California Energy Commission (CEC)

Zero-Emission Vehicle (ZEV) Role: Lead state agency on ZEV infrastructure planning and deployment. The CEC sets the direction for California's multi-agency ZEV infrastructure deployment and ZEV-related manufacturing efforts. This includes efforts to expand charging and hydrogen fueling, vehicle-grid integration (VGI), and planning for resilient transportation systems powered by renewable energy. The CEC also funds research, development, and demonstration of ZEV technologies and workforce development. On October 7, 2023, Governor Newsom signed Assembly Bill (AB) 126, extending the Clean Transportation Program through July 1, 2035. In February 2025, the CEC adopted a $1.4 billion Investment Plan for the Clean Transportation Program to continue the state's transition to zero-emission transportation. The 2024 – 2025 Investment Plan breakdown for the following three years is provided in more detail here: https://efiling.energy.ca.gov/GetDocument.aspx?tn=261539.

Equity Focus: The CEC's Investment Plan goal last year of investing at least 50 percent of funds for benefiting Californians in low-income and disadvantaged communities was codified with the extension of the Clean Transportation Program per AB 126. The CEC is continuing to define, measure, track and increase benefits to communities through a robust public process and inter-agency engagement. Benefits to priority communities include increased access to ZEV infrastructure (including at multi-family dwellings and rental homes), increased zero-emission mobility options (e.g., through transit infrastructure investments), ZEV-focused pathways to high-road jobs, and improved air quality in priority communities.

CEC ZEV MARKET DEVELOPMENT OBJECTIVES

1. **Analysis:** Develop and maintain analysis on ZEV infrastructure needs and progress, as well as data and shared analytical understanding of the integration of transportation into the energy system, in collaboration with the California Air Resources Board (CARB), California Public Utilities Commission (CPUC), Governor's Office of Business and Economic Development (GO-Biz), California Independent System Operator (CAISO), and other agencies. Forecast transportation energy demand for all vehicles, including ZEVs. Analyze and publicize data on California ZEV sales, ZEV on-road fleet, and ZEV infrastructure. Maintain the database of California's ZEV-related manufacturing companies.

   Direct Pillar Connection: Vehicles, Infrastructure, End Users

   Indirect Pillar Connection: Workforce

   Key Collaborators: CARB, CPUC, CAISO and grid operators, GO-Biz, local air districts, California Department of Transportation (Caltrans), California Department of Motor Vehicles (DMV), national labs and universities, non-governmental organizations (NGOs) including equity and environmental justice, and private entities including vehicle and infrastructure manufacturers.

   Key Results & Actions:

a. **AB 2127 Charging Infrastructure Assessment.** The AB 2127 Second Electric Vehicle (EV) Charging Infrastructure Assessment Commission Report was published in March 2024.[1] The analysis presented in this report projects that California will need hundreds of thousands additional chargers to support approximately seven million light-duty plug-in electric vehicles (PEV) in 2030. To support medium- and heavy-duty (MDHD) PEV, California will need about 114,500 chargers for 155,000 vehicles in 2030.

- **Progress in 2024**: AB 2127 Second Electric Vehicle Charging Infrastructure Assessment approved at February 2024 CEC business meeting. Commission Report published March 2024.
- **Progress in 2024:** Staff coordinated with National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory to update infrastructure models for AB 2127 assessments. Developed scenarios and began drafting AB 2127 Third Electric Vehicle Charging Infrastructure Assessment.

- **Action for 2025**: Drafting AB 2127 Third Electric Vehicle Charging Infrastructure Assessment staff report. Publish staff draft report and hold workshop to solicit stakeholder feedback. Address feedback, revise the report and seek approval for publication as Commission Report.

b. **SB 1000 Report on Equitable Distribution of Charging Infrastructure.** Continue activities under SB 1000 to assess equitable distribution of charging infrastructure.

- **Progress in 2024**: Estimated access to at-home charging and access to public near-home charging among EV owners who are less likely to have home charging. Emphasis is on access among multi-family residents, communities designated as disadvantaged or low-income, urban, and/or rural. Updated previous years' findings of public charger distribution and drive time results.

