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# CALIFORNIA HIGH-SPEED RAIL AUTHORITY

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## POLICY

### POLI-1007

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**TITLE: Sustainability Policy**

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#### **POLICY**

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.

#### **PURPOSE**

The Authority is delivering a transformative high-speed rail system for California and is taking a comprehensively sustainable approach to the design, construction, and operation of the high-speed rail system. Our commitment is to not only deliver a system whose operation will contribute significantly to a more sustainable California, but also to employ leading-edge methods during construction and make the country's largest infrastructure program a model for sustainable delivery. This document presents an all-encompassing Sustainability policy for the California High-Speed Rail system and summarizes the Authority's Sustainability priorities and specific Sustainability commitments.

Sustainability represents the degree to which actions taken today enable current and future generations to lead healthy and rewarding lives. This definition implies that the actions taken now to meet current development and transportation needs must also consider how future generations will be able to meet their needs. It also implies a reluctance to bequeath financial and environmental hardship to the next generation.

To implement these ideals, the Authority uses Sustainability as an organizing framework as other businesses, organizations, and projects have done. Consideration of environmental, social, and financial impacts for both current and future generations is a norm that permeates all aspects of the organization and every element of the high-speed rail system life cycle.

The Authority has long embedded sustainability in its mission and has had several ongoing and interrelated efforts that represent significant momentum. Since the 2016 Sustainability Policy Update, the California legislature passed new legislation covering Renewable Energy, construction materials disclosure, and environmental quality. Given these changes the Authority's intent in this document is to update its comprehensive Sustainability policy and framework, including specifically mapping Sustainability commitments to construction and operation.

This framework is intended to strategically identify directed, creative, and cost-effective approaches to achieving the Authority's Sustainability objectives. Specific goals provide targets toward which the Authority can steer planning, design, construction, and operations practices and reinforce requirements of procurement documents.

Elements of success include the following:

- Clearly understanding the system's Sustainability requirements throughout the Authority and its delivery team;
- Communicating and incorporating the above requirements into design, analysis, scopes of work, and procurement documents;
- Clearly understanding the Sustainability actions required in the delivery of the system by the design-build contractors, other contractors, and consultants;
- Tracking key performance indicators throughout the design, construction, and operation to establish baselines for continuous improvement; and
- Monitoring during the design and construction procurement process to ensure that critical decisions are carried through, implementation is monitored, and performance is measured using indicators that can be clearly communicated to stakeholders.

## **APPLICABILITY**

The Authority will apply its Sustainability policy across all aspects of the planning, siting, design, construction, operations, maintenance, management, and governance of the high-speed rail system.

The Authority developed a Sustainability implementation plan to clarify how the Authority embedded Sustainability priorities in procurement documents, technical memoranda, design criteria, and Authority business planning and operation. This policy and the implementation plan will be communicated by the Director of Planning and Sustainability to all parties involved in program implementation in conformance with the Authority's adopted [PLAN-PD-01 Program Management Plan](#). Implementation helps ensure that decision-making incorporates appropriate Sustainability considerations in a timely fashion and that Sustainability is integrated without schedule disruptions or cost escalation.

This policy applies to all Authority employees (i.e., state staff) and to the Authority's integrated team, per contract-specific requirements (herein collectively referred to as "Authority Staff").

## **BACKGROUND**

The high-speed rail system transforms how Californians move and live throughout the state for decades to come. The Authority Board of Directors (Board), legislators, stakeholders, and regulatory bodies have stressed that the high-speed rail system should exemplify Sustainability in its planning, siting, design, construction, mitigation, operation, maintenance, and management. It is vital that stakeholders are clearly aware of the Sustainability priorities for the system and how these priorities will be achieved by the Authority and its delivery teams. The Authority's priorities and objectives seek to balance social, economic, and environmental issues. This approach will allow the Authority to capture value from Sustainability activities and opportunities.

The Authority initially signed a comprehensive Sustainability policy in September 2013, to honor several industry Sustainability and stakeholder commitments. The Authority Board adopted an updated Sustainability policy in March 2016. Since then, the Authority has continuously implemented a range of Sustainability actions, including an update to its materiality assessment that reaffirmed an identified set of stakeholder Sustainability priorities.

