



California High-Speed Rail **BRIEFING: November 2, 2023 Board Meeting** **Agenda Item #6**

TO: Chairman Richard and Board Members

FROM: Margaret Cederoth, Director of Planning and Sustainability

DATE: November 2, 2023

RE: 2023 Sustainability Report

Summary

This document highlights the achievements of the California High-Speed Rail (CHSR), as indicated in the 2023 Sustainability Report.

Background

HSR POLI-PLAN-03, adopted by the Board in April 2019, states that the Authority will produce a sustainability report every year that amongst other important information, reflects environmental, social, and governance (ESG) issues and conforms with global best practices.

The Authority develops annual reports compliant with the Global Reporting Initiative (GRI) G4 standards, a reporting protocol used globally by companies, including peer rail organizations. Through the annual reports, the Authority honors its commitment to transparency, providing stakeholders with quantitative and qualitative data on progress against key commitments and other significant topics for disclosing the sustainability of the high-speed rail (HSR) system.

The Authority published its first report, covering calendar year 2015, in December 2016. The 2023 Sustainability Report is the eighth published report, focusing on the activities that occurred during the 2022 calendar year, and progress to date on key commitments.

Discussion

The Sustainability Policy states: “The California High-Speed Rail Authority (Authority) will deliver a sustainable high-speed rail system for California that serves as a model for sustainable rail infrastructure. The Authority has developed and will continue to implement Sustainability practices that inform and affect the planning, siting, designing, construction, mitigation, operation, and maintenance of the high-speed rail system.”

Annual reporting offers a periodic snapshot of the effectiveness of the Authority’s implementation actions across the program. The report provides consistent measurement of indicators that provide the

Authority with reliable data to inform the refinement of contract requirements, policy, and organization activities. The report also illustrates where corrective action is necessary to achieve success. Our approach to sustainability reflects our organization and our mission to deliver a complex mega project. The sustainability framework shown in Figure 1 is how we organize our approach.