- **Action for 2025**: Publish the staff report on access to public near-home charging among EVs without home charging with updates of previous years' analyses in the appendix of this report. Coordinate with the Disadvantaged Communities Advisory Group (DACAG), GO-Biz, CARB, and equity leads on identifying priorities for future analysis.

c. **AB 126 CEC / CARB Joint Report.** Analyze and coordinate for the AB 126 report on progress toward establishing a hydrogen refueling network that provides the coverage and capacity to fuel hydrogen fuel cell electric vehicles (FCEVs) in the state.

- **Progress in 2024**: The 2024 AB 126 Joint Report analyzed progress toward

[1] Second Electric Vehicle Charging Infrastructure Assessment Commission Report https://www.energy.ca.gov/publications/2024/assembly-bill-2127-second-electric-vehicle-charging-infrastructure-assessment.

establishing a hydrogen refueling network that provides the coverage and capacity to fuel hydrogen FCEVs in the state.

- **Progress in 2024**: As of November 2024, 62 retail stations were open in California providing hydrogen refueling. The network of 62 stations could support as many as 57,000 light-duty FCEVs when operating at full capacity.
- **Progress in 2024**: As of the end of the third quarter in 2024, an estimated 14,415 FCEVs were on the road.

- **Action for 2025**: Continue coordination and analysis for the AB 126 report on hydrogen infrastructure. The process will continue to explore ways to improve reliability and availability of existing stations to improve FCEV drivers' experience and to support current and future light-duty FCEV population in the state.

d. **Charging Infrastructure Modeling Tool Maintenance.** Continue updates to charging infrastructure modeling tools such as the new version of Electric Vehicle Infrastructure Projections (EVI-Pro) model tool; continue updates to the EVI-Pro RoadTrip model tool for long distance travel; continue to develop and update the MDHD Electric Vehicle Infrastructure Load, Operations, and Deployment (HEVI-LOAD) model.

- **Progress in 2024:** The AB 2127 Second Electric Vehicle Charging Infrastructure Assessment Revised Staff Report was approved at the February 2024 CEC business meeting, and the Commission Report was published in March 2024.
- **Progress in 2024:** Staff worked with researchers at the National Renewable Energy Laboratory and Lawrence Berkeley National Laboratory to update all models, assumptions, and scenarios in preparation for the AB 2127 Third Electric Vehicle Charging Infrastructure Assessment.
- **Progress in 2024:** Staff from the Fuels and Transportation Division and Energy Assessment Division coordinated to align AB 2127 assumptions and modeling with the Integrated Energy Policy Report (IEPR).

- **Action for 2025**: Finalize scenarios and assumptions for the AB 2127 third assessment. Publish draft report and hold workshops to collect stakeholder feedback in the third quarter of 2025. Incorporate stakeholder feedback into revision, publish revised staff report by end of 2025.

e. **Maintain and Update a ZEV-Related Manufacturing Database.** Meet monthly with CARB and GO-Biz to identify in-state manufacturers of zero-emission transportation technologies. Develop a public-facing mapping tool for easy access to information on ZEV and ZEV-related manufacturers in California.

- **Progress in 2024**: Collected and analyzed data regarding companies in California that manufacture ZEV products. There were 60 ZEV and ZEV-related commercial manufacturers identified and published to the

mapping tool.

- **Action for 2025**: Continue collecting and analyzing data on ZEV and ZEV-related manufacturers in California with annual updates to the California ZEV Related Manufacturing mapping tool.

f. **ZEV and Infrastructure Statistics Website.** Update the ZEV and Infrastructure Statistics website with quarterly ZEV sales, ZEV populations, and ZEV infrastructure counts. Expand the website to include MDHD ZEVs. Compile MDHD ZEV counts from relevant funding programs in the state through cross-agency collaboration. At the end of each year, reassess whether California Department of Motor Vehicles data can be used to accurately track MDHD ZEVs going forward.