## **TERMS AND DEFINITIONS**

<b>Term</b>	<b>Definition</b>
CALGreen	CALGreen is the California Green Building Standards Code (California Code of Regulations, title 24, part 11) for Residential and Non-residential buildings.
Carbon Neutral	A designation indicating that an entity has identified, inventoried, and managed (reduced and/or offset) carbon dioxide equivalent (CO <sub>2</sub> e) emissions in a product, process, or action over its life cycle to ensure that there is no net release of CO <sub>2</sub> e.
Environmental Product Declaration	A document that discloses the full life-cycle environmental characteristics of a product. They are produced in accordance with the International Organization for Standardization standard 14025 and follow the product category rules for the product.
Fossil Fuels	A fuel, such as coal, gasoline, diesel, oil, and natural gas, that come from the remains of ancient plant and animal life;
Greenhouse Gas (GHG)	A gaseous constituent of the atmosphere, both natural and anthropogenic, that absorbs and emits radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere, and clouds (International Organization for Standardization 14064-1:2006(E)). GHGs include carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulfur hexafluoride (SF <sub>6</sub> ), and nitrogen trifluoride (NF <sub>3</sub> ). GHG emissions are commonly converted into CO <sub>2</sub> e.
Leadership in Energy and Environmental Design (LEED)	A certification administered by the U.S. Green Building Council that provides independent, third-party verification that a building, home, or community was designed and built using strategies aimed at achieving high performance in the following key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.
Life Cycle Cost	The amortized annual cost of a product, including capital costs, installation costs, operating costs, maintenance costs, and disposal costs discounted over the lifetime of the product.

Term	Definition
Net-Zero Energy (or Zero-Net Energy)	A facility or system that produces as much energy through on-site Renewable Energy systems as it uses over the course of a year (or other defined period).
Post-Consumer Recycled Content	The content of a material or finished product that is created from discarded consumer items.
Pre-Consumer Recycled Content	Material that is diverted from the waste stream following an industrial process. Reutilization of materials such as rework, regrind, or scrap generated in a process and capable of being reclaimed within the same process is not considered Pre-Consumer recycled content. Synonyms include post-industrial and secondary material.
Recycling	The series of activities—collection, separation, and processing—by which products or other materials are recovered from the solid waste stream for use in the form of raw materials in the manufacture of new products. Using materials or products for producing heat or power by combustion is not Recycling.
Renewable Energy	Energy resources, such as wind power or solar energy, that can be produced indefinitely.
Sustainability	The capacity to endure. Practical application of sustainable thinking recognizes how current decisions affect the capacity of current and future generations to lead healthy and rewarding lives.

**ROLES AND RESPONSIBILITIES**

**Chief Executive Officer**

- Organizes and enables the Authority’s departments to administer the policy;
- Confirms Sustainability commitments and priorities;
- Communicates the substance of the policy externally; and
- Introduces and approves exceptions to this policy.

**Chief Operating Officer**

- Prioritizes and enables the Authority’s departments to administer the policy.

## **Director of Planning and Sustainability**

- Implements the policy within the Authority;
- Coordinates, manages, oversees, tracks, and monitors key performance indicators throughout procurement, design, construction and operation of the system and its components;
- Establishes baselines to track improvement;
- Monitors design and construction to confirm implementation; and
- Communicates the policy progress to stakeholders through an annual report and other periodic reporting.

## **Chief Deputy Director**

- Implements the requirements relative to the Authority's status as a state agency; and
- Designates a staff member as the solid waste reduction and recycling coordinator.

## **COMMITMENT**

This policy complements and reinforces the Authority's fundamental commitment to Californians and the goals expressed in the High-Speed Rail Authority enabling legislation. The policy's objective is to minimize impacts to the natural and built environment, maximize safety and reliability, encourage compact, walkable land development around transit stations, encourage ridership and revenue, and help California reduce resource consumption, traffic and airport congestion, and energy dependency in a cost-effective manner over the system's entire life cycle.

