

Building a Sustainable Future

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

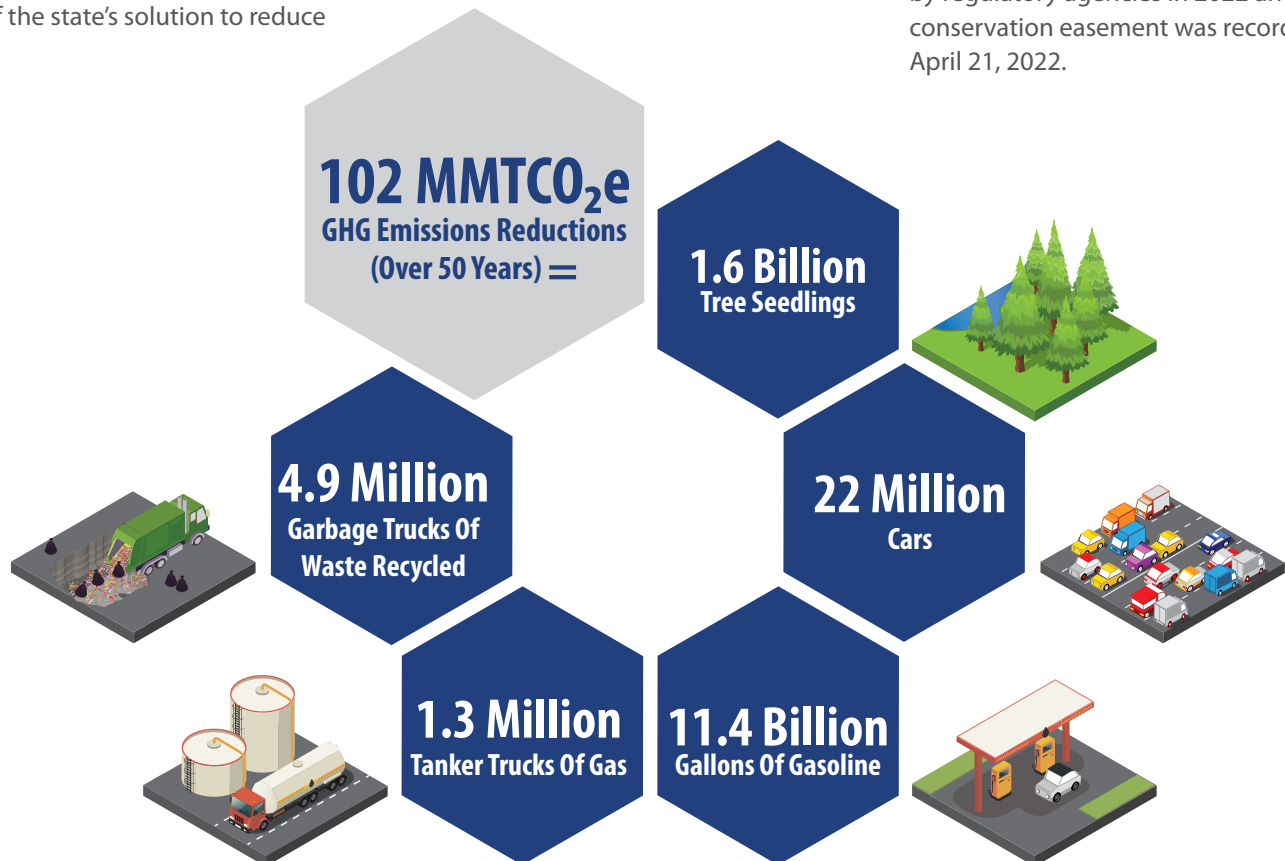
California leads the nation in working to reduce the level of GHG emissions. High-speed rail will be powered by electricity, not diesel fuel as with most rail systems.

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. Over 50 years, the high-speed rail system is forecast to reduce GHG emissions by 102 million metric tons of carbon dioxide equivalent. 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 432,000 passenger vehicles off the road every year – roughly all of the cars registered in San Francisco County.

PROTECTING NATURAL RESOURCES

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. To date, the program has preserved and restored more than 2,972 acres of habitat and protected more than 3,190 acres of agricultural land. The Authority has worked with the California Department of Conservation since 2012 to preserve agricultural land. In 2020, the Authority purchased one additional mitigation site, Antelope Plains (705 acres). The Antelope Plains Conservation Site was approved by regulatory agencies in 2022 and a conservation easement was recorded April 21, 2022.



RECYCLING CONSTRUCTION WASTE (THROUGH 2021)



AGGRESSIVE RECYCLING

The Authority has required contractors to recycle 100% of the steel and concrete from construction and demolition and divert at least 75% of all other construction and demolition waste from landfills. All concrete and metal was recycled or stockpiled for reuse.

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 requires 100% zero-emission vehicle (ZEV) fleets in future infrastructure and construction contracts.

Avoiding producing emissions is a critical focus, but for those remaining air pollutant emissions, the Authority has funded offset projects through a Voluntary Emissions Reduction Agreements with local air districts. To date, the Authority's agreement with the San Joaquin Valley Air District has delivered 1,358 tons of total lifetime reductions of criteria air pollutants.

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 abundant renewable energy resources in California and a robust renewable energy industry. The opportunity for on-site solar coupled with battery storage offers both cost savings and resilience.

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.

