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California's Deployment Plan for the National Electric Vehicle Infrastructure (NEVI) Program

ANNUAL UPDATE

PREPARED BY

Caltrans

CALIFORNIA ENERGY COMMISSION

California's Deployment Plan for the National Electric Vehicle Infrastructure Program

2024 Update

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Abbreviations & Terms

Abbreviation	Term
AFC	Alternative Fuel Corridor
AFDC	Alternative Fuels Data Center
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CEC	California Energy Commission
CFI	Charging and Fueling Infrastructure Discretionary Grant Program
CCS	Combined Charging System
CFMP	California Freight Mobility Plan
CPUC	California Public Utilities Commission
CTC	California Transportation Commission
CTP	Clean Transportation Program
DAC	Disadvantaged communities
DACAG	Disadvantaged Communities Advisory Group for CEC and CPUC
DCFC	Direct Current fast charger
Deployment Plan	California's National Electric Vehicle Infrastructure Deployment Plan
EV	Electric vehicle
EV-ChART	Electric Vehicle Charging Analytics and Reporting Tool
EVC RAA	Electric Vehicle Charger Reliability and Accessibility Accelerator
EVITP	Electric Vehicle Infrastructure Training Program
EVSE	Electric vehicle supply equipment
FHWA	Federal Highway Administration
GO-Biz	Governor's Office of Business and Economic Development
Joint Office	Joint Office of Energy and Transportation
LIC	Low-income community
NAAC	Native American Advisory Committee
NEVI	National Electric Vehicle Infrastructure Formula Program
Priority Populations	In this document, priority populations include California-designated disadvantaged or low-income communities and federal Justice40 communities
ZEV	Zero-emission vehicle

Introduction

The California Department of Transportation (Caltrans) and the California Energy Commission (CEC) are pleased to submit the 2024 National Electric Vehicle Infrastructure (NEVI) Deployment Plan Update to the Federal Highway Administration (FHWA) and Joint Office of Energy and Transportation (Joint Office). California's NEVI Agencies continue to be active in NEVI planning and administration since the first plan was submitted in August 2022.

Completion of California's first NEVI solicitation (Solicitation 1), including a notice of proposed awards, represents the state's major milestone since releasing the 2023 NEVI Plan Update. These proposed awards include 70 charging stations and more than 500 charging ports. Planning for the second solicitation is underway with an anticipated solicitation release date in fall 2024.

Updates From Prior Plan

These sections of California's NEVI Deployment Plan Update have been updated following the guidance and template issued by the Joint Office:

- **EV charging infrastructure deployment:** Results from the state's first solicitation were released June 3, 2024. The CEC announced $37.7 million in proposed awards covering 70 new stations and more than 500 charging ports. The six corridor segments in Solicitation 1 cover some of the most heavily traveled freeway and highway segments in California.

  Planning for the second NEVI solicitation (Solicitation 2) is underway and is scheduled for release in fall 2024. This solicitation will include the 17 remaining corridor groups and cover all remaining Alternative Fuel Corridor segments through Round 7. Solicitation 2 will provide $100 million in funding for 120 stations with nearly 600 ports. A planning and scoping workshop was held March 12, 2024, to explore concepts for Solicitation 2.

  California's $63.7 million Electric Vehicle Charger Reliability and Accessibility Accelerator (EVC RAA) award is expected to fund an additional 1,302 NEVI-compliant ports.

- **ZEV market conditions:** Light-duty zero-emission vehicle (ZEV) sales in California in 2023 increased 28 percent from 2022, with more than 441,000 vehicles sold. ZEV sales reached a new high in the third quarter of 2023 at 26.7 percent of total vehicles sold; cumulative ZEV sales are more than 1.8 million through 2023. Tesla is the second-highest selling vehicle manufacturer in the state.

- **Truck charging infrastructure deployment:** Caltrans and the CEC introduced a strategy to devote a portion of future NEVI funding for truck charging projects.

- **Agency coordination:** Caltrans and the CEC completed an interagency agreement governing implementation of the EVC RAA program. Caltrans was awarded $63.7 million to fund the repair, replacement, or addition of 1,302 ports. Building off the partnership developed in the state's NEVI program, Caltrans will provide oversight of this program, and the CEC will lead its implementation.

- **Plan vision and goals:** The CEC issued new draft regulations for electric vehicle (EV) charging reliability in the report *Tracking and Improving Reliability of California's Electric Vehicle Chargers*.[1]

- **Public engagement:** Caltrans and the CEC continue to be active with public engagement since the first plan was filed. Seven major public workshops and several stakeholder meetings have been held since September 2023. This public engagement includes targeted outreach to priority populations[2], tribes, and utilities.

- **Equity considerations for priority populations**: Caltrans and the CEC reported on the 10 benefit categories developed in the 2023 NEVI Plan Update.

- **Labor and workforce considerations:** The CEC completed an interagency agreement with the California's State Employment Training Panel regarding implementation of the Electric Vehicle Infrastructure Training Program (EVITP) in California.

- **Program evaluation:** Caltrans developed a set of metrics for assessing the progress and outputs of NEVI projects. The California NEVI Agencies will apply these metrics to all applicable phases of NEVI administration.

State Agency Coordination

Caltrans and the CEC continue to collaborate closely on issues related to the planning and administration of NEVI, as well as affiliated topics such as the U.S. Department of Transportation's Charging and Fueling Infrastructure Discretionary Grant Program (CFI) and EVC RAA. The California NEVI Agencies are again collaborating with the Oregon Department of Transportation, Washington State Department of Transportation, and partner state agencies to prepare another round of applications for interstate truck charging under the CFI grant process. The CEC and Caltrans are collaborating with several California ports for a port-related CFI application for drayage truck electrification.

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[1] Schell, Dustin, Ralph Lee, and Michael Dioha. (2024). *Tracking and Improving Reliability of California's Electric Vehicle Chargers*. California Energy Commission. Publication Number: CEC-600-2024-055-D2.

[2] In this document, priority populations include California-designated disadvantaged or low-income communities and federal Justice40 communities.

Memoranda of Understanding with Other Agencies

The California NEVI Agencies completed an interagency agreement that will govern implementation of the $63.7 million EVC RAA award. The interagency agreement establishes clear roles and responsibilities for administering the EVC RAA award. It designates the CEC as the responsible state agency for administering and allocating California's share of EVC RAA funding. The interagency agreement also establishes Caltrans as the state agency responsible and accountable to the FHWA for overseeing federal funds and the CEC consistent with the Stewardship and Oversight Agreement between Caltrans and the FHWA. The interagency agreement received approval from the CEC during its public meeting May 8, 2024, before receiving approval by the California Department of General Services on July 2, 2024.

Interagency Working Groups

Caltrans and the CEC continue to collaborate with the California State Transportation Agency (CalSTA), the California Transportation Commission (CTC), the Governor's Office of Business and Economic Development (GO-Biz), the California Public Utilities Commission (CPUC), and the California Air Resources Board (CARB). CalSTA is California's lead policy agency for transportation. CARB is the lead California agency for zero-emission vehicle regulations and vehicle funding. The CEC is the state's lead agency in zero-emission vehicle infrastructure, related policy and planning, and funding. GO-Biz plays a key convening role in ZEV coordination through the development of California's *Zero-Emission Vehicle (ZEV) Market Development Strategy*,[3] to which several state agencies contribute.

The CEC and Caltrans continue to work closely with CARB on issues germane to NEVI, including truck charging, heavy-duty vehicle demonstrations, hydrogen station development, and zero-emission infrastructure policy issues. CARB is also responsible for regulations like the Advanced Clean Cars II and Advanced Clean Trucks and Fleets Rules, which help drive demand for zero-emission charging and hydrogen fueling infrastructure. CARB also administers the state's Clean Vehicle Rebate Program (CVRP), which is a light-duty vehicle incentive program, and the Hybrid and Zero-Emission Truck and Bus Voucher Incentive, a voucher program for medium- and heavy-duty vehicles. The CEC and Caltrans also continue to work with the CPUC regarding utility and grid upgrades needed to support charging infrastructure through NEVI and other public investments.

Nationally, the California NEVI Agencies are regular participants in the Joint Office's regional coordinating meetings, as well as the forums hosted by the American Association of State Highway and Transportation Officials and the National Association of State Energy Officials.

[3] Governor's Office of Business and Economic Development. "Zero-Emission Vehicle Market Development Strategy."

Internationally, Caltrans is working with federal, state, and local partners in Mexico and the United States to update the 2021 California-Baja California Border Master Plan[4] to address ZEV infrastructure needs for heavy-duty vehicles at and near land ports of entry.

California's State Funding Context

For the second year in a row, California has reduced spending to cover a budget shortfall. The enacted 2024-25 Budget solves a $46.8 billion budget deficit by reducing expenditures by $16 billion. The spending reductions include a nearly 8 percent cut to state operations and a targeted elimination of 10,000 unfilled state positions.[5]

For the 2024–2025 state fiscal year, the CEC's Clean Transportation Program will need to reduce funding sharply for several zero-emission infrastructure categories from the earlier fiscal years when billions were allocated for ZEV infrastructure and vehicles. Table 1 shows current Fiscal Year 2024–2025 investments in zero-emission infrastructure and projected investments for Fiscal Years 2025–2026 through 2027–2028.[6]

Table 1: Projected CEC Clean Transportation Program Allocations for ZEV Infrastructure: Fiscal Years 2024-25 to 2027-28 (millions)

Infrastructure Category	FY 2024–25	FYs 2025–28
Light-Duty Electric Vehicle Charging	$40	$619
Medium- and Heavy-Duty Truck Charging	$38.2	$0
Hydrogen Refueling	$15	*
Drayage Truck Infrastructure	$0	$149
ZEV School Bus Infrastructure	$0	$125
Clean Truck, Bus, and Offroad Infrastructure	$0	$226
Port-Related ZEV Infrastructure	$0	$130
Totals	**$93.2**	**$1,249**

Source: CEC Staff

**Allocations for future fiscal years have not yet been proposed, but the CEC is required to spend at least $15 million per year on hydrogen projects.*

California continues to lead the nation, and much of the world, in ZEV sales and uptake. However, more charging infrastructure is needed to achieve greater adoption and meet the state's policy goals. Federal funds are essential to a broad and equitable network, especially given the state's second year of budget shortfall.

As described in the Plan Vision and Goals section, California projects needing approximately 1 million chargers (including 39,000 direct-current fast chargers) to support 7.1 million light-duty plug-in electric vehicles in 2030. To support medium- and heavy-duty plug-in electric vehicles, California will need about 114,500 chargers (109,000 depot chargers and 5,500 en route chargers) for 155,000 vehicles in 2030. This

[4] California Department of Transportation. "California-Baja California Border Master Plan."
[5] California Department of Finance. *California State Budget – 2024-25*.
[6] Tuggy, Benjamin. (2024). *2024-2025 Investment Plan Update for the Clean Transportation Program*, California Energy Commission. Publication Number: CEC-600-2024-047-SD.

infrastructure is key to supporting the transition to zero-emissions vehicles needed to meet the state's 2030 and 2035 carbon reduction and clean air goals.[7]

Public Engagement

Since filing the NEVI Plan Update in September 2023, CEC and Caltrans have hosted seven workshops related to NEVI deployment, EVC RAA, and charging-related technical issues:

- October 2023: Workshop on EVC RAA Funding Opportunity
- November 2023: Pre-Application Workshop for First NEVI Solicitation
- December 2023: Workshop on Interoperability for Light-Duty Charging
- March 2024: Solicitation Concepts for Second NEVI Solicitation
- March 2024: EVC RAA Solicitation Concepts
- April 2024: Workshop on Revised Draft Regulations for Electric Vehicle Charging
- May 2024: Planning and Scoping Workshop for 2024 NEVI Plan Update

The CEC and Caltrans will host an additional "preapplication" workshop for the second NEVI solicitation once the solicitation is released. That workshop will inform potential applicants of the specific technical, financial, experiential, and administrative requirements needed to develop an eligible application for the second NEVI solicitation.

California NEVI and NEVI-Related Workshops

October 2023 Joint Workshop on the FHWA's EV Charger Reliability and Accessibility Accelerator Notice of Funding Opportunity

Caltrans and the CEC hosted a joint workshop October 20, 2023, to present the concepts and requirements for the EVC RAA notice of funding opportunity. The workshop presentation described:

- Program funding levels.
- Program requirements to meet 23 CFR Section 680 regulations.
- The need for a competitive phase of funding during states' implementation of the program.
- The 12-month requirement to have repairs and upgrades completed.
- U.S. Department of Energy National Renewable Energy Laboratory's approach to identifying the eligible chargers, operating companies, and site hosts.

November 2023 Preapplication Workshop for NEVI Solicitation 1

The CEC conducted a preapplication workshop November 9, 2023, for the first NEVI solicitation.[8] CEC staff conducts preapplication workshops after a solicitation has been

[7] *Ibid.*

[8] California Energy Commission. (2023, November 9). "Pre-Application Workshop – GFO-23-601 – California's National Electric Vehicle Infrastructure Formula Program."

released but before the deadline for applications. Staff reviewed in detail all the application requirements needed for a successful application. Preapplication workshops are followed by a comment period, and staff prepares a written question and answer document based on comments and questions received.

December 2023 CEC Staff Workshop on Electric Vehicle Charging Interoperability

CEC staff provided an overview of charging interoperability in North America, a vision for broad interoperability, and steps to achieve broad interoperability, including possible future CEC actions.[9] As with the April 2024 CEC staff workshop on EV charger tracking and reliability regulations, this workshop is not part of NEVI *per se* but directly addresses important policy and technical issues required to ensure convenient and reliable EV charging experiences.

The CEC's policy statement on interoperability and proposed regulations for EV charger reliability correspond to, and support, federal standards and policy goals for interoperability and reliability.