## **SUSTAINABILITY PRIORITIES, COMMITMENTS, AND PRINCIPLES**

In 2012, Authority Staff and stakeholders identified five Sustainability priorities. In 2015 and 2018, further stakeholder engagement confirmed the relevance of and refined these priorities:

- **Energy and Emissions** refers to the conservation and type of energy resources the Authority uses to construct and operate the rail systems. Energy and emissions also refer to the tracking and minimization of emissions (both greenhouse gas (GHG) and criteria air pollutant emissions) associated with both construction and operation.
- **Sustainable Infrastructure** refers to the set of principles and actions in planning, siting, design, construction, mitigation, operation, maintenance, and

management of infrastructure that reflect a balance of social, environmental, and economic concerns.

- **Natural Resources** refers to the environment and its resources, addressed in and within ecological systems.
- **Station Communities and Ridership** refers to collaborative planning activities that promote transit-oriented development and sustainable land use decisions that will help bring riders into the high-speed rail system; encourage and promote proximity co-location for education, health, and business institutions; and ancillary consumer concession services.
- **Economic Development and Governance** refers to responsible leadership and management, transparency practices, and sound business planning.

The Authority Sustainability priorities and commitments are designed to advance the overall Sustainability Policy and correspond to specific actions the Authority will undertake itself or through work with partners. These priorities allow the Authority to set qualitative and quantitative targets and monitor progress in an annually updated Sustainability implementation plan.

As the Authority enters into contracts for the construction and implementation of the high-speed rail system, system-specific goals are further refined by the Director of Planning and Sustainability in each contract's provisions, Sustainability strategies and procedures, and other contract documents. As system delivery advances, the Director of Planning and Sustainability will incorporate more specificity on operations practices and strategies into the annual Sustainability implementation plan.

### **Energy and Emissions Commitments**

Construction Phase:

- Achieve net-zero GHG and criteria air pollutant emissions in construction.

Operations Phase:

- Net-Zero Energy/LEED platinum facilities;
- Operate the system on 100 percent Renewable Energy;
- Strengthen public health by improving air quality;
- Reduce vehicle miles traveled; and
- Reduce operational energy costs.

## **Sustainable Infrastructure Commitments**

### Construction Phase:

- Design and construct the system in conformance with Authority's Principles for Sustainable Infrastructure (see next section);
- Consider climate change risks and vulnerabilities and plan for them proactively by incorporating climate adaptation measures into system design; and
- Protect health and safety of workers and communities.

### Operations Phase:

- Operate the system in conformance with Authority's Principles for Sustainable Infrastructure (see next section); and
- Protect health and safety of workers, customers, and communities.

## **Natural Resources Commitments**

### Construction Phase:

- Conserve, maintain, and restore habitat and wildlife corridors through landscape scale mitigation;
- Retain, protect, and enhance the environmental quality and biodiversity of the system area;
- Conserve agricultural land;
- Reduce the demand for virgin natural resources by using materials with Post-Consumer and Pre-Consumer Recycled Content; and
- Practice on-site water conservation.

### Operations Phase:

- Work toward zero-net water operations.

## **Station Communities and Ridership Commitments**

- Design and construct stations and infrastructure that reinforce Sustainable Community Strategies ([CA Senate Bill 375](#));
- Implement livable development patterns in station areas and reinforce quality of life through design of the built environment;
- Reinforce infill development and affordable housing through station area planning partnerships and identify a mechanism to fund two-to-one replacement of low- and moderate-income housing stock;
- Provide convenient station access and appropriate station interfaces to all high-speed rail station areas;
- Connect local and regional transit to high-speed rail stations; and
- Implement active transportation facilities, walking and bicycling, for station access.

## **Economic Development and Governance Commitments**

### Construction Phase:

- Improve the economic value to Californians from the system and maximize benefits to disadvantaged communities;
- Implement 30 percent overall small business participation goal for Authority contracts, including 10 percent Disadvantaged Business participation and 3 percent Disabled Veteran Business Enterprises;
- Maximize opportunity for private investment;
- Govern transparently and accountably; and
- Continuously improve program delivery and management.

### Operations Phase:

- Maximize opportunity for private investment and private sector operations; and
- Achieve a self-sustaining financial structure.

## **AUTHORITY PRINCIPLES FOR SUSTAINABLE INFRASTRUCTURE**

Sustainable infrastructure can refer to a variety of priorities and objectives. The Authority defined its sustainable infrastructure principles based on global best practices, stakeholder priorities, and California state regulations.