- **Progress in 2024**: Light-duty EV charger dashboard updated March 2025 with over 178,000 operational public and shared private chargers. Use of additional new data sets to improve counts.
- **Progress in 2024:** MDHD station dashboard updated with data as of December 2024. Estimated over 16,000 public and private planned and operational charging and hydrogen fueling positions in California.

- **Action for 2025**: Staff to conduct website updates in Q3 2025.
- **Action for 2025**: Continue to refine data collection, including forthcoming AB 2061 regulations which include charging port inventory requirements.

g. **Transportation Energy Demand Forecast (TEDF).** Complete the TEDF annually as part of the Integrated Energy Policy Report (IEPR). Review results as an indicator of whether the state is on track to meet its goals with current market conditions. Results will feed into the biennial AB 2127 assessments as well as the IEPR.

- **Progress in 2024**: Developed and utilized an updated travel model, the Passenger, Air, Rail, Microtransit, and Marine model (PARMM), to better capture the effects of state policy and market considerations.
- **Progress in 2024:** Developed a new California Vehicle Survey to compile data on evolving trends in consumer purchase behavior.
- **Progress in 2024:** Completed the TEDF for the 2024 IEPR. The TEDF includes a baseline scenario reflecting existing trends and policies, and an "Additional Achievable Transportation Electrification" scenario that incorporates recent supply-side regulations.

- **Action for 2025**: Assess economic and demographic changes resulting from federal and state policies.
- **Action for 2025**: Complete the TEDF for the 2025 IEPR.

h. **Transportation Energy Demand Scenarios.** Develop exploratory scenarios for the IEPR that build from the Transportation Energy Demand Forecast to assess potential impacts of proposed PEV policies, incentives, or othertrends.

- **Progress in 2024**: Completed development of updated demand scenarios that identify the long-term energy demand and greenhouse gases (GHG) emission reductions from existing and near-term policies. These scenarios included the annual energy consumption for all energy types and GHG emissions out to 2050 for varying degrees of electrification in transportation and other sectors.

- **Action for 2025**: Integrate updates to demand scenarios into relevant efforts, such as the 2025 SB 100 Joint Agency Report. Complete the supporting staff report on the Demand Scenarios Project.

i. **SB 643 Report.** Conduct assessments of the FCEV infrastructure, fuel production, and distribution needed to meet California's zero-emission truck, bus, and off-road vehicle goals as set in Executive Order N-79-20, as well as any CARB regulation that requires or allows zero-emission heavy-duty and off-road vehicles.

- **Progress in 2024**: Staff published the SB 643 Final Staff Report in January 2024 and delivered it to the California State Legislature. Staff presented the final staff report to the Commissioners at the March CEC business meeting.

- **Action for 2025**: Continue assessing developments in MDHD refueling infrastructure, and in hydrogen applications for the off-road and non-road sectors.
- **Action for 2025:** Continue collaborating with Lawrence Berkeley National Lab to incorporate MDHD hydrogen and off-road/non-road into future scenarios into the HEVI-LOAD model.
- **Action for 2025:** Continue preparation and develop outline/schedule of next report ahead of its December 2026 publication. Next report is due January 2027.

2. **Infrastructure Development:** Develop and deploy ZEV infrastructure, with a focus on accelerating deployment, encouraging private investments, and addressing gaps in access for communities designated as disadvantaged and low-income. Enable public and private sector investment in ZEV infrastructure. Oversee publicly owned utilities' electricity resource planning, including plans for transportation electrification through investments and rates.

Direct Pillar Connection: Infrastructure, Workforce

Indirect Pillar Connection: End Users

Key Collaborators: CPUC, CARB, GO-Biz, CAISO and grid operators, local air districts, Caltrans, DMV, utilities, the DACAG, the Clean Transportation Program Advisory Committee, electricity and hydrogen providers, federal, regional, local and tribal governments, NGOs, fleets, universities and researchentities, and other external stakeholders who have an interest in zero-emissiontransportation including vehicle manufacturers and infrastructure manufacturers and companies.