The workshop topics included:

- Background on the North American charging ecosystem and implications for interoperability.
- A CEC vision for "broad interoperability": A future where any driver with any EV can easily charge at any charger on any network.
- Steps to achieve broad interoperability, including potential private industry and public agency actions.
- Presentation and discussion on the CEC Policy Statement on Interoperability.[10]

March 2024 Joint Workshop on NEVI Program Concepts for the Second NEVI Solicitation

Caltrans and the CEC hosted a joint workshop on March 12, 2024 to present the proposed structure for the state's second NEVI solicitation.[11] Staff proposed a $100 million solicitation covering all 17 of the remaining corridor groups along the state's Alternative Fuel Corridors (AFCs) through Round 7. The proposed solicitation would cover 120 stations with nearly 600 ports and is estimated for release in fall 2024.

The proposed concepts for Solicitation 2 would have required an applicant to include a project from both the top-half and lower-half of the corridor group rankings in a single application. The awardee would then complete stations in the higher-ranked corridor group before working on the stations in the lower-ranked group. This requirement was proposed primarily to not overextend applicants' capacity for project delivery.

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[9] California Energy Commission. (2023, December 1). "Staff Workshop on Electric Vehicle Charging Interoperability."
[10] California Energy Commission. (2023, November 14). *Statement on Charging Interoperability*.
[11] California Energy Commission. (2024, March 12). "Joint Workshop on California Electric Vehicle Infrastructure (NEVI) Formula Program Concepts – Second Solicitation."

Staff presented discussion questions for the participating stakeholders:

- Is there industry capacity to proceed with the proposed size of Solicitation 2?
- What do you think about the two-phased projects and stand-alone projects?
- Is the corridor group framework working?
- Any feedback on specific corridor groups?
- What is an appropriate per charging port estimate for the total project cost?
- Is the proposed match share requirement appropriate?
- How can disadvantaged and low-income community benefits be strengthened?
- How can we facilitate participation of small businesses or enterprises owned by disabled veterans, women, or lesbian, gay, bisexual, or transgender persons?

The workshop had 116 attendees. Nine participants submitted written comments.

Stakeholder feedback at the workshop and in subsequent comment letters indicated that the originally proposed concept would present challenges for applicants to apply for NEVI funding, given the large scope of two projects with requirements for several sites in a single application.

Most participants were supportive of the proposal to offer all remaining AFCs in Solicitation 2. Conversely, several stakeholders expressed support for fewer stations to be required per NEVI project to allow charging developers or site hosts with fewer locations under their control to pursue NEVI funding. Another common comment was the need to support medium- and heavy-duty EV charging infrastructure in the state's NEVI solicitations.

Staff revised the parameters for Solicitation 2 based on this feedback, as described in the Contracting Section, and will release an updated solicitation concept for the public prior to solicitation release.

March 2024 Joint Workshop on EVC RAA Concepts

California was awarded $63.7 million to fund the repair, replacement, or addition of 1,302 chargers under EVC RAA. The CEC and Caltrans hosted a joint workshop to solicit feedback on the proposed structure and requirements for California's EVC RAA grant funding opportunity.[12] The workshop had 55 attendees.

April 2024 Workshop on Revised Draft Regulations for Electric Vehicle Charger Tracking and Reliability

Governor Newsom signed Assembly Bill 2061 in September 2022 (Ting, Chapter 345, Statutes of 2022). This bill requires the CEC to establish uptime recordkeeping and reporting requirements for chargers funded through an incentive by a California state

[12] California Energy Commission. (2024, March 27). "Joint Workshop on California Electric Vehicle Charger Reliability and Accessibility Accelerator (EVC RAA) Program Concepts."

agency or an expense to ratepayers. The CEC is developing a regulation under AB 2061.[13] Staff held a workshop on the proposed AB 2061 regulations in April 2024.[14]

The requirements of this regulation will align with, and add to, the uptime reporting requirements of 23 CFR Section 680 with minimal variances. NEVI-funded chargers will not have to comply with the reliability and data sharing requirements of these regulations unless they also received an incentive from a state agency or through a charge on ratepayers.

May 2024 Joint Planning and Scoping Workshop for NEVI Plan Update

In this workshop, the CEC and Caltrans staff solicited stakeholder input on the state's 2024 NEVI Plan Update and future third NEVI Solicitation. Staff provided status reports on the first and second solicitations, as well as the EVC RAA solicitation and plans for additional CFI applications for truck charging and hydrogen fueling.

Solicitation 2 would cover all remaining corridor segments through Round 7 of the AFC designations, accounting for more than 7,000 miles of freeways and highways. Beginning with Solicitation 3, staff proposes shifting some portion of the $384 million formula allocation to support charging projects for medium- and heavy-duty vehicles.[15]

More than 70 stakeholders participated in the workshop or provided written comment.[16] Common or notable points of feedback from stakeholders included:

- **Truck original equipment manufacturers:**
  - Support shifting NEVI funds to truck charging.
  - Need to convene stakeholder group to develop standards.
  - Future proof sites to accommodate Megawatt Charging System chargers.

- **Truck charging station developers:**
  - Support using NEVI funds for truck charging stations.
  - Definition of "public station" may be problematic for logistics operators due to the scheduling requirements for efficient trucking.
  - Commercial fleet operators need certainty: scheduling and reservations should be allowed.
  - Trucks have larger station footprint and power requirements than light-duty vehicles and need more flexibility in siting.

[13] California Energy Commission. "Electric Vehicle Charging Infrastructure Reliability and Data Standards."
[14] California Energy Commission. (2024, April 30). "Workshop on Revised Proposed Regulations for Tracking and Improving Reliability of California's Electric Vehicle Chargers."
[15] California Energy Commission. (2024, May 10). "Joint Workshop on the 2024 Update to the NEVI Formula Program Deployment Plan."
[16] California Energy Commission. "2024 NEVI Plan Update Docket 22-EVI-03."

- **California Fuel and Convenience Alliance:**
  - Sixty percent of retail gas stations are owned by independents, many of whom are first-generation immigrants.
  - Caltrans and the CEC should leverage existing fuel retail stations for charging.
  - The bundled corridor approach bars independents from full participation in NEVI solicitations.

- **Environmental advocacy and environmental justice organizations:**
  - Requested the use of NEVI funds for truck charging projects, as highlighted in the Outreach to Priority Populations section below.

Community Engagement Outcomes Report

The CEC and Caltrans have designed NEVI outreach to ensure that all stakeholders involved with and affected by the NEVI Formula Program have an opportunity to understand the state's intent, process, and goals for planning, designing, constructing, and operating the NEVI-funded charging stations. One goal is to ensure equitable access and competitiveness for stakeholders seeking to bid on NEVI-funded projects. Another goal is to provide sufficient information to stakeholders who may be concerned about the location or configuration of specific station proposals and create an opportunity for such concerns to be voiced in a meaningful and effective manner.

The methods for this notification and outreach include:

- Broadly advertised public workshops using the stakeholder listservs developed for the CEC's Clean Transportation Program, which is the state's designated program for charging infrastructure funding and development.

- Focused outreach to organizations representing priority populations.

- Leveraging existing tribal outreach and consultation programs developed by Caltrans and the CEC.

Due to California's large size, public workshops are the primary tool used to communicate the agencies' intent and plans for the NEVI Formula Program. By state law, each public workshop must be publicly noticed 10 days in advance of a workshop. Each notice must include the workshop agenda, directions on how to access and participate in the workshop's virtual presentations, directions on how to file written comments, and instructions on how to contact the CEC Public Advisor's Office for any needed assistance.

Outreach to Priority Populations

Caltrans and the CEC have their own respective systems for engaging and consulting with representatives of priority populations and tribes. Caltrans, in partnership with CalSTA and the California Transportation Commission, obtains input from the 16-member Interagency Transportation Equity Advisory Committee, established in October

2022. The CEC obtains input from the Disadvantaged Communities Advisory Group (DACAG),[17] the legislatively created body that advises the CEC and the California Public Utilities Commission (CPUC) on energy and transportation issues in California (Table 2). CEC staff has consulted with the DACAG during preparation of the original NEVI Plan and each NEVI Plan Update, providing briefings on what NEVI is, where the corridors are, and what the process will be for the solicitations. The DACAG also has a Transportation Electrification Subcommittee, with whom CEC staff consults on more technical issues.

Table 2: 2024 DACAG Membership

Organization	Representative
The Greenlining Institute	Román Partida-López, Chair
Rising Sun Center for Opportunity	Julia Mary Popolizio Hatton, Vice Chair
Marin Clean Energy	Stephanie Chen
Arrowhead Solutions	Fred Beihn
West Modesto Community Collaborative	Abimael Chavez-Hernandez
Strategic Actions for a Just Economy	Chelsea Kirk
Physicians, Scientists, and Engineers for Healthy Energy	Elena Krieger
Central California Asthma Collaborative	Sarah Sharpe, Secretary
Los Angeles Brotherhood Crusade	Curtis Silvers
OC Goes Solar	Senait Forthal

Source: CEC Staff

Environmental Advocacy Letter Urging Truck Charging

On March 29, 2024, a coalition of 10 environmental advocacy and environmental justice organizations, including several members of the DACAG, sent a letter to Director Tony Tavares of Caltrans and Chair David Hochschild of the CEC urging them to shift NEVI funds away from light-duty charging and to focus on charging for medium- and heavy-duty trucks. The letter stated: "Investing in medium- and heavy-duty charging infrastructure is amongst the single most important ways to provide benefits to disadvantaged [low-income communities] because medium- and heavy-duty diesel trucks disproportionately impact these communities."[18] The letter cited a recent academic study that stated that ongoing exposure to high levels of particulate matter and ozone causes more than $330 billion in annual health losses in California.[19]

[17] The DACAG was established in Senate Bill 350 (De León, Chapter 547, Statutes of 2015), the Clean Energy and Pollution Reduction Act of 2015.

[18] Los Angeles County Electric Truck and Bus Coalition, Vanessa Rivas Villanueva, Adrian Martinez, Andrea Marpillero-Colomina, Bill Magavern, Marven Norman, Janet Cox, Rita Clement, Katherine Garcia, Dakoury Godo-Solo, and Kevin Hamilton. (2024, March 29). *Letter to California Energy Commission Chair David Hochschild and California Department of Transportation Director Tony Tavares*. Docketed June 20, 2024.

[19] Wang, Tianyang, Bin Zhao, Kuo-Nan Liou, Yu Gu, Zhe Jiang, Kathleen Song, Hui Su, Michael Jerrett, and Yifang Zhu. (2019). "Mortality Burdens in California Due to Air Pollution Attributable to Local and Nonlocal Emissions," *Environment International,* Volume 133, Part B, 105232.

The coalition also stated in its letter that NEVI funds and the solicitation and grant-making process provide an opportunity to create strong workforce standards that can benefit local communities in disadvantaged areas. Feedback from these groups has contributed greatly to the state's intentions to explicitly support truck charging with NEVI funding in future solicitations.

May 2024 DACAG Meeting

CEC staff met with the DACAG on May 17, 2024, and provided an informational and status briefing on the NEVI solicitations and preparation of the 2024 NEVI Plan Update, noting that more than $200 million would remain in formula funding after the first two solicitations were released. Staff also described the efforts of Caltrans and the CEC to implement EVC RAA and continue applying for CFI funding for truck charging and hydrogen refueling. The briefing acknowledged the environmental coalition letter, and staff stated that a primary goal in preparing the third NEVI solicitation will be assessing the potential to shift significant NEVI funding to truck charging.

Some members of the DACAG responded with the following recommendations:

- Appreciated the seriousness with which the CEC and Caltrans leadership showed in reviewing the letter.
- Continued to urge the California NEVI Agencies to shift funding to truck charging.
- Expressed concern about the level of local engagement and encouraged the NEVI Agencies to engage local community-based organizations through the solicitation process.
- Encouraged the NEVI Agencies to regard and engage ***people***, not just describe the places they live.

CEC Commissioner Patricia Monahan expressed appreciation for the DACAG's work with NEVI and acknowledged the recommendation to use NEVI funds for truck charging. She also discussed the state's budget process and the severe budget shortfall. CPUC Commissioner Darcie Houck also described the "tough budget year." She said a key topic for her is tackling the utility interconnection delays, saying they adversely affect EV drivers.

Tribal Engagement

California is home to 109 federally recognized Native American tribes with nearly 100 reservations and rancherias. Caltrans and the CEC have a similar process for consultation with tribes in California; Caltrans works through its Native American Advisory Committee (NAAC), and the CEC works through its Office of the Public Advisor, Energy Equity, and Tribal Affairs.

Native American Advisory Committee

In 1996, the NAAC was established at Caltrans to ensure the Department receives direct advice from tribal governments on issues pertaining to all modes of transportation

within California. Members of the NAAC advocate for all Native Americans of California and are nominated by tribes throughout the state (Table 3).

Caltrans staff consulted with the NAAC on June 6, 2024, regarding California's NEVI Plan Update. In this meeting, Caltrans provided an overview of the state's first NEVI solicitation, shared a strategy for the second solicitation, and highlighted the overlap between the corridors from the second solicitation and federally recognized tribal lands using California's NEVI Interactive Map.

Tribal representatives were interested in evaluating how the NEVI program may be a revenue-generating opportunity, and Caltrans staff provided further consultation with individual tribes, as requested. Caltrans staff also discussed intentions to fund medium- and heavy-duty charging stations along AFCs through the NEVI program and asked for feedback on this and desired future off-corridor project types.