The following principles encompass the Authority's commitment to sustainable infrastructure:

- Require energy efficiency in design;
- Minimize GHG emissions through design and requirements and achieve net-zero GHG and criteria air pollutant emissions in construction;
- Design and construct high-performance facilities that achieve Net-Zero Energy for operations and can be Leadership in Energy and Environmental Design (LEED)-certified at the platinum level;
- Require Environmental Product Declarations for construction materials, including steel products and concrete mix designs, to improve disclosure of materials' information and incentivize the selection of better-performing environmental products;
- Require optimized life cycle scores for major materials, including assessment of global warming potential while maintaining competition, durability, and quality;
- Require the use of non-hazardous materials, where possible, and minimize the use of those materials harmful to human health or the environment;
- Investigate appropriateness of groundwater recharge along the alignment and make recharge a requirement where appropriate;
- Require groundwater recharge at sites where practicable and/or detain water for reuse in irrigation while maintaining water quality;
- Sequester in-situ hazardous material where feasible and cost effective;
- Follow construction waste practices that divert at least 85 percent of waste from landfill, unless the local regulation is higher;
- Recycle all steel and concrete waste generated in construction;
- Follow construction practices that maintain or improve air quality during construction, both for workers and people living in the air basin in which the high-speed rail system is being constructed;
- Require life cycle performance of components, systems, and materials where practicable. Adaptively reuse existing structures and facilities whenever feasible;
- Reduce potable water use in design, construction, and operation to the maximum extent practicable;
- Maintain community and stakeholder engagement throughout design, construction, and operation of the system;
- Use 100 percent Renewable Energy for system operation;
- Maximize station access for pedestrians, cyclists, and transit riders;
- Consider equitable system access, investments, and benefits through design, construction, and operation of the system;
- Progressively refine Sustainability requirements in design and construction contracts to achieve improved outcomes;

- Integrate climate adaptation and resilience principles into the design, construction, and operation of the system; and
- Follow operations practices that maintain or improve air quality.

## **FINANCIAL IMPACT**

Incorporating sustainable design, construction, and operations practices into a project or program from its inception avoids several of the factors identified as adding cost to infrastructure projects. The Authority is committed to pursuing Sustainability strategies that will be as close to cost-neutral as possible or that will reduce operating costs.

## **REPORTING AND CONTINUOUS IMPROVEMENT**

The Authority will produce a Sustainability report annually. Following the example of peer organizations (high-speed rail agencies and major transportation agencies), the report will contain a subset of indicators recommended by the Global Reporting Initiative, the world's most widely-used framework for Sustainability reporting. If required by regulation or to address critical stakeholder interest, the Authority will undertake the steps and procedures necessary to enable its environmental and Sustainability claims to be audited and verified by a third party in compliance with the International Organization for Standardization (ISO) 14001 standard.

In 2019, the Authority updated its materiality assessment, reaffirming which topics and indicators were highly significant to stakeholders. Going forward, the Director of Planning and Sustainability shall develop the Authority's annual report to reflect and respond to these significant indicators.

The Authority has included general references to Sustainability in its planning, design, and construction documents, and placed specific requirements in the contract for design-build services and other contracts. The Director of Planning and Sustainability will consistently refine these statements and requirements to reflect cost-effective and high-speed-rail-specific implementation strategies to be undertaken by various divisions of the Authority and its consultants. Authority staff will monitor contractor compliance with requirements set forth in design-build construction contracts throughout construction. Authority staff will collect performance data through the Authority's Environmental Mitigation Management Application tool. Authority staff will assemble these data, as well as Authority performance information, into the annual report as directed by the Director of Planning and Sustainability.

## **SOURCES OF AUTHORITY**

The laws, regulations, and direction for this policy are cited in the following:

- [California State Administrative Manual – chapter 1800](#). Energy and Sustainability
- [California Executive Order B-30-15](#). Establishing 2030 California emissions target, Adaptation initiatives

## **REFERENCES**

<b>Authority Document Control Number</b>	<b>Document Title</b>
<a href="#">POLI-1019</a>	Station Site and Adjacent Development Policy
<a href="#">POLI-1049</a>	Land Use Management Policy

## **SUMMARY OF REFERENCED DOCUMENTS**

The following section summarizes several of the documents related to, and which informed the development of this policy, priorities, commitments, and principles. This section also includes commitments and memoranda of understanding that the Authority has signed, committing it to partnerships and engagement with stakeholders.

