CALIFORNIA
High-Speed Rail Authority

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Good for the State, Good for the Environment

The California High-Speed Rail Authority (Authority) is responsible for planning, designing, building and operation of the first high-speed rail system in the nation. California high-speed rail will connect the mega-regions of the state, contribute to economic development and a cleaner environment, create jobs and preserve agricultural and protected lands. By 2029, the system will run from San Francisco to the Los Angeles basin in under three hours at speeds capable of over 200 miles per hour. The system will eventually extend to Sacramento and San Diego, totaling 800 miles with up to 24 stations. In addition, the Authority is overseeing the implementation of a statewide rail modernization plan that will invest billions of dollars in local and regional rail lines to meet the state's 21st century transportation needs.

CALIFORNIA'S CURRENT TRANSPORTATION NEEDS

California is the third-largest state in the nation at over 160,000 square miles. As early as 1909, state leaders realized the need to develop major infrastructure projects to connect the different areas of the state together. Always at the forefront of the nation, California's freeway system was started in 1947, a full decade before the federal government established the National Defense and Interstate System. Ultimately, California's auto transportation network took over a half century to build and currently has more than 50,000 miles of freeways and highways.

In addition to roads, highways, and bridges, there are over 100 airports and thousands of miles of conventional rail systems across the state. These early crucial investments in infrastructure connected the various regions of the state and served as the foundation for the economic growth and prosperity that continues today.

However, the Golden State's transportation systems are aging and cannot keep up with the demands of a growing population that is expected to hit 50 million by 2030. Currently, strain on the state's existing roads,

"You can pave farmlands with new roads and black out skies with airplanes but the air we breathe will be no better than a tailpipe. This project brings an infusion of energy into rural areas of high unemployment and provides relief for urban traffic gridlock. Most importantly, it's an investment in California's future."

- Darrell Steinberg, Senate Pro-Tem

airports and railways has resulted in increased congestion, reduced air quality, increased travel times and wasted gas. To keep up with population and usage trends, California would need to invest over $150 billion to build 4,300 new-lanes miles of highway, 115 additional gates at California airports and 4 new airport runways. Alternatively, a high-speed rail system will cost less to construct, take the pressure off the current infrastructure system, reduce the state's dependency on fossil fuels, and result in better air quality and community health in California.

REDUCTION IN CARS ON THE ROAD AND PLANES IN THE AIR

According to the Texas Transportation Institute's *2012 Annual Urban Mobility Report*, congestion on roads and highways in California's urban areas resulted in over $19 billion in economic activity lost in 2011 alone. In addition, the flight between Los Angeles to San Francisco is the busiest short-haul market in the country, with hundreds of daily flights and five million annual passengers. Compared to long-distance flights, these short-haul flights have a very small profit margin for airports and airliners. The high-speed rail system will take cars off the road and reduce daily flights, thus boosting California's economic productivity as more travelers and commuters take the train to get around the state.

Reduction in Vehicle Miles Traveled

- By 2040, the system will reduce vehicles miles of travel in the state by almost 10 million miles of travel every day.
- Over a 58 year period (from the start of operations in 2022 through 2080), the system will reduce auto travel on the state's highways and roads by over 400 billion miles of travel.

Daily Number of Flights Diverted

- Starting in 2030, the state will see a reduction of 93 to 171 flights daily.
- By 2040, the state will see a reduction of 97 to180 flights daily.

REDUCTIONS IN ENERGY/FOSSIL FUEL USE

The Authority has committed to using 100 percent renewable energy for powering the system. This will be achieved by procuring or producing enough renewable energy to offset the amount of energy it takes from the state's power grid to operate trains and facilities.

This net-zero approach will increase the environmental benefits of the rail system and reinforce California's renewable energy economy while providing the Authority with a cost-stable source of electricity.

Finally, the high-speed rail system will save 2.0 to 3.2 million barrels of oil annually starting in 2030.

GREENHOUSE GAS (GHG) EMISSIONS REDUCTIONS

According to the U.S. Environmental Protection Agency, greenhouse gases (GHG) are gases that trap heat in the atmosphere. In 2010 alone, U.S. GHG emissions totaled 6,821.8 million metrics tons of carbon dioxide (CO_2). California leads the nation in working to reduce the level of GHG emissions. In 2006, the State Legislature passed Assembly Bill 32, also known as the Global Warming Solutions Act, that directs the state to reduce statewide emissions to 1990 levels by 2020, a 17 percent reduction.

- In 2022, when the Initial Operating Section (Merced to the San Fernando Valley) is up and running, the resulting GHG reductions will be between 100,000 to 300,000 million metric tons of carbon dioxide ($MtCO_2$) in the first year. That's the equivalent of from between 17,700 to 53,000 personal vehicles taken off the road.
- Between 2022 and 2040, the cumulative reduction of CO_2 is estimated to be between 5 and 10 million metric tons.

"High-speed rail is the modern form of transportation that really delivers. It functions reliably and at full capacity even during the height of rush hour, peak holiday travel and bad weather. Investing in high-speed rail as part of a balanced transportation system is smart business for California."

- Andy Kunz, President & CEO, US High-Speed Rail Association

High-Speed Rail Fact

- *High-Speed Rail will eliminate over 12 billion pounds of the greenhouse gas emissions that cause global warming every year. That's the equivalent from removing one million cars from roads annually.*