Key Results & Actions:

a. **Fund Infrastructure through Grant Funding Opportunities (GFOs), Block Grants, Loans, and Interagency Agreements.** The Clean Transportation Program administers funding through targeted solicitations and block grant incentive programs to support development of charging and refueling ZEV infrastructure for passenger vehicles, MDHD, and off-road equipment.

Infrastructure Solicitations:

- **Progress in 2024**: Developed and published multiple solicitations to support light-duty and MDHD ZEV infrastructure. Examples include solicitations to support Tribal EV Infrastructure, Planning, and Workforce Training and Development; Light-duty Hydrogen Infrastructure Build-Out; Reliable, Equitable, and Accessible Charging for Multi-family Housing 3.0; Charging and Refueling Infrastructure for Transport in California Provided Along Targeted Highway Segments 2.0; California's Electric Vehicle Charger Reliability and Accessibility Accelerator Program (Federal); FAST 2.0 Fast and Available Charging for All Californians; California's National Electric Vehicle Infrastructure Formula Program, Solicitation #2 (Federal).

- **Action for 2025:** Develop and publish multiple solicitations to support light-duty and MDHD ZEV infrastructure. Examples include solicitation concepts such as light-duty EV charging; infrastructure for charging and refueling MDHD BEV and FCEV; focusing on ZEV infrastructure at ports, goods movement, on- and off-road, and corridors with MDHD ZEVs; utilizing federal funding for the third National Electric Vehicle Infrastructure solicitation and the first Charging and Refueling Infrastructure solicitation.

Block Grants:

- **Progress in 2024**: Developed and published multiple funding windows through block grants. These include Energy Infrastructure Incentives for Zero-Emission (EnergIIZE) Commercial Vehicles - Drayage Set-Aside funding Lane; EnergIIZE Commercial Vehicles - Transit Set-Aside Funding Lane; EnergIIZE Commercial Vehicles - EV Fast Track Set-Aside; EnergIIZE Commercial Vehicles - EV Jump Start Set-Aside; EnergIIZE Commercial Vehicles - Hydrogen Set-Aside; Zero-Emission School Bus and Infrastructure (ZESBI) Program; Communities in Charge Funding.

- **Action for 2025**: Release block grants to support light-duty EV charging projects; MDHD commercial ZEV projects.

b. **Equitable Access to Infrastructure for all Californians.** Ensure all Californians have access to infrastructure by including equity objectives in all funding opportunities and by designing programs toprovide benefits to underserved communities.

- **Progress in 2024:** Revised the Clean Transportation Program's Community Benefits Metrics and presented the draft to the DACAG and Clean

Transportation Program Advisory Committee.

- **Progress in 2024**: Released RFP-24-601 – Technical Assistance for MDHD ZEV Infrastructure Blueprint Development.
- **Progress in 2024:** Released GFO-24-605 – Technical Assistance for ZEV Infrastructure Funding, a funding opportunity for third-party implementers to provide technical assistance for communities eligible to seek federal and state funding for ZEV infrastructure.

- **Action for 2025:** Finalize the Community Benefits Metrics for the Clean Transportation Program and begin collecting data for 2025.

c. **Strive for Equipment Standardization.** Fund efforts and solicitations covering topics such as equipment testing and certification to encourage interoperability.

- **Progress in 2024**: Continued to maintain and updated the Vehicle-to-Grid Equipment List with new entries including UL[2] 1741 Supplement-B certification.
- **Progress in 2024:** Released GFO-24-609 – Charge Yard, aiming at deploying a permanent testing facility for charging interoperability, maturing interoperability and testing standards, supporting testing of bidirectional charging and other innovative charging technologies and use cases.
- **Progress in 2024:** Updated statement on SAE[3] J3400 North American Charging Standard (NACS) connector standard following publication of SAE's recommended practice. CEC is working towards a single connector future for light-duty vehicles, will continue to monitor industry adoption and may accordingly require J3400 NACS connectors for publicly-funded chargers.
- **Progress in 2024:** Conducted an informational workshop on network roaming for EVs.
- **Progress in 2024:** Continued to harmonize technical requirements for EV charging equipment across CEC programs.

