

Good for the Environment

California's policies set a national tone on climate change, developing clean energy, curbing greenhouse gas emissions, benefiting disadvantaged communities, protecting endangered species and valuable agricultural lands, and transitioning to a sustainable, low-carbon future.

The California High-Speed Rail Authority (Authority) is responsible for planning, designing and building the first high-speed rail system in the United States. Our goal is to deliver the greenest infrastructure project in the nation, both in construction and operations, and to honor California's culture of environmental stewardship.

ALL ELECTRIC REDUCING GREENHOUSE GAS (GHG) EMISSIONS

California leads the nation in working to reduce the level of GHG emissions. High-speed rail will be powered by electricity, not diesel fuel as with most rail systems.

The high-speed rail system provides a green transportation choice and is part of the state's solution to reduce transportation GHG emissions by shifting travel away from automobiles and short-haul air travel. The high-speed rail system also reduces harmful air pollutants, such as particulate matter, carbon monoxide and nitrogen oxide. The average annual greenhouse gas emissions savings of the system, as much as 2 million metric tons of carbon dioxide equivalent, would be equal to taking 400,000 passenger vehicles off the road every year – roughly all of the cars registered in San Francisco County.

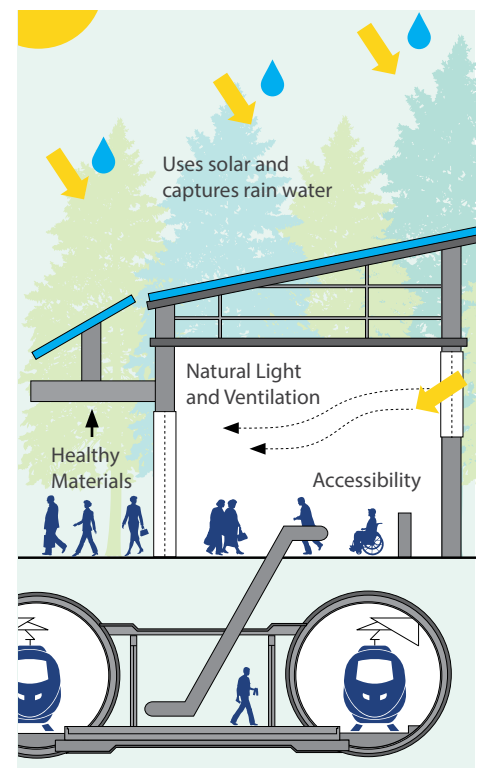
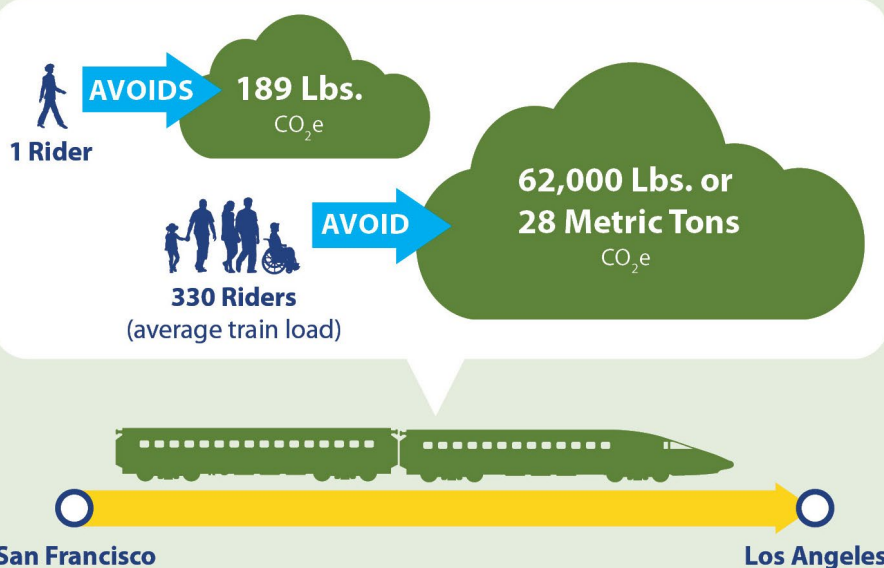
POWERED BY RENEWABLE ENERGY

High-speed rail is designed to use 100-percent renewable energy to power the system. This ambitious commitment is made possible by the abundance of renewable energy resources in California—solar, wind, geothermal and bioenergy.

High-speed rail stations and service facilities will be designed to be net-zero energy, meaning they will produce at least as much energy on-site as is consumed by the facility over the course of a year. Also, station design will focus on ease of navigation; passenger well-being; efficient use of resources; building to the highest LEED standards; and ease of maintenance.

SAN FRANCISCO TO LOS ANGELES (IN 2040)

Carbon dioxide equivalent (CO₂e) avoided due to mode shift from air and auto travel to high-speed rail travel.



AGGRESSIVE RECYCLING

The Authority has required contractors to recycle 100 percent of the steel and concrete from construction and demolition and divert at least 75 percent of all other construction and demolition waste from landfills, unless local regulations specify a higher diversion rate.

More than 97 percent of the nearly 200,000 tons of rail system construction-related waste material has been recycled to date. All concrete and metal was recycled or stockpiled for reuse, while 86 percent of other demolition debris, including organic waste, was recycled.

PROTECTING NATURAL RESOURCES

To date, the program has successfully preserved and restored more than 3,750 acres of natural habitat. With the help of the California Department of Conservation, the Authority has protected 1,250 acres of agricultural lands to date. In 2019, we secured an additional 978 acres for habitat protection.

The Authority uses an innovative regional approach to coordinate with and learn from local environmental organizations, whose support is invaluable and essential to identifying and protecting important habitat.

Recycling Construction Waste (through 2020)



PROTECTING AIR QUALITY DURING CONSTRUCTION

All contractors working on the high-speed rail system must use trucks and equipment that comply with California requirements. This includes Tier 4 equipment, the highest EPA equipment rating, that reduces the amount of criteria air pollutants released during construction.

The Authority addresses remaining air

pollutant emissions by funding offset projects through Voluntary Emissions Reduction Agreements with local air districts. To date, the Authority's agreement with the San Joaquin Valley Air District has delivered 1,375 tons of total lifetime reductions of criteria air pollutant emissions through a range of projects funded under the Air District's Heavy-Duty Engine Program, including the purchase of new agricultural tractors, trucks and school buses.

Reducing Air Pollution

Tier 4 Equipment:
Reduces Nitrogen Oxide,
Carbon Monoxide and
Particulate Matter
Avoids Black Carbon

On- and Off-Road Vehicles:
Emissions Produced



**Actions That Offset
Air Quality Emissions**