### **Laws, Codes, Plans and Executive Orders**

- [Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century, California Streets and Highways Code section 2704 et seq.](#) Proposition 1a, which was approved by the voters of California in November 2008, contains several references that relate to Sustainability:
  - “(g) In order to reduce impacts on communities and the environment, the alignment for the high-speed train system shall follow existing transportation or utility corridors to the extent feasible and shall be financially viable, as determined by the authority.
  - (h) Stations shall be located in areas with good access to local mass transit or other modes of transportation.
  - (i) The high-speed train system shall be planned and constructed in a manner that minimizes urban sprawl and impacts on the natural environment.
  - (j) Preserving wildlife corridors and mitigating impacts to wildlife movement, where feasible as determined by the authority, in order to limit the extent.”

- [\*\*2013 CALGreen. California Code of Regulations title 24, part 11.\*\*](#) CALGreen is the building code for residential and non-residential buildings. It has mandatory (Tier 1) and optional (Tier 2) elements that correspond to critical areas of high-performance design, construction, and operation. Design documents prepared by the Authority must meet CALGreen requirements. While the high-speed rail system will be a statewide system—generally planned and designed in accordance with relevant state standards, regulations, and codes—many system facilities will also require coordination with local jurisdiction design requirements.
- [\*\*Air Pollution: Greenhouse Gases: California Global Warming Solutions Act of 2006, California Health and Safety Code section 38500 et seq.\*\*](#) This California law (also referred to as Assembly Bill 32, or AB32), adopted in 2006, directs the California Air Resources Board (CARB) to begin developing solutions to reduce statewide GHG emissions to 1990 levels by 2020. The high-speed system is included as a transportation measure to help achieve statewide emissions reduction.
- [\*\*California Global Warming Solutions Act of 2006, California Health and Safety Code section 38566.\*\*](#) This California law (also referred to as State Bill 32, or SB32), adopted in 2016, requires CARB to ensure that statewide greenhouse gas emissions are reduced to 40 percent below the 1990 level by 2030.
- [\*\*Transportation planning: travel demand models: sustainable communities strategy: environmental review. Sustainable Communities and Climate Protection Act of 2008 \(as amended\), California Government Code 65080, 65400, 65583, 65584.1, 65584.02, 65584.04, 65587, and 65588; California Public Resources Code 21061.3, 21159.28, and 21155.\*\*](#) This California law (also referred to as State Bill, or SB375), adopted in 2008, requires CARB to develop regional reduction targets for GHGs and prompts the creation of regional plans to reduce emissions from vehicle use throughout the state. California's 18 Metropolitan Planning Organizations (MPOs) must create Sustainable Community Strategies (SCS). The MPOs are required to develop the SCSs through integrated land use and transportation planning and demonstrate an ability to attain the proposed reduction targets by 2020 and 2035. The Authority's station area planning activities support and reinforce SCS planning.
- [\*\*State agency recycling: waste diversion: community service districts, California Public Resources Code sections 40148, 40196.3, 41821.2, 42920 et seq.\*\*](#) This California law, adopted in 1999, requires each state agency and each large state facility, as defined, to divert at least 25 percent of the solid waste generated by the state agency or large state facility from landfill disposal or transformation facilities by January 1, 2002, and at least 50 percent by January 1, 2004. Agencies must also designate at least one solid waste reduction and Recycling coordinator to oversee the implementation of waste management

plans and Recycling/reuse programs. Agencies must submit an annual report, for the prior calendar year, including disposal amounts and explanation of diversion activities. The Business Services Manager at the Authority is the designated coordinator.