- **Action for 2025**: Award GFO-24-609 – Charge Yard and develop grant agreement.
- **Action for 2025**: Develop a roadmap for broad Plug & Charge support and adoption: Plug & Charge is a key feature of ISO[4] 15118 that enables modern charging systems to simplify a driver's ability to initiate and pay for a charging session.
- **Action for 2025**: Continue to monitor standards and interoperability development and their impact on driver experience, including on payment and network roaming.

d. **Use Data and Analysis to Inform Investments.** Use the results of the AB 2127 analysis, SB 1000 analysis, SB 643 analysis, and ongoing AB 8 hydrogen studies to

[2] Underwriters Laboratories (UL). https://www.ul.com/
[3] SAE International (SAE). https://www.sae.org/
[4] International Organization for Standardization (ISO). https://www.iso.org/home.html

inform solicitation design.

- **Progress in 2024**: Developed and published SB 1000, AB 8, SB 643, and AB 2127 reports. Staff also utilize data from CEC-funded chargers and historical station development data from National Renewable Energy Laboratory.

- **Action for 2025**: Develop the next round of SB 1000, AB 8, SB 643, and AB 2127 reports.
- **Action for 2025**: Finalize and seek Commission approval of AB 2061 regulations. This regulation will increase the granularity and volume of data the CEC has on funded chargers. Staff will continue to utilize data from CEC-funded chargers and historical station development data from National Renewable Energy Laboratory. These efforts, along with stakeholder feedback, will further refine the above reports and continue to drive the evolution of funding strategies.

e. **Demonstrate Emerging Technologies for Sectors that are Nascent.** Demonstrate hydrogen fuel cell and electric vehicle technologies and fueling infrastructure for zero-emission rail, marine, aviation, off-road, and green zone projects serving California ports and other sectors. Focus deployments in or near priority communities whenever feasible.

- **Progress in 2024:** Released the NOPA for the Advanced Technology Demonstration and Pilot Projects solicitation in March 2024.
- **Progress in 2024:** Conducted a workshop for MDHD solicitation concepts in July 2024.

- **Action for 2025**: Under the Advanced Technology Demonstration and Pilot Projects solicitation, six projects are proposed for award by staff. Three projects have been approved at a CEC business meeting and the remaining projects will be ready for presentation at a later CEC business meeting in 2025 for voting.
- **Action for 2025:** Conduct a workshop on emerging opportunities and MDHD infrastructure funding to propose concepts and solicit feedback from the public.

f. **ZEV Infrastructure Plan (ZIP).** The statewide ZIP supports decision-making by State agencies and stakeholders, and public discussions of ZEV infrastructure policies and funding needs. The ZIP incorporates State agency plans and information needs for future decisions. CEC will engage the public for feedback and input.

- **Progress in 2024**: Drafted the 2024 ZIP. Released the draft and conducted a public workshop in January 2025.

- **Action for 2025**: Staff will refine the ZIP Report based on new AB 2127 analysis.

3. **Research, Development & Demonstration:** Support a wide range of innovative technologies to accelerate deployment of ZEV infrastructure, facilitate VGI, and increase benefits for all residents and markets, with focused attention to disadvantaged and low-income communities.

   Direct Pillar Connection: Vehicles, Infrastructure, End Users

   Indirect Pillar Connection: Workforce

   Key Collaborators: CPUC, CARB, CAISO, Caltrans, federal, tribal, local, and regional governments, vehicle manufacturers, grid operators, utilities, hydrogen providers, clean energy technology developers, NGOs, universities and other research entities, and fleets.

   Key Results & Actions:

   a. **Electric Program Investment Charge (EPIC).** Fund research leading to technological advancements and scientific breakthroughs supporting California's clean energy goals, with a focus on providing ratepayer benefits, including reliability, lower costs, and safety. EPIC awards funding through competitive grants to advance pre-commercial clean energy technologies and approaches, including those related to achieving California's transportation electrification goals, for the benefit of electricity ratepayers of California's three electric investor-owned utilities.