Table 3: 2024 NAAC Membership

Member Name	Tribe or Native Government	Region
Jacque Hostler-Carmesin	Trinidad Rancheria	Northern
Richard Warner	Elk Valley Rancheria	Northern
Jeff Hodge	Hoopa Valley Tribe	Northern
Misty Rickwalt	Karuk Tribe	Northern
Michael DeSpain	Buena Vista Rancheria of Me-Wuk Indians	Central
Paul Irwin	North Fork Rancheria of Mono Indians of California	Central
Esther Fillingame	Lone Pine Paiute Shoshone Reservation	Central
Orval Elliott Jr.	Hopland Band of Pomo Indians	Central
Daniel Salgado Sr.	Cahuilla Band of Indians	Southern
Erica Pinto	Jamul Indian Village of CA	Southern
Margaret Park	Agua Caliente Band of Cahuilla Indians	Southern
Lorenda Sanchez	California Indian Manpower Consortium	Statewide

Source: Caltrans Staff

Utility Engagement

The CEC works closely with California's publicly owned and investor-owned utilities on a wide range of energy and grid topics, often in collaboration with the CPUC. The CEC also works with trade organizations like the California Electric Transportation Coalition, a consortium of the state's major utilities and EV charging companies, and the West Coast Clean Transit Corridor Initiative, a consortium of the major West Coast utilities working on truck-charging issues.

Caltrans and the CEC met with the following representatives from the California Electric Transportation Coalition on April 16, 2024, to discuss the first NEVI solicitation and the forms and processes that were used for the utility grid capacity assessments:

- Los Angeles Department of Water and Power
- Pacific Gas and Electric Company
- Sacramento Municipal Utility District
- San Diego Gas & Electric
- Southern California Edison

The primary purpose of the meeting was for the CEC and Caltrans staff to hear about the utilities' experiences with solicitation applicants and using the utility verification form created for the first NEVI solicitation. The California Electric Transportation Coalition's representatives underscored the challenge of using one form, as each utility has its own unique application process, and each utility representative described the challenge of reviewing and assessing a large number of applications close to the application deadline. Pacific Gas and Electric described how 53 utility verification forms were submitted to the utility near the application deadline, creating a significant workload. Other utilities described similar challenges. The group agreed to continue meeting to improve the standard utility verification form used by all applicants and utilities.

Subsequently, in June 2024, Los Angeles Department of Water and Power, Pacific Gas and Electric, San Diego Gas & Electric, and Southern California Edison, demonstrated their online tools for verifying available electrical capacity to CEC staff. The current plan for NEVI Solicitation 2 is to direct applicants to use these publicly available web resources as much as possible to self-verify electrical capacity at proposed charging station sites. Solicitation 2 will again identify utility contacts to assist solicitation applicants as needed. This strategy should reduce the burden on utility staff while providing solicitation applicants the ability to assess electrical capacity on their own as they evaluate possible sites.

Site-Specific Public Engagement

To date, the CEC and Caltrans have not hosted site-specific public or private meetings for the state's NEVI Formula Program. All public engagement has occurred through virtual, state-level public workshops, which enable widespread participation from stakeholders across the state. Small group meetings with members of the DACAG and its constituents have been held virtually.

Plan Vision and Goals

California is committed to reducing emissions from the transportation sector by increasing the adoption of zero-emission vehicles. Reducing transportation carbon, criteria, and particulate emissions is critical to improving air quality and reducing public health impacts to millions of Californians. Through legislation, regulatory action, and executive orders, California is making the transition across market segments ranging

from passenger cars to heavy-duty trucks.

On September 23, 2020, Governor Gavin Newsom signed Executive Order N-79-20,[20] setting the following zero-emission vehicle targets for California:

- One hundred percent of in-state sales of new passenger cars and light-duty trucks will be zero-emission by 2035.
- One hundred percent of medium- and heavy-duty vehicles operating in the state by 2045, where feasible, and by 2035 for drayage trucks will be zero-emission.
- One hundred percent of off-road vehicles and equipment operations will be zero-emission by 2035.

To support the 7.1 million light-duty EVs projected by 2030, the state will need 1 million chargers, including 39,000 DC fast chargers. In 2035, California's projected 15.2 million light-duty EVs will need 2.1 million chargers, including 83,000 DC fast chargers.[21] The light-duty target includes public chargers, such as those at parks, shopping centers, hotels, public buildings, and so forth, and shared-private electric vehicle chargers, such as those at workplaces and multiunit dwellings.

Public funding, electric utility investment, and private investment have contributed to California's ZEV charging infrastructure networks, and all will continue to be essential to meeting future deployment goals. Funding through the NEVI Formula Program will be necessary to build out the state's EV corridors to ensure seamless interstate travel for EV drivers and will be complemented by state funding.

Data Collection, Equity, and Reliability

California's strategy to deploy EV charging infrastructure incorporates an interconnected network to simplify data collection and support the development of convenient, accessible, reliable, and equitable EV charging.

1. ***Data collection:*** Owner–operators of NEVI-funded stations will be required to collect and transmit all operational and maintenance data as defined in 23 CFR Sections 680.112 and 680.116(c). Operational data will be collected and transmitted quarterly, while maintenance data will be collected and transmitted annually. These requirements are being incorporated into the scope of work of NEVI grant agreements. All data will be made available to the FHWA through the Electric Vehicle Charging Analytics and Reporting Tool (EV-ChART).

[20] Office of Governor Newsom. (2020, September 23). "Governor Newsom Announces California Will Phase Out Gasoline-Powered Cars & Drastically Reduce Demand for Fossil Fuel in California's Fight Against Climate Change."

[21] Davis, Adam, Tiffany Hoang, Thanh Lopez, Jeffrey Lu, Taylor Nguyen, Bob Nolty, Larry Rillera, Dustin Schell, and Micah Wofford. (2023). *Assembly Bill 2127 Second Electric Vehicle Charging Infrastructure Assessment: Assessing Charging Needs to Support Zero-Emission Vehicles in 2030 and 2035*, California Energy Commission. Publication Number: CEC600-2024-003-CMR.

2. ***Equitable access:*** All NEVI-funded stations will be fully accessible and available to all users. All stations will be Americans with Disabilities Act-compliant, have nondiscriminatory payment options in line with federal requirements, and must be well-lit. Furthermore, applicants are encouraged to include amenities such as accessible restrooms, where feasible.

   California will continue to engage with communities, including disadvantaged, underserved, and rural communities, through workshops and outreach to ensure equitable and collective decision-making in solicitation design and program implementation. This engagement will ensure charger installations are meeting the needs of the communities they serve while providing seamless statewide access. See the Equity Considerations section for an overview of how California will prioritize equity and track benefits to communities.

3. ***Network reliability:*** NEVI-funded projects will conform to the reliability requirements of 23 CFR Section 680. Grant agreements will require funding recipients to report the required data through EV-ChART, which will be submitted to the FHWA upon the CEC's review and approval. In addition to meeting these minimum requirements, the CEC has included additional reliability reporting requirements in the state's first NEVI solicitation to align with state reporting standards. Funding recipients will be required to:
   a. Collect and retain records of the following remote monitoring data:
      i. Charger operative status using OCPP 2.0.1.
      ii. Each charge attempt will be recorded through EV-ChART
      iii. Each failed charging session and session error information will be reported through EV-ChART.
   b. Generate and retain maintenance records for all preventive and corrective maintenance conducted on chargers.
   c. Generate and retain records of inoperative charging ports.
   d. Conduct annual preventive maintenance on all chargers and charging ports.
   e. Conduct corrective maintenance within 10 business days.

These requirements will help ensure that chargers installed and operated with NEVI funds will be well maintained and meet the requirements of 23 CFR Section 680. Applicants will be required to report data for a minimum of five years from when the charger is operational.

A Vision for Zero-Emission Trucking

California's quest to decarbonize light-duty passenger vehicles is well underway; 25 percent of new car sales in the state are now electric vehicles, and more than 1.5 million ZEVs have been sold in the state. The next challenge is to decarbonize trucks, which are responsible for a large fraction of emissions from the transportation sector despite comprising a small fraction of vehicles on the road.

CARB's Advanced Clean Fleets and Advanced Clean Trucks regulations are forcing a technology shift to zero-emission propulsion. Beginning in Model Year 2024, sales requirements for zero-emission trucks steadily increase annually until the state's requirement for 100 percent zero-emission truck sales by Model Year 2036. A network of charging infrastructure to support this historic shift to zero-emission trucking is urgently needed.

When the second NEVI solicitation is complete, California will have funded all 7,000 miles of designated Alternative Fuel Corridors (through Round 7 of the nominating process) with at least four DC fast chargers at 50-mile intervals or less. California's NEVI Agencies then intend to focus a portion of NEVI formula funding on charging stations along Alternative Fuel Corridors that support the medium- and heavy-duty sectors. Stations that can serve medium- and heavy-duty trucks will require higher power levels and larger footprints than stations that prioritize light-duty vehicles.

For medium- and heavy-duty trucks, analysis by the CEC projects that 114,500 chargers will be needed in 2030 to support 155,000 vehicles: 109,000 low power (20–150 kW) depot chargers and 5,500 high power (350–1,500 kW) en route chargers.[22] In 2035, California's 377,000 medium- and heavy-duty plug-in electric vehicles will need 264,500 chargers: 256,000 depot chargers and 8,500 en route chargers.[23]

Caltrans and the CEC intend to consult with industry and other stakeholders to identify appropriate standards for truck charging stations. Technical standards used in existing truck charging programs such as the state's Charging and Refueling Infrastructure Transport in CALifornia Provided Along Targeted Highway Segments, Energy Infrastructure Incentives for Zero-Emission program, the Trade Corridor Enhancement Program, and the Port and Freight Infrastructure Program will also be reviewed. Ongoing consultation with the Joint Office will be needed as well. Please see the Freight section for a more detailed assessment of these issues.

Electric Vehicle Charger Reliability and Accessibility Accelerator (EVC RAA) Implementation

The Electric Vehicle Charger Reliability and Accessibility Accelerator was created through funding from the NEVI Formula Program at the national level. EVC RAA aims to improve reliability of existing EV infrastructure by funding the repair and replacement of existing, publicly accessible, nonoperational chargers across the United States.

Increasing EV adoption is critical to meeting California's climate goals, and increasing consumer confidence in EVs depends on access to reliable EV chargers. EVC RAA presents an opportunity to improve the reliability of California's existing EV charging network.

[22] *Ibid.*
[23] *Ibid.*

Caltrans applied for EVC RAA grant funding in November 2023 and was awarded $63.7 million in one-time funding in January 2024. Like NEVI, Caltrans will partner with the CEC to implement California's EVC RAA program. The CEC and Caltrans plan to leverage the CEC's existing grant solicitation process to distribute California's EVC RAA funds. The CEC is developing the EVC RAA solicitation and plans to release it in fall 2024. The solicitation will provide $59.5 million to repair, replace, and add at least 1,302 ports to meet the NEVI Standards across California. A total of 3,516 ports at more than 1,500 stations across the state are eligible for the program, 55 percent of which are in Justice40 communities.

Contracting

Status of Contracting Process

As described in previous NEVI Deployment Plans, California is using the CEC's competitive solicitation process to administer funding under the NEVI Formula Program. This process emphasizes transparency and an equitable, objective review of each application.

NEVI Solicitation 1

The CEC released the state's first NEVI grant funding opportunity, GFO-23-601, "California's National Electric Vehicle Infrastructure Formula Program," in October 2023. Eighteen proposals were received to design, build, operate, and maintain new NEVI-compliant charging stations. The solicitation closed in January 2024, and the proposed awards were announced in June 2024. Please see the solicitation files on the CEC website for more detailed information.[24]

Using the method described in the 2023 California NEVI Plan Update, staff divided the state's AFCs into corridor groups and ranked them using a series of prioritization factors described in the 2023 NEVI Deployment Plan Update. Some of the higher-value ranking factors included whether a corridor was part of an AFC along the interstate highway system, traversed Justice40 communities, or demonstrated future demand for high-powered charging based on modeling results, or a combination thereof.

Table 4 lists the six highest-ranked corridor groups that were included in GFO-23-601. This table updates Table 1 in the 2023 California NEVI Plan Update. The revised table reflects a reduction in the number of charging stations and new Combined Charging System (CCS) charging ports requested in the solicitation based on CEC analysis of existing charging stations that were likely to meet NEVI standards, making it unnecessary to install additional infrastructure around those locations.

In total, GFO-23-601 requested a minimum of 26 new charging stations and 270 charging ports. Each applicant to GFO-23-601 had to propose a project covering all segments of a corridor group that met the minimum number of stations and

[24] California Energy Commission. (2023, October 26). "GFO-23-601 - California's National Electric Vehicle Infrastructure Formula Program."

charging ports listed in Table 4.