- The [California Long-term Energy Efficiency Strategic Plan](#) was published in 2008 and updated in 2011 by the California Public Utilities Commission. It sets ambitious efficiency goals for the state, including achieving zero-net energy new construction in the residential sector by 2020 and commercial sector by 2030. Setting a Net-Zero Energy goal for the design of high-speed rail facilities aligns with current California planning to achieve state energy targets.
- [California Budget Act of 2012, as amended \(Chapter 152, Statutes of 2012\)](#). This California budget law, which appropriated funding for the high-speed rail system, passed in July 2012. It directs the Authority to submit, on or before June 30, 2013, a report approved by the California Secretary of Business, Transportation and Housing, consistent with the criteria in this provision that provides an analysis of the net impact of the high-speed rail system on the state's GHG emissions. The Authority completed [this report](#) and delivered it to the state legislature.
- [Greenhouse gases: emissions reduction, California Government Code sections 16428.9, 12087.5, 19602.8; California Health and Safety Code sections 39711, 39715, 39719, 39719.1, 44091.1; California Public Resources Code sections 4475, 4598, 25470, 25471.5, 25474.5, 25472, 25474, 42995 et seq., 75121, 75200 et seq.; California Public Utilities Code section 2827](#). This California law (also referred to as Senate Bill 862, SB862) continuously appropriates 25 percent of the annual proceeds of the Greenhouse Gas Reduction Fund to the Authority for specified components of the initial operating segment and the Phase I blended system of the high-speed rail system.
- [California Global Warming Solutions Act of 2006: Greenhouse Gas Reduction Fund, California Health and Safety Code sections 39711, 39713, 39715, 39721, 39723](#). This California law requires the allocation of monies from the Greenhouse Gas Reduction Fund to benefit disadvantaged communities.
- [California Global Warming Solutions Act of 2006: Greenhouse Gas Reduction Fund, California Government Code section 12894; California Health and Safety Code sections 39710 et seq.](#) This California law requires the development of a three-year investment plan to identify funding priorities for investing auction proceeds. Additionally, those investments shall be used to facilitate the achievement of reductions of GHG emissions in the state and direct investment toward the most disadvantaged communities and households in the state.

- **[Public contracts: bid specifications: Buy Clean California Act, California Public Contract Code sections 3400 et seq., 3500 et seq.](#)** This California law requires the Department of General Services (DGS) to establish and publish in the State Contracting Manual, a maximum acceptable global warming potential for each category of eligible materials. The bill requires the department to review the maximum acceptable global warming potential for each category of eligible materials established by January 1, 2022, and every 3 years thereafter. Eligible materials are defined as carbon steel rebar, flat glass, mineral wool board insulation, and structural steel.
- **[Clean Energy and Pollution Reduction Act of 2015, California Health and Safety Code section 44258.5; California Labor Code section 1720; California Public Resources Code sections 25302.2, 25327; California Public Utilities Code sections 237.5, 359, 365.2, 366.3, 399.11, 399.12, 399.13, 399.15, 399.16, 399.18, 399.21, 399.30, 399.4, 400 et seq., 454.51, 454.52, 454.55, 454.56, 701.1, 740.12, 740.8, 9505, 9620, 9621, 9622.](#)** This California law requires that utilities increase to 50 percent the amount of electricity generated and sold to retail customers per year from eligible Renewable Energy resources, by December 31, 2030.
- **[California Renewables Portfolio Standard Program: emissions of greenhouse gases, California Public Utilities Code sections 399.11, 399.15, 399.30, 454.53.](#)** This California law (also referred to as State Bill 100, SB100) requires that the program is to achieve the 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. This bill also states that it is the policy of the state that eligible Renewable Energy resources and zero-carbon resources supply 100 percent of retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.
- **[California Executive Order B-18-12.](#)** This executive order directs state agencies to initiate a range of green building practices for the state's buildings. It requires all new state buildings and major renovations beginning design after 2025 to be constructed as zero-net energy facilities and to reduce agency GHG emissions by 10 percent.
- **[California Executive Order B-30-15.](#)** This executive order established a California GHG target of 40 percent below 1990 levels by 2030. It requires state agencies to take climate change into account in their planning and investment decisions and employ full Life Cycle Cost accounting when assessing investments.
- **[California Executive Order B-55-18.](#)** This executive order set a statewide goal to achieve carbon neutrality as soon as possible, but no later than 2045, and maintain net negative emissions thereafter.

- [California Executive Order N-06-19](#). This executive order encourages state agencies to work in partnership with local governments for the purposes of affordable housing and preservation.
- [California Executive Order N-19-19](#). This executive order directs the State Transportation Agency to reduce fuel consumption and greenhouse gas emissions associated with the transportation sector through funding of active transportation and investments to support housing near available jobs, among other actions.