      - **Progress in 2024:** Participated in the Strategic Objective planning process for the EPIC 5 program cycle (2026-2030). This involved drafting clear, measurable, and robust targets to guide EPIC investment plan strategies to scale and deploy innovations that align with EPIC's Strategic Goals, which include Transportation Electrification.
      - **Progress in 2024:** Held the annual EPIC Symposium in October 2024 which included a panel highlighting projects focused on accelerating MDHD transportation electrification.
      - **Progress in 2024:** Released the NOPA for GFO-23-306 – Grid-Supportive Transportation Electrification in August 2024. Nine projects were proposed for awards totaling $24.1 million. The projects will demonstrate a suite of innovations that can enable more efficient use of grid infrastructure to support transportation electrification.
      - **Progress in 2024:** Released GFO-24-302 – Enabling Electric Vehicles as Distributed Energy Resources, in October 2024 with $12.6 million available to fund applied research projects to address VGI knowledge gaps, reduce the costs of bidirectional charging, and develop submetering solutions to facilitate VGI.
      - **Progress in 2024:** Executed a federal cost share agreement with the University of California San Diego to leverage $10 million of federal funds with $1.2 million of EPIC funds to scale up their lithium-ion battery direct recycling technology.

      - **Action for 2025**: Make progress in developing the EPIC 5 Investment Plan, contingent on CPUC approval of the Strategic Objectives.

- **Action for 2025**: Kick off nine GFO-23-306 – Grid-Supportive Transportation Electrification projects.
- **Action for 2025**: Release a NOPA for GFO-24-302 – Enabling Electric Vehicles as Distributed Energy Resources.
- **Action for 2025**: May 2025, the grand opening for the Electric Truck Research and Utilization Center (eTRUC) Advanced Technology Research Center (ATRC) at Southern California Edison's Electric Vehicle Technical Center in Pomona. The ATRC will support industry testing of emerging high-power charging technologies.
- **Action for 2025**: Initiate demonstrations of vehicle-to-building technologies for resilient backup power across several commercial use cases (e.g., agricultural, transit bus, government fleet, public buildings).
- **Action for 2025**: Initiate a demonstration of vehicle-to-grid with a fleet of First Student electric school buses in Richmond.

b. **Gas R&D Program.** Fund research to support the gas sector transition and cost-effective achievement of California's clean energy and climate goals. The Gas R&D Program awards funding through competitive grants to advance technologies and research that support reductions in fossil gas consumption, advance the production and use of renewable gas, and deliver public health, affordability, environmental, and safety benefits.

- **Progress in 2024**: Continued overseeing projects to demonstrate pre-commercial hydrogen fuel cells and refueling infrastructure technologies for difficult-to-electrify heavy-duty vehicle applications.

- **Action for 2025**: Initiate demonstration of a hydrogen fuel cell powered locomotive with Sierra Northern Railway in West Sacramento.
- **Action for 2025**: Initiate real-world fleet demonstrations of Class 8 hydrogen fuel cell powered trucks developed by Cummins Accelera and Symbio.

4. **Infrastructure Resilience:** Support strategies to improve resiliency including related to energy storage, VGI, hydrogen supply and refueling station reliability, electric grid and Electric Vehicle Supply Equipment (EVSE) reliability, on-site generation, and related workforce adequacy.

Direct Pillar Connection: Vehicles, Infrastructure

Indirect Pillar Connection: End Users, Workforce

Key Collaborators: CAISO and grid operators, CARB, CPUC, California Labor & Workforce Development Agency, California Workforce Development Board, Employment Training Panel, GO-Biz, utilities, vehicle manufacturers and supply chain stakeholders, electricity and hydrogen providers, energy technology developers, federal and tribal governments, local and regional governments, non-governmental organizations, universities and other research entities, and organized labor.

Key Results & Actions:

a. **Workforce Development.** Support workforce and equity priorities articulated in the Clean Transportation Program Investment Plan.