Table 4: The Six Corridor Groups Eligible for Solicitation 1

Corridor Groups	Corridor Segments	Minimum New Stations	Total New Charging Ports
6A	I-5: South of Sacramento to Kettleman City	2	67
6B	I-5: South of Kettleman City to Santa Clarita	2	81
7	SR 58: (I-5/SR 58) Buttonwillow to Barstow	4	16
7	I-15: Hesperia to Nevada	2	38
7	I-40: Barstow to Needles	1	8
16	I-8: San Diego to El Centro	2	8
16	I-15: San Diego to Murrieta	2	8
16	I-805: San Diego to San Ysidro	1	4
19	I-210: Sylmar to Redlands	1	4
19	I-215: Murrieta to San Bernardino	2	8
19	I-405: Mission Hills to Irvine	1	4
20	I-110: Los Angeles to San Pedro	2	8
20	I-710: Los Angeles to Long Beach	2	8
20	I-605: Irwindale/Duarte to Seal Beach	1	4
20	I-105: El Segundo to Norwalk	1	4

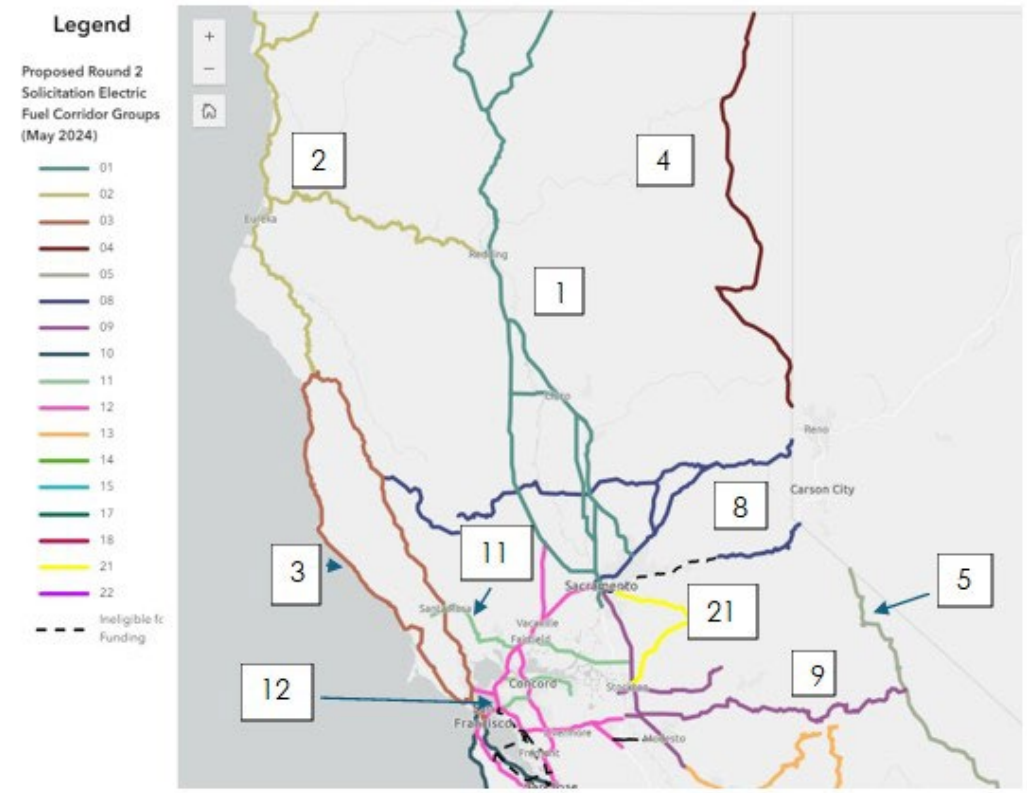
Source: CEC staff

The proposed awards under GFO-23-601 are discussed in the Awarded Contracts section. As of August 2024, CEC staff is negotiating with the awardees to execute grant agreements in September through November 2024.

NEVI Solicitation 2

Preparation for Solicitation 2 is ongoing and expected for release in fall 2024. The CEC and Caltrans propose to fund all 17 of the remaining corridor groups with a $100 million solicitation that would fund at least 120 charging stations and 598 DC fast charging ports. Figures 1 and 2 show the 17 corridor groups for Northern and Southern California proposed for inclusion in Solicitation 2.

Figure 1: Northern California Corridors in Solicitation 2



Source: CEC staff

Figure 2: Southern California Corridors in Solicitation 2

Source: CEC staff

The concepts presented at the March 2024 workshop included breaking the corridor group projects into two competitions, one called "two-part projects" and one called "stand-alone projects." Stakeholders commented that they were not in favor of these concepts. Feedback from the workshop included the following points:

- **Do not require applicants to complete an entire corridor group**: Stakeholders expressed preference for individual corridor segments within a corridor group, arguing that individual corridor segments would increase competition and allow more diverse applicants. One also argued that partnerships (as promoted by Caltrans and the CEC to enable diverse participation) are difficult to make.

- **Do not require two-part projects or change how they would work**: Several commenters felt the two-part projects exacerbated the challenge with completing an entire corridor group and would reduce competition further by locking in one recipient to complete multiple corridor groups.

- **Include all remaining corridor groups**: Multiple commentors supported including all remaining corridor groups in the next solicitation; no commentors were against doing so. Accelerating deployment of corridor charging was supported by all.

In addition to incorporating the feedback above into the design of Solicitation 2, staff will also incorporate the following lessons from Solicitation 1:

1. **Maximum award amounts can be reduced**. Most Solicitation 1 applications requested funding levels that were significantly below the maximum award amounts offered for the respective corridor groups ($150,000 per charging port). Many were close to half of the maximum. The proposed maximum awards presented in the workshop for Solicitation 2 assumed the same levels as in Solicitation 1; those maximum awards are being adjusted downward.

2. **"Required sites" can be eliminated**. Four of the six corridor groups in Solicitation 1 had one or more "required sites" — usually a junction of two AFCs wherein applicants were required to locate a charging station within one mile. The required sites were included to ensure end points of AFCs had stations nearby and NEVI requirements at AFC termini would be more than sufficient. However, with the FHWA NEVI Formula Program Guidance (June 11, 2024) that corridor termini must have a station located within 25 miles, the required sites now seem overly restrictive and unnecessary. There were also reports of price inflation at prospective station sites.

The NEVI Agencies will need to factor in the revised definition of "NEVI-Compliant Stations" for solicitation planning. Solicitation 1 assumed that existing stations meeting the location, port, and power requirements were NEVI-compliant, which meant that no new stations were required at these sites.

With clarification from the FHWA's NEVI Formula Program Guidance (updated June 11, 2024), staff revised the assumptions related to existing stations. It is apparent that all existing stations will need some level of improvement to become NEVI-compliant and meet all 23 CFR Section 680 requirements. Therefore, the number of stations needed to achieve fully built out status for NEVI is slightly greater than originally estimated.

Based on stakeholder feedback, lessons from Solicitation 1, and the new guidance on existing charging stations, staff is revising the Solicitation 2 concepts presented in March 2024 to:

- Reduce the burden of completing corridor groups by dropping the two-part project concept and requesting completion of corridor segments (for example, State Route 199) instead of full corridor groups (for example, U.S. Highway 101, State Route 199, and State Route 299). The idea of stand-alone projects that require only one or a few stations to complete will be retained.

- Reduce the maximum award per charging port, with possible additional funding if a battery energy storage system or onsite solar is included.

- Remove assumptions that existing charging stations will contribute to AFC buildout.

- Reduce evaluation criteria and application requirements to enable faster application development and evaluation, anticipating a higher volume of applications.

Awarded Contracts

The CEC received 18 applications to Solicitation 1 (GFO-23-601) from nine applicants. Notable takeaways from project applications include the following:

- **Projects came in at lower cost than anticipated:** CEC staff evaluated available EV charging equipment pricing and previous fast-charging awards to set a maximum award for each corridor group. The maximum awards offered up to $150,000 per new charging port, which covers up to 50 percent of all costs related to designing, building, operating, and maintaining the new charging stations.

  For example, the maximum award for Corridor Group 6A, with 67 new charging ports, was 67 multiplied by $150,000, which totals $10,050,000. As an example of how costs were lower than anticipated, the three applications received for Corridor Group 6A requested $4,008,069, $5,025,000, and $8,522,138, respectively.

- **Several applicants preferred building more charging ports per station:** Even though GFO-23-601 requested more than the minimum of four 150 kW CCS charging ports per station along several corridors, several applicants expressed interest in building even more ports than that (for instance, the proposed award

for Corridor Group 6A will feature 121 ports rather than the 67 requested ports). For Solicitation 2, the NEVI Agencies will continue to assess the optimal number of ports to request per station.

- **Nearly all ports exceed the 150 kW minimum:** 84 percent (422 of 504) of the ports proposed for award for Solicitation 1 are 200 kW. Another 62 ports will be 175 kW, while 20 will be 150 kW.

The CEC announced 11 proposed awards on June 3, 2024, for a total of $37,715,166.[25] Proposed awardees will provide $53,232,945 in match funding or 59 percent of the $90,948,111 in total project costs. CEC staff is coordinating with proposed awardees to develop grant agreements and to request project authorization to begin work. Although none of the grant agreements have been formally awarded as of the end of August 2024, the agreements are expected to be considered for approval in September, October, and November 2024. The proposed awards under Solicitation 1 (GFO-23-601) are shown in Table 5.

Table 5: Proposed Awards from NEVI Solicitation 1 (GFO-23-601)

Corridor Group	Proposed Award Recipient	Number of Stations	Number of Ports	Proposed Award Amount
6A	Skychargers, LLC	6	68	$4,008,069
6A	Zero6 EV Charging CA I LLC	9	53	$3,675,000
6B	Skychargers, LLC	3	76	$2,965,854
6B	Zero6 EV Charging CA I LLC	10	77	$6,075,000
7	Electrify America	11	62	$6,488,372
7	Skychargers, LLC	3	30	$3,665,627
7	Zero6 EV Charging CA I LLC	11	58	$4,650,000
16	Sustainable Energies CA LLC	5	20	$1,860,000
16	Tesla, Inc.	2	20	$1,327,244
19	Sustainable Energies CA LLC	4	16	$1,200,000
20	Sustainable Energies CA LLC	6	24	$1,800,000
Totals		70	504	$37,715,166

Source: Notice of Proposed Awards for GFO-23-60126

The EV charging station locations included in these projects are listed in Table 6 and shown spatially in Figures 3 and 4. Adjustments to the station locations and number of ports per location are possible until the agreements for these projects are executed.

[25] California Energy Commission. (2024, June 3). "GFO-23-601 Notice of Proposed Awards."
[26] *Ibid.*

Table 6: Proposed Station Locations by Interstate or State Route

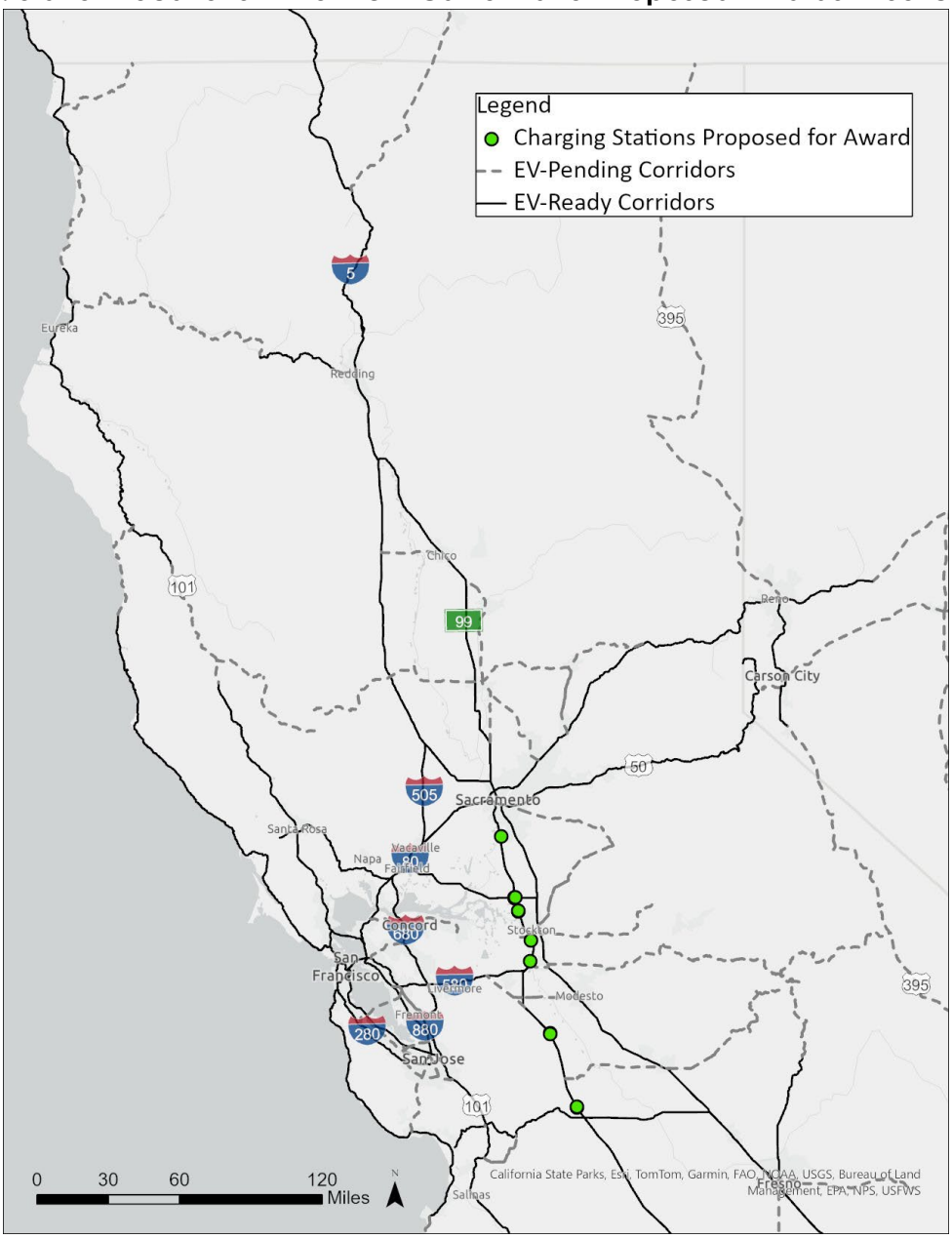
Interstate or State Route	Corridor Group	Station Address or Coordinates	Number of Ports
5	6A	9615 W Taron Dr, Elk Grove, CA 95757	4
5	6A	6437 W Banner St, Lodi, CA 95242	6
5	6A	15050 North Thornton Rd, Lodi, CA 95242	4
5	6A	15250 North Thornton Rd, Lodi, CA 95242	6
5	6A	10424 Trinity Parkway, Stockton, CA 95219	8
5	6A	10850 Trinity Parkway, Stockton, CA 95219	8
5	6A	613 Carolyn Weston Blvd, Stockton, CA 95206	4
5	6A	16542 Golden Valley Parkway, Lathrop, CA 95330	4
5	6A	2965 Annamarie Ave, Patterson, CA 95363	6
5	6A	55 Rogers Road, Patterson, CA 95363	6
5	6A	12754 CA-33, Gustine, CA 95322	4
5	6A	29025 Plaza Drive, Santa Nella, CA 95322	6
5	6A	25430 West Dorris Ave, Coalinga, CA 93210	11
5	6A	35.987862, -119.962495 (Kettleman City)	40
5	6B	33225 Hubert Way, Kettleman City, CA 93239	4
5	6B	21948 CA-46, Lost Hills, CA 93249	6
5	6B	24551 W Lerdo Hwy, Buttonwillow, CA 93206	6
5	6B	20238 Taft Hwy, Bakersfield, CA 93311	4
5	6B	9557 Copus Rd, Bakersfield, CA 93313	8
5	6B	5601 Outlets at Tejon Pkwy, Arvin, CA 93203	4
5	6B	5701 Dennis McCarthy Dr, Lebec, CA 93243	21
5	6B	9000 Countryside Ct, Lebec, CA 93243	4
5	6B	34.823730, -118.880460 (Lebec)	60
5	6B	201 Frazier Mountain Park Rd, Lebec, CA 93243	8
5	6B	73 Frazier Mountain Park Rd, Lebec, CA 93243	8
5	6B	31880 Castaic Rd, Castaic, CA 91384	8