### **Commitments and Memoranda of Understanding (MOUs)**

- [MOU for Achieving an Environmentally Sustainable High-Speed Train System in California](#). In 2011, the Authority signed an MOU with partners at the federal and state levels pledging an environmentally conscious approach to the planning, design, construction, and operation of the high-speed rail system. The Authority, with the Federal Railroad Administration, U.S. Department of Housing and Urban Development (Region 9), U.S. Department of Transportation, and U.S. Environmental Protection Agency (EPA) Region 9, established a partnership for sustainable system development. The sustainability MOU encourages the Authority to consider the need to plan, site, design, construct, operate, and maintain a high-speed train system in California using environmentally preferable practices to:
  - Protect the health of California’s residents and preserve California’s natural resources; and
  - Minimize air and water pollution, energy usage, and other environmental impacts.

The signatory agencies also recognize the significant and far-reaching benefits of a well-planned system in California and share a common vision for a system that, when combined with other planning efforts:

- Promote sustainable housing and development patterns which recognize local goals and interests;
- Integrate station access and amenities into the fabric of surrounding neighborhoods;
- Stimulate multimodal connectivity and thereby increase options for affordable, convenient access to goods, services, and employment;
- Reduce per passenger transportation emissions across California, thereby reducing associated environmental and health impacts; and
- Protect ecologically sensitive and agricultural lands.

The signatory agencies work together in six specific areas: sustainable livable communities, materials selection, design and construction, Renewable Energy and energy efficiency, water resource management, and the development of a system-wide sustainability policy. This MOU was referenced in the 2012 Business Plan and is included in the Authority's procurement documents. The Authority's application of the MOU objectives is further refined and defined in this Sustainability policy.

- **MOU for the Development of Renewable Energy on State Property**. This MOU was originally adopted on December 15, 2010 by the California Energy Commission with:
  - California Department of General Services;
  - California Department of Corrections and Rehabilitation, California Department of Transportation;
  - California Department of Water Resources; and
  - California Department of Fish and Game.

Later, the California State Lands Commission, University of California, and California State University systems also signed the MOU (which includes an option for additional agencies to join in the future). The Authority became a signatory on April 2, 2012.

The MOU was effective through June 30, 2014. The signatories, working as a collective group, were to study, plan, and develop energy-generating infrastructure on state government premises. They were to work on a consistent procurement strategy and contract language for Requests for Proposals (RFP) and develop one or more statewide RFP solicitations for developers of green power on state property.

- **American Public Transportation Agency (APTA): APTA Sustainability Commitment**. The Authority signed this commitment July 2013. APTA stresses that sustainability comprises practices that make good business and environmental sense, balancing the economic, social, and environmental needs of a community. Signatories committed to a core set of actions that include the following:
  - Make sustainability a part of the organization's strategic objectives;
  - Identify a sustainability champion in the organization with the requisite human and financial resources and mandates;
  - Establish an awareness-raising and education program on sustainability for agency staff; and

- Undertake a sustainability inventory of the agency, reporting on some basic indicators including water usage, criteria air pollutant emissions, GHG emissions and savings, energy use, and Recycling levels.

The Planning and Sustainability Branch have undertaken all the core set of actions and report on them annually.

- [International Union of Railways \(UIC\). Railway Climate Responsibility Pledge](#). The Authority signed this commitment in August 2015. This pledge included commitments to:
  - Reduce the Authority’s specific energy consumption and CO2 emissions, and through these reductions contribute to the UIC “Low Carbon Rail Transport Challenge” and its global 2030/2050 targets, presented in 2014 at the UN Climate Summit;
  - Stimulate modal shift to rail in national and international markets, by working in partnership with key stakeholders;
  - Actively communicate climate-friendly initiatives undertaken by the Authority during the year 2016 and beyond, to raise awareness, acceptance, and recognition of the role of sustainable transport as a part of the solution to climate change;
  - Report data on the Authority’s specific energy consumption and CO2 emissions to UIC on a regular basis; and
  - To promote and demonstrate the continuous improvement of railway sector at the international level.

## **CONTACT**

For questions regarding this document, please contact the Program Delivery Office’s Director of Planning and Sustainability.