- **Progress in 2024:** Met regularly with the California Workforce Development Board to collaborate on workforce development in clean energy.
- **Progress in 2024:** Developed an agreement with the Employment Training Panel to increase the number and geographic diversity of electricians certified through the Electric Vehicle Infrastructure Training Program (EVITP) to install charging infrastructure.
- **Progress in 2024:** Published the Draft Zero-Emission Vehicle Workforce Training and Development Strategy to help define the CEC's vision for ZEV workforce development goals, objectives, and activities funded by the Clean Transportation Program.
- **Progress in 2024:** Updated the Clean Transportation Program workforce webpages to provide resources for navigating the workforce for ZEVs and related infrastructure, including current CEC workforce projects and information on EVITP.
- **Progress in 2024:** Hosted the Clean Transportation Program ZEV Workforce Training and Development Workshop to provide updates on program initiatives and solicit public input regarding workforce for charging infrastructure maintenance and repair.

- **Action for 2025:** Continue to meet regularly with the California Workforce Development Board to collaborate on workforce development in clean energy.
- **Action for 2025:** Support the Employment Training Panel in releasing a solicitation for the EVITP fund to increase the number of electricians certified through EVITP within California.
- **Action for 2025:** Revise the ZEV Workforce Training and Development Strategy document to incorporate public feedback and update objectives and funding priorities for ZEV workforce development under the Clean Transportation Program.
- **Action for 2025:** In consultation with the CPUC, conduct a workshop to determine if the EVITP curriculum and testing needs supplementation to ensure safe installation of charging infrastructure.
- **Action for 2025:** Develop an agreement with the University of California Los Angeles Labor Center to conduct a workforce assessment of the ZEV charging infrastructure labor market focusing on EV supply equipment installation and maintenance occupations.
- **Action for 2025:** Develop funding pathways to support charger maintenance and repair training.
- **Action for 2025:** Support the development and maintenance of a ZEV training catalog that provides a user-friendly platform to search for ZEV workforce training and development programs.
- **Action for 2025:** Leverage training to expand the number of service agents who have certification by the California Department of Food and Agriculture's Division of Measurement Standards to seal and reseal EV

chargers.

b. **Hydrogen Supply and Station Reliability.** Collaborate with stakeholdersto ensure the hydrogen supply and distribution system has sufficient backup to continue functioning through supply disruptions and to increase the reliability and availability of existing stations.

- **Progress in 2024:** Continued focus on increasing hydrogen production for the California mobility market, with a focus on clean hydrogen and low carbon intensities. In addition, more hydrogen production projects, even outside the transportation sector, will help reduce the costs of hydrogen production and delivery in general and will help advance technologies.
- **Progress in 2024:** Continued focusing on improving the reliability and availability of existing hydrogen refueling stations.

- **Action for 2025**: Continue focusing on improving the reliability and availability of existing hydrogen refueling stations through agreements under GFO-23-604 – Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations.
- **Action for 2025:** Pending funding availability, re-release a GFO – Large Scale Centralized Clean Hydrogen Production solicitation in the next fiscal year.

c. **EV Charging Station Reliability.** Collaborate with stakeholders to measure and track EV charging station reliability and up-time.

- **Progress in 2024**: Continued including reliability recordkeeping and reporting requirements along with performance standards for CEC GFOs to ensure the reliable operation of chargers when using CEC funds.
- **Progress in 2024:** Continued to manage the University of California Davis contract to ensure the field-testing program maintains schedule. Received and began incorporating data into the inaugural biennial reliability assessment, required by AB 2061.
- **Progress in 2024:** Conducted analysis and began drafting the inaugural AB 2061 reliability report.
- **Progress in 2024:** Released second draft of the proposed reliability regulations for public comment.

- **Action for 2025**: Continue including reliability recordkeeping and reporting requirements as well as performance standards for CEC GFOs to ensure the reliable operation of chargers while using CEC funds.
- **Action for 2025:** Continue to manage the University of California Davis contract to ensure field testing program maintains schedule.
- **Action for 2025:** Finish drafting inaugural AB 2061 reliability report for publication in 2025.
- **Action for 2025:** Finalize reliability regulations proposal and submit final proposal for adoption in CEC business meeting.