Interstate or State Route	Corridor Group	Station Address or Coordinates	Number of Ports
5	6B	27923 Sloan Canyon Rd, Castaic, CA 91384	8
5	6B	24160 Lyons Ave, Newhall, CA 91321	8
58	7	20681 Tracy Ave, Buttonwillow, CA 93206	4
58	7	20688 Tracy Ave, Buttonwillow, CA 93206	4
58	7	4310 California Ave, Bakersfield, CA 93309	4
58	7	1631 S. Comanche Dr, Bakersfield, CA 93307	6
58	7	1001 W Tehachapi Blvd, Tehachapi, CA 93561	8
58	7	2000 E Tehachapi Blvd, Tehachapi, CA 93561	4
58	7	35.00993785886764, -117.8710390943351	4
58	7	27201 Boron Frontage Rd N, Boron, CA 93516	4
58	7	34.996484, -117.543025	4
58	7	2974 Lenwood Rd, Barstow, CA 92311	4
15	7	11490 Fashion Ct, Hesperia, CA 92345	8
15	7	14921 Bear Valley Rd, Hesperia, CA 92345	4
15	7	14799 Bear Valley Rd, Hesperia, CA 92345	4
15	7	34.590950, -117.257432	6
15	7	15680 Roy Rogers Dr, Victorville, CA 92394	4
15	7	2800 Lenwood Rd, Barstow, CA 92311	14
15	7	1308 E Main St, Barstow, CA 92311	4
15	7	36017 Calico Blvd, Yermo, CA 92398	16
15	7	39263 Harvard Rd, Newberry Springs, CA 92365	4
15	7	35.276504, -116.057843 (Baker)	12
15	7	65845 Cima Rd, Nipton, CA 92364	20
40	7	25635 Crucero Rd, Ludlow, CA 92338	4
40	7	68480 Ludlow Rd, Ludlow, CA 92338	4
40	7	2461 Needles Hwy, Needles, CA 92363	4
8	16	1155 Alpine Blvd, Alpine, CA 91901	4

Interstate or State Route	Corridor Group	Station Address or Coordinates	Number of Ports
8	16	1800 Golden Acorn Way, Campo, CA 91906	15
8	16	1496 Carrizo Gorge Rd, Jacumba Hot Springs, CA 91934	4
15	16	2890 National Ave, San Diego, CA 92113	5
15	16	9225 Clairemont Mesa Blvd, San Diego, CA 92123	4
15	16	41000 California Oaks Rd, Murrieta, CA 92562	4
805	16	930 Dennery Rd, San Diego, CA 92154	4
210	19	12980 Foothill Blvd, Sylmar, CA 91342	4
215	19	40375 Murrieta Hot Springs Rd, Murrieta, CA 92563	4
215	19	454 North H Street, San Bernardino, CA 92410	4
405	19	10310 Sepulveda Blvd, Mission Hills, CA 91345	4
110	20	4403 S Figueroa St, Los Angeles, CA 90037	4
110	20	233 N Harbor Blvd, San Pedro, CA 90731	4
710	20	1201 S Fremont Ave, Alhambra, CA 91803	4
710	20	590 Long Beach Blvd, Long Beach, CA 90802	4
605	20	1114 Huntington Dr, Duarte, CA 91010	4
105	20	11037 Rosecrans Ave, Norwalk, CA 90650	4

Source: GFO-23-601

Figure 3: Station Locations in Northern California for Proposed Awards in Solicitation 1



Source: CEC staff

Figure 4: Station Locations in Southern California for Proposed Awards in Solicitation 1

Source: CEC staff

Scoring Methodologies Utilized

Table 7 summarizes the eight evaluation criteria developed for GFO-23-601 and the respective potential scores. (A detailed list of evaluation criteria is available at the California NEVI web page).[27] The highest value criteria included station design, project readiness, operations and maintenance plans, project team experience, and project costs. Staff used the Project Benefits criterion to evaluate applicants on the degree to

[27] California Energy Commission. "National Electric Vehicle Infrastructure (NEVI) Formula Program."

which they addressed environmental, economic, and health benefits of a project for priority populations and tribal nations.

To qualify as an eligible project, applicants needed to have at least 50 percent of the proposed chargers located within a disadvantaged or low-income community or both per the California definitions,[28] and at least 40 percent of the proposed chargers located within a Justice40 Community. Applicants also needed a minimum passing score of 70 percent (140 out of 200 possible points) to have an eligible project.

Table 7: Summary of GFO-23-601 Evaluation Criteria

Criterion	Description	Possible Points
1	Charging Station Design	50
2	Project Readiness	40
3	Operations and Maintenance	30
4	Team Qualifications and Experience	20
5	Expected Project Benefits	10
6	Innovation and Sustainability	10
7	Project Budget and Finances	20
8	Cost	20
	Total Possible Points	**200**
	Minimum Passing Score (70%)	**140**

Source: GFO-23-601 Application Manual

Plan for Compliance with Federal Requirements

The Solicitation 1 manual (GFO-23-601)[29] specified the federal requirements for which awardees will be responsible. Section II.B.1. of the Solicitation Manual, "Compliance with Requirements Applying to NEVI Projects," describes requirements to comply with the:

- Build America Buy American Act
- Davis Bacon Act
- National Environmental Policy Act
- Americans with Disabilities Act of 1990
- Title VI of the Civil Rights Act of 1964

[28] The following geographic areas are defined by the California Environmental Protection Agency as disadvantaged: (1) census tracts receiving the highest 25 percent of overall scores in CalEnviroScreen 4.0; (2) census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores; (3) census tracts identified in the 2017 disadvantaged community designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0; (4) and areas under the control of federally recognized tribes. California low-income communities are designated by CARB as census tracts with median household incomes at or below 80 percent of the statewide median income or with median household incomes at or below the threshold designated as low income by the California Department of Housing and Community Development

[29] California Energy Commission. (2023, December). "Grant Funding Opportunity - California's National Electric Vehicle Infrastructure Formula Program - Addendum 1 (GFO-23-601)."

- All applicable requirements of Title VIII of the Civil Rights Act of 1968
- Uniform Relocation Assistance and Real Property Acquisition Act (49 CFR 24 et seq.)

The manual also mandated compliance with federal NEVI program requirements, including:

- USC Title 23, Chapter 1
- 2 CFR part 200
- 23 CFR parts 35 and 36
- And any promulgated regulations for the federal NEVI program, and California's NEVI Deployment Plan, as amended

The CEC and Caltrans also developed Special Federal Award Terms and Conditions covering general and financial provisions.[30]

The CEC is requesting proposals from expert consultants for assistance in complying with federal requirements. On July 8, 2024, the CEC released a request for proposal, RFP-24-301, "Compliance, Monitoring, and Reporting Support for Federal Funding."[31] The selected contractor will review and improve future solicitation guidance and assist the state in monitoring compliance with several federal funding programs, including NEVI. Proposals were due August 19, 2024.

Civil Rights

No changes have been made from the 2023 NEVI Plan Update regarding the state's commitment to civil rights under the NEVI program.

Existing and Future Conditions Analysis

California Geography, Terrain, and Climate

No major changes have occurred to California's geography or terrain. Please see the 2022 NEVI Plan for a complete description.

A series of nine major winter storms known as "atmospheric rivers" pummeled California between January and March 2024, causing substantial flood damage and 21 fatalities in Southern California.[32] The February storm alone led to nine deaths and caused an estimated $11 billion in damages to roadways, infrastructure, the power grid, homes, and businesses. San Diego experienced an atmospheric river event in January, which

[30] California Energy Commission. (2023, October). "GFO-23-601 Special Federal Terms and Conditions."
[31] California Energy Commission. (2024, July 8). "RFP-24-301 – Compliance, Monitoring, and Reporting Support for Federal Funding."
[32] National Centers for Environmental Information. "Annual 2023 National Climate Report."

resulted in three deaths, damage to 800 homes, and a federal disaster declaration.[33] The storm also impacted priority populations in Monterey County.

In July 2023, California experienced a series of heat waves that produced record-setting temperatures around the state. At the time, July 2023 was the hottest month in global recorded history.[34] Despite the extreme summer temperatures, the 2023 fire season was relatively mild, with fewer than 325,000 acres burned, down substantially from the peak wildfire seasons between 2018 and 2021 when millions of acres burned.[35]

The 2024 fire season has begun aggressively. Through August of this year, nearly 5,000 fire incidents have occurred, burning over 800,000 acres.

California ZEV Ownership and ZEV Market Conditions

California continues to make considerable progress toward its transportation electrification goals. More than 441,283 light-duty electric vehicles were sold in 2023,[36] or 25 percent of total sales and a 28 percent increase over 2022 sales. Cumulative light-duty ZEV sales now total nearly 2 million vehicles, and an estimated 1 million electric vehicles are now on the road. The state's goal of 1.5 million ZEV sales by 2025 was achieved two years ahead of schedule.[37]

California continues to have the most dynamic ZEV market in the country, accounting for 40 percent of all ZEV sales nationally.[38] In the third quarter of 2023, ZEV sales reached a new high of 26.75 percent of all light-duty vehicle sales.[39] The Tesla Model 3, Model Y, and Model S were the top selling vehicles in their respective classes, outcompeting fossil-fueled counterparts. In 2023, Tesla was again the second-highest selling brand overall in California with 13 percent market share, up slightly from 11.2 percent in 2022. Toyota continued to be the state's highest-selling brand with 15.7 percent market share, while Ford is number three with 11.8 percent market share.[40]

The Clean Vehicle Rebate Project now lists 19 eligible automakers with 105 ZEV models, up substantially from the 40 ZEV models available in 2022. Nine automakers offer 16 models of plug-in hybrid electric vehicles.[41] After Tesla, the top selling ZEVs in California in 2023 include the Volkswagen ID.4, Chevrolet Bolt EUV, Mustang Mach-e,

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[33] California Governor's Office of Emergency Services. (2024, February 20). "Governor Newsom Secures Presidential Major Disaster Declaration to Support Storm Recovery Efforts in San Diego."
[34] Governor's Office of Emergency Services. (2023, August 2). "Extreme Heat Breaking Records at Home and Beyond."
[35] California Department of Forestry and Fire Protection. "Statistics," accessed August 9, 2024.
[36] Veloz. (2024, April). "California EV Market Report."
[37] Office of Governor Newsom. (2023, April 21). "California Surpasses 1.5 Million ZEVs Goal Two Years Ahead of Schedule."
[38] Office of Governor Newsom. (2023, January 20). "California ZEV Sales Near 19% of all New Car Sales in California in 2022."
[39] California Energy Commission. "New ZEV Sales in California."
[40] California New Car Dealership Association. (2024, January 29). "California New Car Dealers Association Releases Year-End 2023 Auto Outlook Report."
[41] California Clean Vehicle Rebate Project. (2024, May 30). "List of Eligible Vehicles."

Hyundai IONIQ 5, and BMW i4. Rivian's sales of the R1S and R1T surpassed 10,000 vehicles for the first time, and the Ford F-150 Lightning sales exceeded 4,000 vehicles.[42]

On California's Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project website, 30 original equipment manufacturers now have eligible zero-emission trucks in the medium-duty package delivery, heavy-duty straight truck, and Class 7 and 8 tractor categories.[43]

In terms of manufacturing, "California is home to more than 360 companies with 70,000 employees that work on zero-emission transportation, including vehicles, components, infrastructure, and research. California has 56 ZEV-related manufacturers and leads the nation in ZEV manufacturing jobs. Transportation equipment manufacturing was the fourth-largest export in California by trade dollar value in 2022."[44]

Freight

Given the significant impacts to public health of diesel trucks and the immense need for infrastructure to support the adoption of zero-emission medium- and heavy-duty trucks, California intends to use NEVI funding for projects along AFCs that support charging of battery-electric trucks. Use of NEVI funds for this purpose builds on direction in California's previous annual NEVI plans, aligns with state and federal policies described below, and reflects input from community groups and the private sectors.

California's Goods Movement Sector

California boasts a state-of-the-art freight transportation network, renowned for its diverse modal options that ensure the prompt and effective delivery of essential goods. Ongoing enhancements aimed at bolstering efficiency and reducing emissions will further benefit the state's economy and the welfare of its residents.