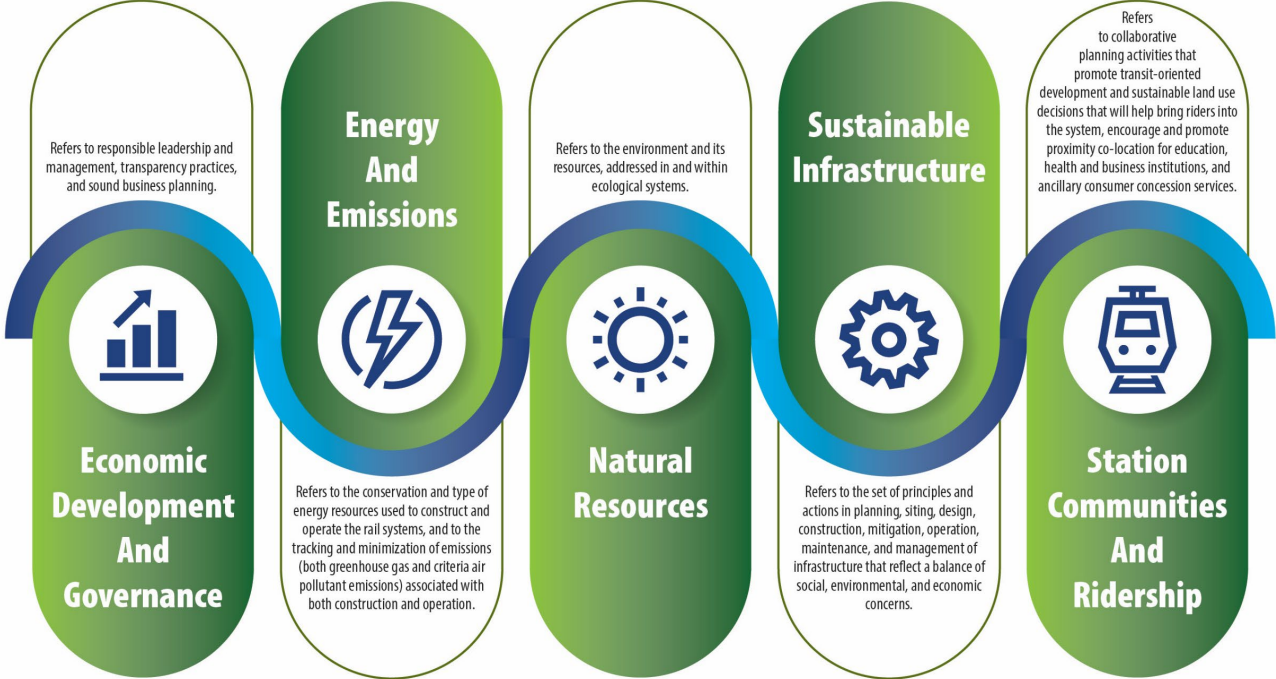


Figure 1. Sustainability Framework

Achievements to date:

The HSR system serves as the backbone of all-electric, zero-emission interregional travel and is integral to reducing road and air miles travelled in California. The system contributes to California achieving its goals of a carbon-neutral transportation system by 2035 and a carbon-neutral economy by 2045. The Authority also focuses on delivering extensive additional co-benefits and encourages these co-benefits through progressive procurement. These benefits include:

- 7,200 future jobs;
- 8,346 construction jobs dispatched through December 2022;
- 761 small businesses engaged;
- \$5.5B investment in disadvantaged communities;
- 102,272,049 metric tons of carbon dioxide equivalent emissions reductions anticipated;
- 500,150 pounds of criteria air pollutants avoided;
- 503,393 metric tons of carbon sequestered and avoided through habitat and conservation;
- 62,000 air trips will be reduced annually; and
- 5 billion vehicle miles traveled reductions annually.

The following sections highlight the specific progress in 2022 as they relate to each element of the sustainability framework, as indicated in the 2023 Sustainability Report.

Economic Development and Governance

- Economic development
 - At end of 2022, over 8,300 construction jobs have been dispatched at construction sites along the Central Valley segment, 65% of which were filled by targeted workers.
 - The number of small businesses put to work on the project has increased by nearly 166% since 2015. The number of those businesses located in disadvantaged communities has grown by over 151% since 2016.
 - As of December 2022, the small businesses working on the HSR system represents \$1.5B in investment.
- Governance
 - We are embedding sustainability as we advance the Initial Operating Segment by developing our Sustainable Procurement Policy and corresponding procedure. This will ensure the Authority's procurement of all goods and services is in alignment with its environmental, social and governance priorities.

Energy and Emissions

- Reducing emissions in construction
 - The Authority has implemented requirements for contractors to solely use zero-emission vehicles (ZEVs) for their on-road project fleets in all future construction contracts and for their off-road fleets to be composed of newer, more efficient equipment models that meet the highest emission standard set by the U.S. Environmental Protection Agency (Tier 4).
 - The Authority will amend the off-road fleet requirements to mandate contractors to use increasingly more ZEVs in the future, as ZEV technology improves and becomes more available. The notable strategy implementation phases are noted below:
 - By 2030, we will require 10% of off-road equipment to be composed of Zero Emissions Vehicles (ZEV), where feasible.
 - By 2035, we will require 100% of off-road equipment to be composed of ZEVs, where feasible.
 - Since construction began, the Authority has steadily increased the percentage of Tier 4 equipment to over 90%. The current clean equipment requirements are estimated to have:
 - avoided almost 80,000 pounds of criteria air pollutants in just 2022, and over 350,000 pounds of criteria air pollutants since the start of construction; and
 - lowered emissions for reactive organic gases, particulate matter, black carbon and nitrogen oxide by 65% to 76% compared to a typical fleet.
 - For remaining tailpipe emissions from the construction vehicle fleet, the Authority has achieved net-zero through carbon sequestration and Voluntary Emission Reduction Agreements (VERA) with the San Joaquin Valley Air Pollution Control District:
 - Participation in the VERA program has resulted in total lifetime offsets of 1,358 tons of criteria air pollutants.

