of transportation.





## Why Regional HSR?

For the past 15 years, airlines in the United States, particularly in the western part of the country, have added to their short- to middistance routes, only to discover that these planes are much more inefficient, in terms of fuel use per passenger compared to larger planes traveling more than 600 miles. As fuel prices continue to rise, this will be more sharply felt by all airline carriers.



#### **Optimal Distances**

High-speed rail is a part of an integrated transportation system. HSR has the ability to connect city center rail stations to multiple other city center rail stations, with an intermediate-stop passenger loading/unloading time of three to eight minutes, while air transport connects airports outside city centers to other airports outside city centers with a stop time for intermediate destinations of 30 minutes to one hour. So while air travel is efficient for greater distances, high-speed rail is more efficient for shorter travel or connecting travel between cities.

Many countries in Europe have truly integrated their HSR short- to mid-distance routes with longer-haul flights at their airports. These types of seamless connections can be found in Frankfurt, Germany; Lyon and Paris, France; and Amsterdam, Netherlands. As mentioned earlier, this type of configuration frees up valuable airport space for longer flights.

The ETR 500 "Frecciarossa" of the Italian Railways takes one hour from downtown Milan to the center of Bologna, while a plane plus taxi takes an hour and a half to do the same distance.

As a rule of thumb, rail journeys need to be four hours, or thereabout, to be competitive with air travel on journey time. One factor that may have further bearing on HSR's competitiveness is the increased convenience when using HSR, for example: no requirement to check baggage and no repeated passenger lines for checking, security and boarding, in addition to the typically high on-time reliability as compared to air. Separately, from a business traveler's perspective, HSR can offer amenities such as cellular phone network availability and, on Franco-German TGV-Est for example, wireless Internet broadband.

### How Much Does HSR Cost?

With significant population centers and wide-open spaces, the Western region has significant geographical advantage for the development of high-speed rail. The purpose of initial studies will be to determine capital costs and economic viability.





## Members Of The Western High-Speed Rail Alliance:

Denver Regional Council of Governments (DRCOG) Denver, Colorado

Maricopa Association of Governments (MAG) Phoenix, Arizona

Regional Transportation Commission of Southern Nevada (RTC) Las Vegas, Nevada

Regional Transportation Commission of Washoe County (RTC) *Reno, Nevada* 

Utah Transit Authority (UTA) Salt Lake City, Utah

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