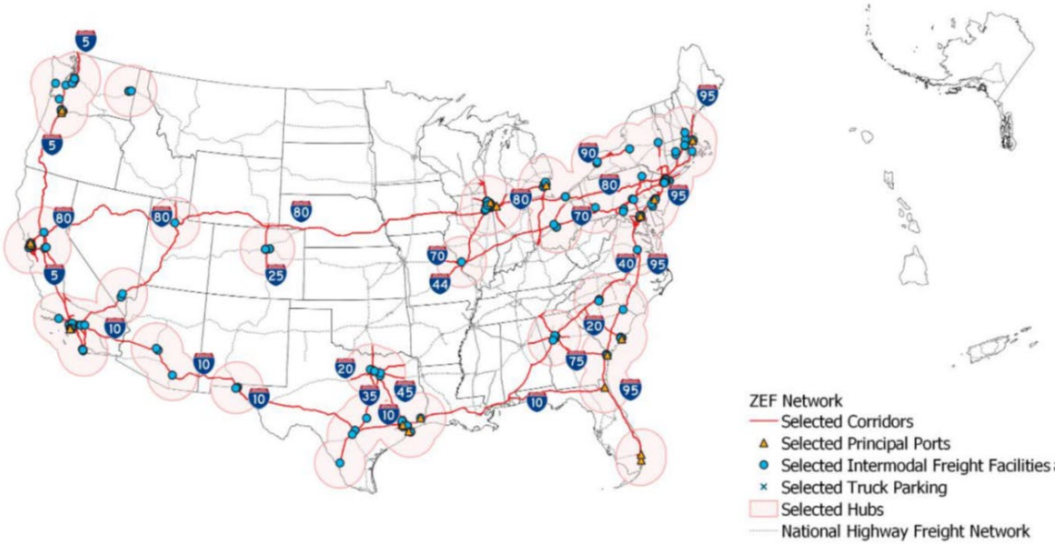
California has 12 seaports, 12 airports with major cargo operations, two Class I railroads, 27 Class III railroads, three existing and one future commercial land border ports of entry with Mexico, more than 3,500 National Highway Freight Network miles, and a large warehousing and distribution sector.[45] Phase 1 and 2 of the National Zero-Emissions Freight Corridor Strategy, shown in Figure 5, encompass four principal ports in California, many miles of the National Highway Freight Network, and select intermodal freight facilities.[46]

The highway network is the largest component of California's freight network in terms of infrastructure, tonnage shipped, and value shipped. It provides first- and last-mile

[42] California Energy Commission. "New ZEV Sales in California."
[43] California Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project. "List of Eligible Vehicles Sorted for Medium-Duty, Straight Truck, and Tractor Categories," accessed May 29, 2024.
[44] Tuggy, Benjamin. (2024). *2024-2025 Investment Plan Update for the Clean Transportation Program*, California Energy Commission. Publication Number: CEC-600-2024-047-SD.
[45] California Department of Transportation. (2023). *California Freight Mobility Plan 2023*.
[46] Joint Office of Energy and Transportation. (2024). *National Zero-Emission Freight Corridor Strategy 2024*.

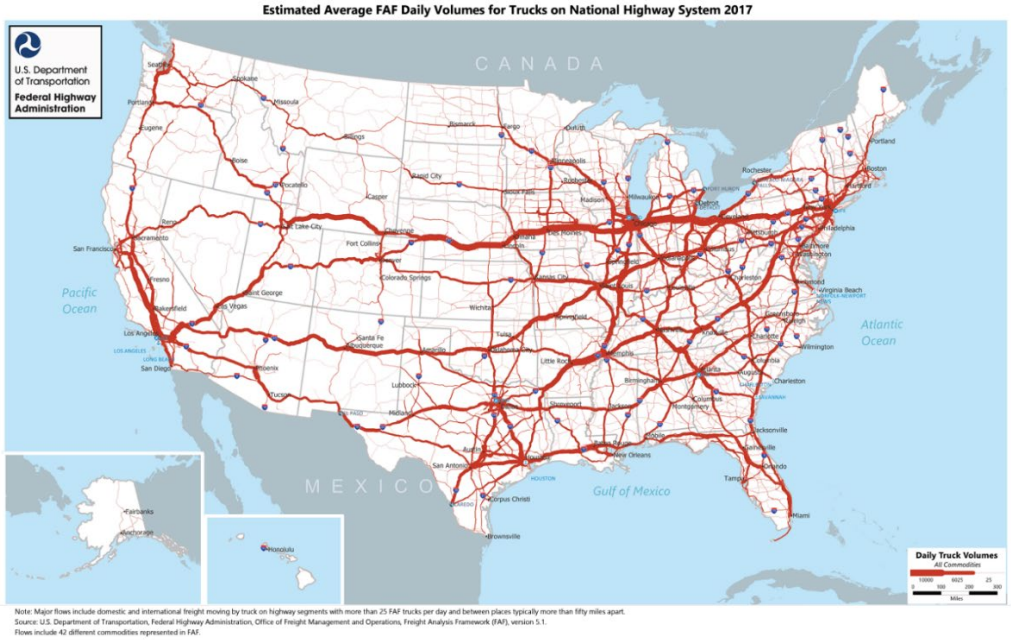
connections to other modes in addition to supporting California's key industries. Trucks are by far the most used mode (between air, rail, marine, and pipelines) to move freight. The Freight Analysis Framework forecasts that freight moved on trucks is expected to grow by 47 percent from 2023 to 2050 in California.[47] Figure 6 shows daily truck volumes in California compared to the rest of the nation.

Figure 5: Phases 1 and 2 of the National ZEF Network



Source: Joint Office of Energy and Transportation

Figure 6: Estimated Average Daily Volumes for Trucks on National Highway System[48]

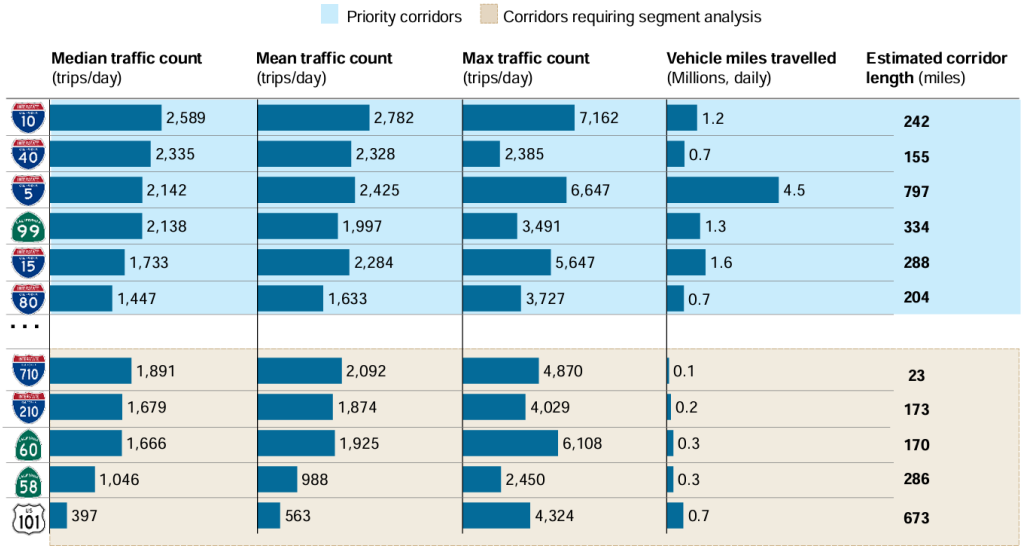


Source: U.S. Department of Transportation

[47] Oak Ridge National Laboratory. "Freight Analysis Framework Version 5."
[48] Federal Highway Administration. "Estimated Average FAF Daily Volumes for Trucks on National Highway System 2017."

Figures 7 and 8 illustrate the state's priority Clean Freight Corridors based on a report published by the CTC in December 2023.[49] The assessment identified California's corridors with the highest average daily truck volumes, commodities, and emissions.

Figure 7: Truck Traffic Assessment of California Corridors[50]



Source: California Transportation Commission

Figure 8: "Top 6" Freight Corridors Identified[51]

Source: California Transportation Commission

[49] California Transportation Commission. (2023). *SB 671 Clean Freight Corridor Efficiency Assessment*.
[50] *Ibid.*
[51] *Ibid.*

Policies Support the Transition to Zero-Emission Trucks

Adoption of zero-emission trucks and buses in California is directly related to world-leading policies set by CARB that are beginning to take effect. Such policies require the sale and purchase of ZEVs and include the Innovative Clean Transit, Advanced Clean Trucks, and Advanced Clean Fleets standards, which began taking effect in 2023 and 2024.

The Innovative Clean Transit standard requires 25 percent of bus purchases by large transit agencies to be zero-emission in 2023 and increases to 50 percent for these agencies in 2026 and 100 percent in 2029. Purchase requirements for small agencies begin in 2026 at 25 percent and increase to 100 percent in 2029.[52]

The Advanced Clean Trucks standard sets ZEV sales targets for manufacturers of Class 2b–8 vehicles. Policy implementation began with Model Year 2024, requiring 5 to 9 percent of medium- and heavy-duty vehicle sales to be of ZEVs, depending on the weight class. This requirement increases to 40 to 75 percent of sales by Model Year 2035. Manufacturers are on track to more than double the number of zero-emission Classes 7–8 tractor sales required by the standard for Model Year 2024.[53]

In 2023, Caltrans published its latest federally approved California Freight Mobility Plan (CFMP). The CFMP is a comprehensive plan that governs the immediate and long-range planning activities and capital investments by the state with respect to freight movement. The CFMP includes strategies to support infrastructure for zero-emission medium- and heavy-duty vehicles.

State Funding for Medium- and Heavy-Duty ZEV Infrastructure

Funding programs at the CEC and Caltrans are helping build infrastructure for zero-emission trucks:

- In the most recently adopted Investment Plan for the Clean Transportation Program (CTP), the CEC will allocate $685.2 million in funding for medium- and heavy-duty vehicle infrastructure in Fiscal Years 2023–2024 through 2027–2028.[54]
- In 2023, the CEC's CTP awarded $88 million for truck charging across three solicitations: CALifornia Provided Along Targeted Highway Segments, MDHD Blueprint Implementation, and Innovative Charging Solutions for the MDHD Sector. These awards will fund 13 projects across 19 sites for a total of nearly 450 charging ports.
- The CTP Energy Infrastructure Incentives for Zero-Emission block grant funding program, which focuses on medium- and heavy-duty vehicle infrastructure, has awarded $118.3 million for 212 projects and 2,005 charging ports.

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[52] California Air Resources Board. (2019, May 16). "Innovative Clean Transit Regulation Fact Sheet."
[53] California Air Resources Board. (2021, August 20). "Advanced Clean Trucks Fact Sheet."
[54] Tuggy, Benjamin. (2024). *2024-2025 Investment Plan Update for the Clean Transportation Program*, California Energy Commission. Publication Number: CEC-600-2024-047-SD.

- In June 2023, Caltrans was awarded funding for three truck-charging and hydrogen-fueling projects totaling $111.6 million under Cycle 3 of the state's Trade Corridor Enhancement Program.[55]
- Caltrans is also administering the state's Port and Freight Infrastructure Program on behalf of CalSTA, including significant ZEV-related projects such as the $76.3 million Freight Air Quality Solutions project that will provide truck charging at warehouses in Southern California.[56]

Federal Funds Are Needed to Support Truck Electrification in California

Despite the significant investments in state funding for truck electrification, federal funding, including NEVI, is needed to enable California's transition to zero-emission medium- and heavy-duty vehicles. The CTC's Clean Freight Corridor Efficiency Assessment estimates the total capital cost to build the initial infrastructure network supporting zero-emission trucks to be between $10 billion and $15 billion.

In June 2023, Caltrans, the CEC, Oregon Department of Transportation, and Washington State Department of Transportation applied to the USDOT's Charging and Fueling Infrastructure (CFI) Discretionary Grant Program to support charging and hydrogen fueling infrastructure for trucks from Mexico to Canada along Interstate 5 and key corridors connecting to ports and freight centers along the West Coast. On August 27, 2024, this tristate project was awarded $102 million in funding, a key milestone in achieving zero-emissions goods movement along the West Coast and nationally.

As described in the Plan Vision and Goals section, an estimated 5,500 high power en route chargers and 109,000 low power chargers are needed to support 155,000 zero-emission trucks in California by 2030. This demand far exceeds existing funding; thus, the three states are also preparing an application to support truck charging along Interstate 5 for the second round of CFI funding. The California NEVI Agencies are also working with ports across the state to develop an application that supports drayage truck charging.

Incorporation of Truck Charging in NEVI Solicitations 1 and 2

Recognizing that NEVI Formula Program funds can be used to install, operate, and maintain EV charging stations for medium- and heavy-duty vehicles,[57] California's first NEVI solicitation included evaluation criteria to encourage truck charging. The goal was to reward projects supporting use by multiple vehicle-types, having higher-powered

[55] California Transportation Commission. (2022, November 18). "Trade Corridor Enhancement Program – Application Receipt Log."
[56] California State Transportation Agency. (2023). *Port and Freight Infrastructure Program (PFIP) Annual Report*.
[57] Federal Highway Administration. "NEVI Formula Program Questions and Answers," accessed August 1, 2024.

charging than the minimum requirement, and offering pull-through[58] charging configurations. In the state's first NEVI solicitation, no projects included attributes to specifically support medium- and heavy-duty vehicles. Similar criteria will be included in California's second NEVI solicitation.