Natural Resources

- Preserving agricultural land and creating habitat

- The Authority has preserved and restored more than 4,400 acres of habitat and protected more than 3,400 acres of agricultural land from development.
- Over 3,190 acres are now protected under agricultural conservation easements.

Sustainable Infrastructure

- Advancing sustainable infrastructure
 - Through 2022, we have diverted 95% of non-hazardous waste from landfill (302,961 tons diverted out of 319,294 total tons of non-hazardous waste).
 - We diverted 28,566 tons out of the 29,914 tons of non-hazardous waste generated in 2022.
 - We are progressing actions identified in the Climate Adaptation Plan, including developing a climate change policy and integrating climate change into the Safety and Security Management Plan (SSMP).

Station Communities and Ridership

- Community-focused station area planning
 - We are creating station area development plans focusing on offices, housing, education, health care facilities and shopping around high-speed rail stations, creating 15-minute communities where daily needs are within walking or cycling distance.
 - We are providing opportunities such as community meetings and open houses for community members to receive information and provide feedback on matters affecting them during the development of the HSR system. This includes engaging communities with special concerns, such as disadvantaged communities.
 - Over 10,000 community members joined the community meetings we hosted, including over 1,900 members from disadvantaged communities.

Key Activities Moving Forward

We continue to move forward with key activities, advancing implementation in the following areas:

- **Greenhouse Gas (GHG) Emissions:** Continuing to actively manage carbon information including monitoring and accounting for the GHG emissions produced, avoided, and sequestered in project delivery; applying the insights from the life-cycle (embodied) carbon models for the project to update a baseline of materials and construction emissions; updating methodologies with the Air Resources Board; refining our GHG calculations with updated information from the 2023 Business Plan.
- **Award:** Continuing to maintain the Envision Platinum award by implementing Envision requirements in the procurement packages for relevant consultant and contractor actions.
- **Station Communities:** Finalizing delivery using a building block approach to the stations, prioritizing universal accessibility, sustainable design, pedestrian access, and community connections in Merced, Fresno, Kings/Tulare, and Bakersfield.
- **Renewable Energy:** Working with a cross-functional team to finalize procurement documents for the traction power procurement in early 2024. This includes optimizing the size of solar power and battery systems to enable a range of operating scenarios, achieve resilience, and reduce operating costs;

- **Zero Emission Vehicles:** Finalizing details of the implementation of the Zero Emissions Vehicle (ZEV) action plan for on-road and off-road project fleets including identifying pilot projects that could be prioritized for all-electric or ZEV construction.
- **Climate Change:** Updating the climate adaptation plan and continuing climate adaptation efforts with the ultimate goal of creating a resilient and reliable system for California.
- **Organization:** Refining Sustainability Implementation to make necessary updates to targets, definitions of program sustainability elements, milestones, and measures for success.
- **Reporting:** Providing continued transparency through monthly reporting and the EMMA dashboard; exploring refined ESG dashboarding for the monthly program delivery report.
- **Procurement:** Implementing the Sustainable Procurement Policy; continuing the Authority’s demonstrated leadership in sustainable procurement with an internal, multidisciplinary working team, which has been implementing sustainable procurement strategies and increasing attention on influencing equity through procurement.
- **Engagement:** Continuing a comprehensive engagement process with all communities and external stakeholders to identify and address community issues, ideas for mitigation, and quantify the significance of different environmental, social, and governance issues based on the 2022 Materiality Assessment.

The actions of every member of the Authority and its delivery partners contribute to the positive outcomes and progress detailed in this Sustainability Report.

Legal Approval

This is an informational item, and by itself, does not raise any legal concerns.

Budget and Fiscal Impact

This is an informational item on the Authority’s 2023 Sustainability Report, and by itself, does not have a budget or fiscal impact.

REVIEWER INFORMATION	SIGNATURE
Reviewer Name and Title: Brian Annis Chief Financial Officer	Signature verifying budget analysis: Signed 10/25/23
Reviewer Name and Title: Alicia Fowler Chief Counsel	Signature verifying legal analysis: Signed 10/25/23

Recommendations

This is an informational item.

Attachments

- PowerPoint Presentation
- 2023 Sustainability Report