Incorporation of Truck Charging in Future Solicitations

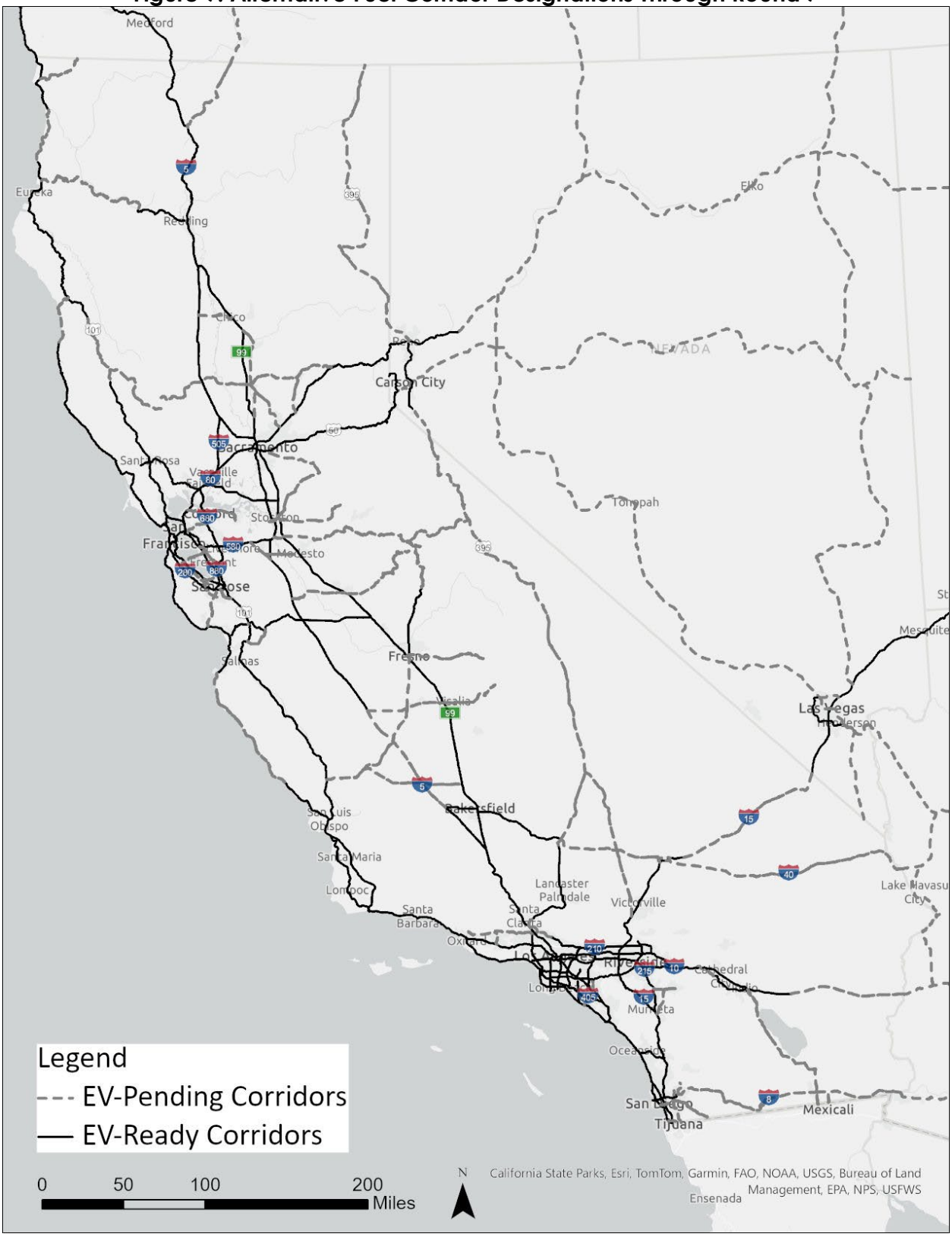
California plans to include more extensive support for truck charging projects in NEVI Solicitation 3 and beyond. The state's goal is to fund chargers dedicated to trucks, much like existing travel centers that have separate fueling for passenger vehicles and heavy trucks, to minimize safety risks associated with pedestrian and truck interactions and provide infrastructure that best serves the needs of different vehicles. These solicitations will adhere to the 23 CFR Section 680 standards for NEVI-funded charging stations.[59]

Alternative Fuel Corridor Designations

Figure 9 shows California's designated AFCs through Round 7 in 2023. The AFCs now encompass nearly all the state's major north-south and east-west freeway and highway corridors, more than 7,000 center-line miles. On August 1, 2024, Caltrans submitted nominations to Round 8 of the AFC program. Corridors approved by the FHWA in Round 8 will be described in the 2025 NEVI Plan Update.

[58] Pull-through charging stalls benefit not only heavy-duty trucks but also charging for tow vehicles, towed recreation equipment (for example, electrified RV trailers, boats, motorcycles), or construction equipment (for example, skid steers, mini excavators).
[59] Code of Federal Regulations. "National Electric Vehicle Infrastructure Standards and Requirements."

Figure 9: Alternative Fuel Corridor Designations Through Round 7



Source: CEC staff

Existing Charging Stations

Figures 10, 11, and 12 show existing public DC fast charging and Level 2 charging stations in California as of June 28, 2024, based on information from the U.S. Department of Energy's Alternative Fuels Data Center (AFDC). These maps show 2,383 DC fast charging stations in California, up from 1,900 in the 2023 NEVI Plan Update. Similarly, more than 15,500 public Level 2 stations are now available in the state, up from 14,100 in the 2023 NEVI Plan Update.[60] A complete table of existing DCFCs and Level 2 chargers along the current AFCs in California can be downloaded from the AFDC website.

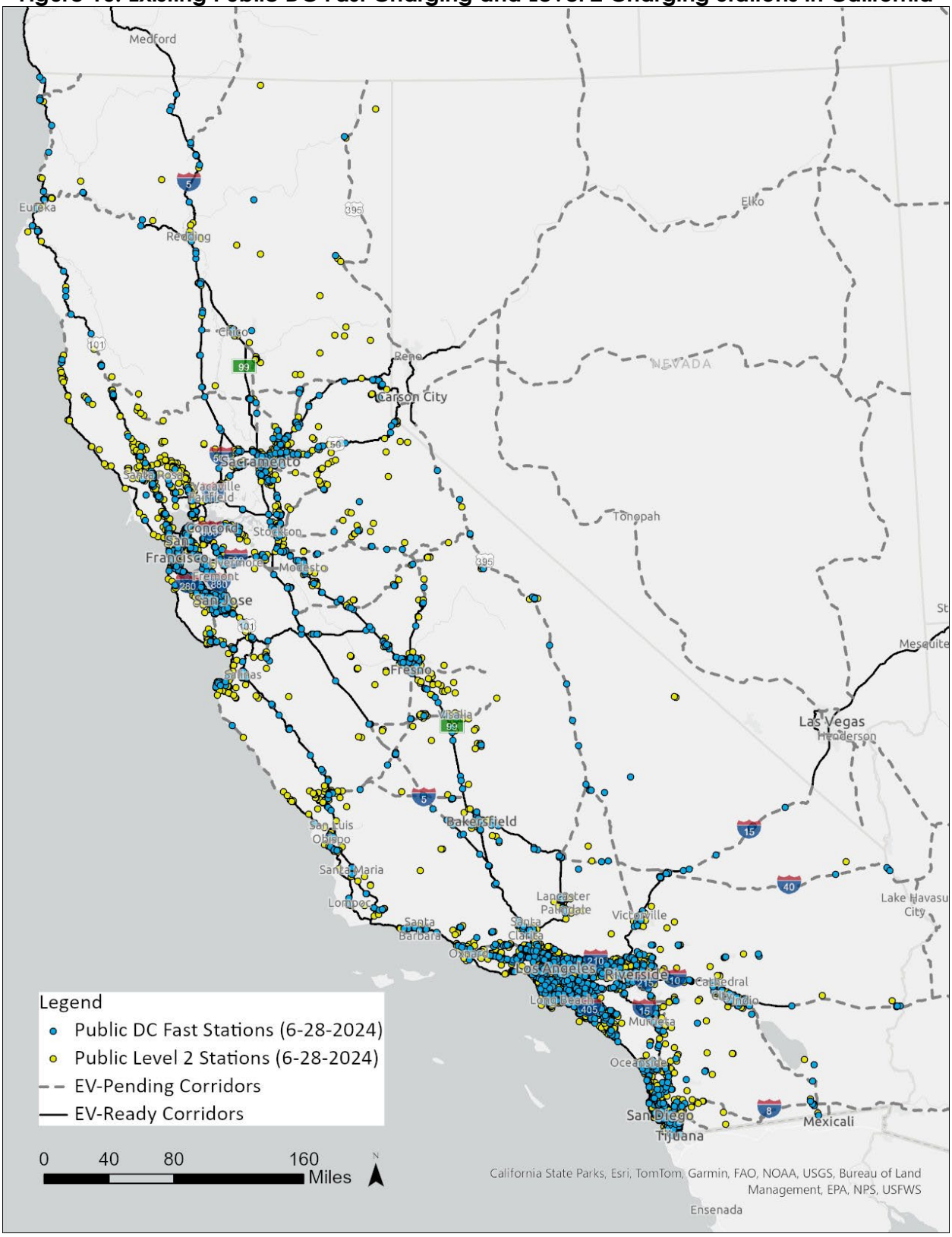
EV Charging Infrastructure Deployment

There are now 14,708 public and shared private DC fast chargers in California according to analysis by the CEC as of August 2024 (13,943 of the DC fast chargers are public and 765 are shared private).[61]

[60] U.S. Department of Energy. "Alternative Fuels Data Center," accessed June 28, 2024.

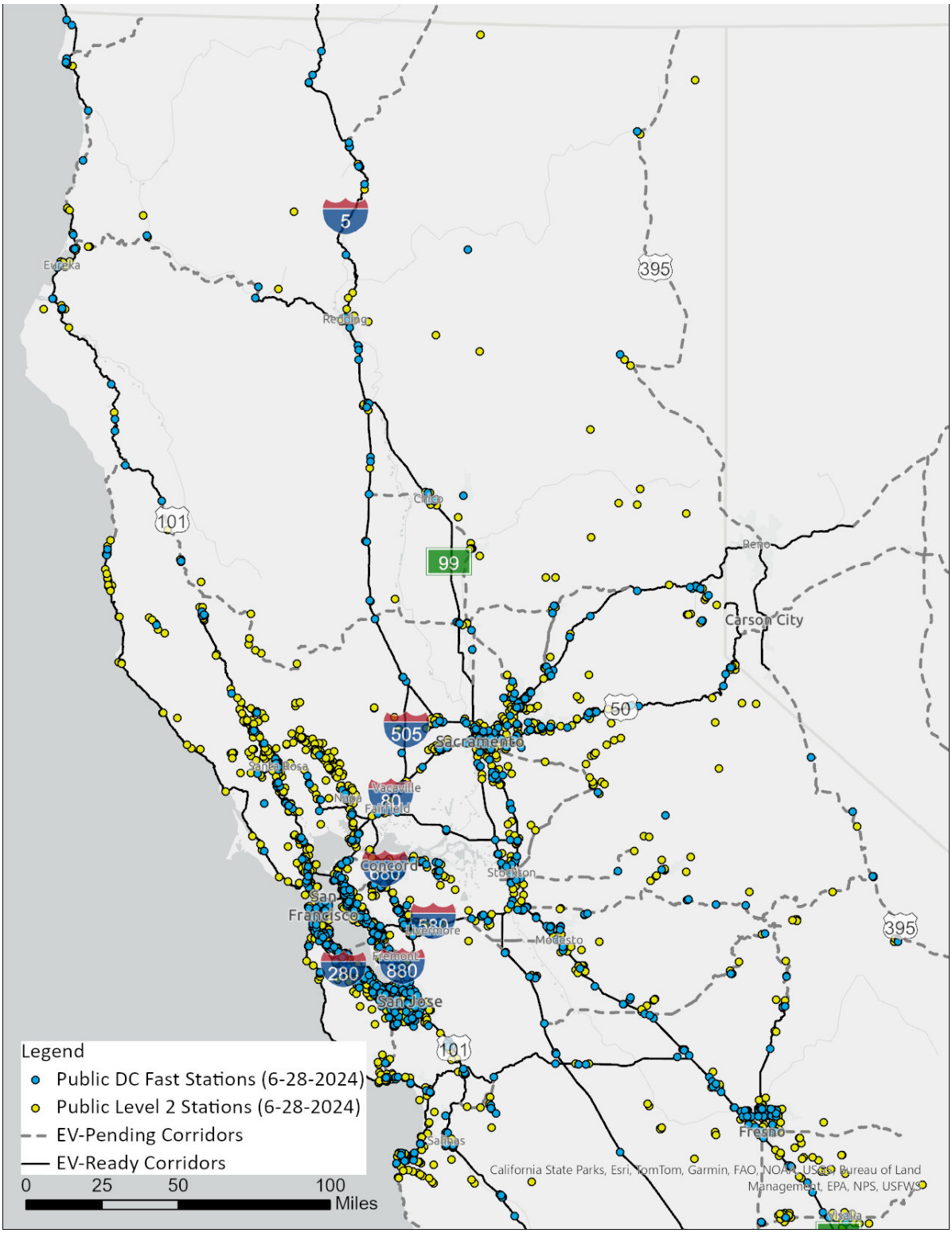
[61] These numbers reflect the CEC's latest count as of August 29, 2024 and are greater than the 12,105 public and 205 private DC fast chargers, respectively, in California captured by the AFDC as of August 30, 2024.
California Energy Commission. "Electric Vehicle Chargers in California," accessed August 29, 2024.

Figure 10: Existing Public DC Fast Charging and Level 2 Charging Stations in California



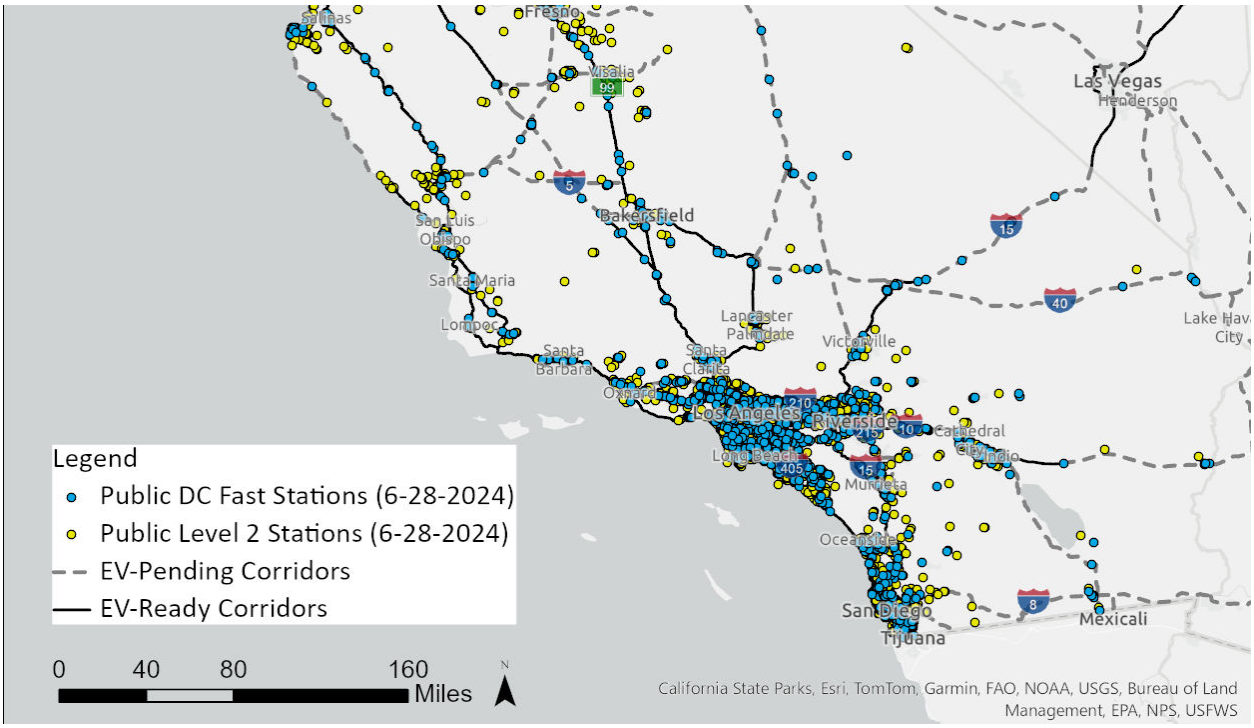
Source: CEC staff using AFDC data as of June 28, 2024

Figure 11: Existing Public DC Fast Charging and Level 2 Charging Stations in Northern California



Source: CEC staff using AFDC data as of June 28, 2024

Figure 12: Existing Public DC Fast Charging and Level 2 Charging Stations in Southern California



Source: CEC staff using AFDC data as of June 28, 2024

Nonfederal Funding for Charging Infrastructure

Looking forward, California will invest $42.6 million in light-duty charging infrastructure through the CEC's CTP in 2023–2024 and an additional $340 million in Greenhouse Gas Reduction Funds through Fiscal Year 2026–2027.

The CPUC's investments in light-duty charging infrastructure through its Transportation Electrification program totals $1.1 billion; nearly $300 million has been spent to date with more than $800 million remaining to be invested.[62]

The private sector continues to invest heavily in charging infrastructure as well. The CEC's standard match requirement is 50 percent cost share. To date, the CTP has leveraged $1.1 billion in private funding.[63] Private match for the 70 charging stations proposed for awards under NEVI Solicitation 1 totals $53.2 million.[64]

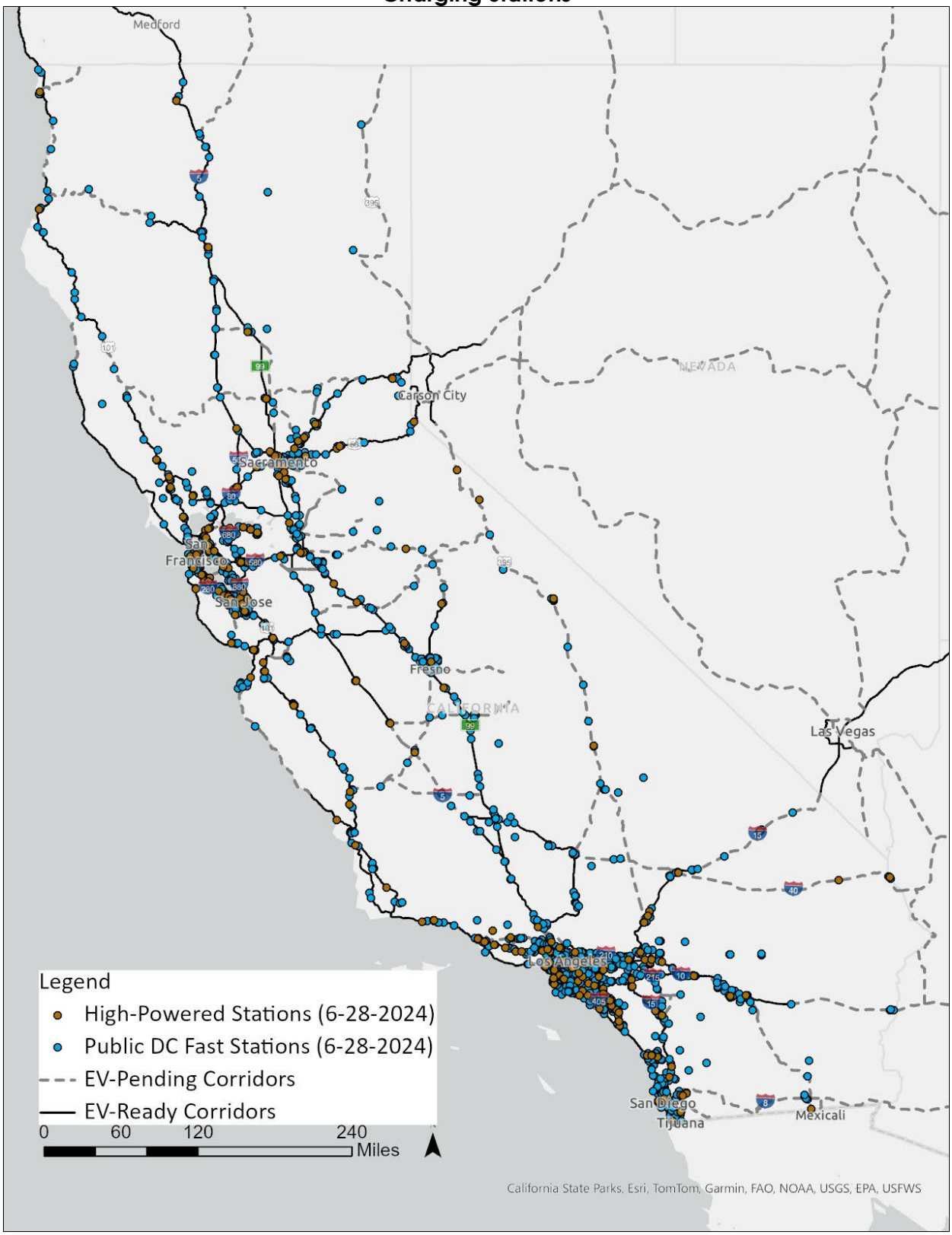
[62] California Public Utilities Commission. "Charging Infrastructure Deployment and Incentives," accessed August 29, 2024.
[63] Tuggy, Benjamin. (2024). *2024-2025 Investment Plan Update for the Clean Transportation Program*, California Energy Commission. Publication Number: CEC-600-2024-047-SD.
[64] California Energy Commission. (2024, June 3). "GFO-23-601 Notice of Proposed Awards."

Existing High-Powered EV Charging Stations

Figure 13 shows locations of DC fast charging stations in California. These stations include high-powered, public stations that meet the power and spatial requirements of 23 CFR Section 680: a minimum of 4 x 150 kW ports with CCS connectors at stations located no more than 1 mile from an AFC, and no more than 50 miles apart. There are 213 existing stations that meet these criteria. DC fast charging stations that do not meet the power requirements of 23 CFR Section 680 are labeled as "Public DC Fast Stations" in Figure 13.

The CEC and Caltrans cannot determine the number of existing DC fast charging stations installed before the establishment of the NEVI program that meets all of the 23 CFR Section 680 requirements because the reporting requirements for these stations do not capture all of the metrics needed to verify compliance. Looking forward, the CEC and Caltrans will identify stations that are fully NEVI-compliant as stations funded through the NEVI program become operational.

Figure 13: Existing High-Powered DC Fast Charging Stations and Non-NEVI DC Fast Charging Stations



Source: CEC staff using AFDC data as of June 28, 2024

Planned Charging Stations

The announced awards for NEVI Solicitation 1 are expected to yield 70 stations and 504 charging ports, most of which are 200 kW. Planning for Solicitation 2 is underway, and the $100 million round of funding is expected to support 120 charging stations and nearly 600 charging ports. The EVC RAA award of $63.7 million is expected to fund an additional 1,302 NEVI-compliant ports in California.

Planning Towards a Fully Built-Out Determination

Assuming minimal expansion of the current 7,000-mile AFC network, California will have at least 2,400 ports across more than 190 stations that will be fully NEVI-compliant when Solicitations 1 and 2 and the EVC RAA upgrades are completed.

Grant agreements for the 70 stations awarded for Solicitation 1 are expected to receive federal funding authorization from the FHWA and to be executed by CEC in fall 2024. Projects can proceed once federal authorization is received and an agreement is executed. Stations must become operational within five years from the date of award, although some are expected within one to two years. Solicitation 2 should result in awards in 2025, with the same five-year maximum time to make stations operational.

California conservatively estimates that it will achieve fully built-out status in 2030, roughly five years after executing agreements from Solicitations 1 and 2 (Table 8). The exact number of stations needed to achieve fully built-out status is subject to change, given that EVC RAA should bring some existing stations along AFCs into NEVI compliance.

Table 8: Estimated Number of Stations and Time Estimate to Achieve Fully Built-Out Status

Guidance Question	California *Response*
How many stations are still needed to achieve Fully built-out status (based on the state's EV AFCs as of the date of this update's submission)?	***190***
Provide the estimated year to achieve Fully built-out status:	***2030***

Source: CEC staff based on 2024 NEVI Plan Template

EV Charging Infrastructure Deployment After Build-Out

As discussed in the Vision section, after deployment of the Solicitation 2 funds, Caltrans and the CEC plan to direct a large portion of the remaining $230 million in NEVI formula funds to truck charging stations for medium- and heavy-duty vehicles. When the build-out of the AFCs is complete, the NEVI Agencies may continue supporting additional truck charging or community charging outside the AFC network.

Implementation

The CEC has taken rigorous steps to support the reliable operation and maintenance of charging infrastructure funds provided through the CTP, including those funded through the NEVI Formula Program. Current and future CEC solicitations for charging infrastructure will include:

1. Minimum reliability standards
2. Detailed recordkeeping and reporting requirements
3. Requirements for annual preventive maintenance
4. Maximum times to conduct corrective maintenance

The CEC is taking additional steps to better understand and ensure the reliability of charging infrastructure operating in California. The CEC has recently approved a contract for a third party to field test publicly accessible chargers by sending testers to charging stations to attempt to charge a variety of EV makes and models.

Please see the Plan Vision and Goals section for a full description of the measures the California NEVI Agencies will use to ensure that the NEVI-funded stations are operated and maintained in conformance with federal requirements, including accountability by station owners and operators. As noted, planning, installation, maintenance, and ownership of the NEVI-funded stations is the responsibility of the grant recipient. These obligations are part of the legally binding agreements each awardee must agree to in accepting a NEVI-funding award.

Please see the Labor and Workforce Considerations section for a full description of the measures California will use to ensure conformance with NEVI's labor, training, and installation standards.

Please see the Compliance section for a full description of AB 2061, which requires the CEC to develop uptime recordkeeping and reporting requirements for all chargers installed with a state incentive on or after January 1, 2024. Following AB 2061, the CEC has released draft regulatory language.

California's Electric Grid

California is undertaking grid and transmission planning to account for increasing electrification of the building and transportation sectors, with an eye toward policies that will encourage grid-friendly load growth. New electric load from ZEVs has steadily increased in recent years and will increase over the coming decades but is expected to add only a small amount of electricity demand to California's grid over the next decade.

The CPUC is working to support and direct California investor-owned utilities to keep pace with the growing number of new EV charging stations planned and being developed in California. CPUC Resolution E-5247, issued in December 2022, sets a 125-

day target for site interconnection energizations under 2 MW.[65] CPUC staff has started a similar proceeding to promote transportation electrification in the truck sector.[66]

California's Electric Utilities

California has more than 80 electric utilities, including investor-owned utilities, public utilities, community choice aggregators, and rural electric co-ops.[67] These utilities vary widely in size and service territories. The six private utilities include three large investor-owned utilities (Pacific Gas and Electric, Southern California Edison, and San Diego Gas & Electric) and several community-sized companies like Bear Valley Electric Service. The 45 public utilities also vary in size, ranging from the large Los Angeles Department of Water and Power and the Sacramento Municipal Utility District to scores of small, community-based utilities. There are 25 community choice aggregators and four rural electric cooperatives.

Slow energization times and grid capacity constraints can slow development of DC fast charging stations. In response, CEC staff is developing a potential new modeling approach with the EVSE Deployment and Grid Evaluation modeling tool.[68] This tool is intended to identify areas in the state that have sufficient grid capacity to accommodate new charger station-related load or that are grid-constrained or will be in the near future (through 2025). A description of the analytical approach to identifying grid-constrained parts of the state is available in the CEC's Second AB 2127 Report.[69]

Equity Considerations for Priority Populations

Identification and Outreach to Disadvantaged Communities in the State

Figure 14 shows the locations of AFCs and priority populations through Round 7 for California. CEC staff accessed the Climate and Economic Justice Screening Tool to identify the 3,801 census tracts meeting the Justice40 criteria.[70] A total of 2,940 census tracts are identified with Climate and Economic Justice Screening Tool that meet the priority population definition.

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[65] California Public Utilities Commission. "Distribution Infrastructure and Planning to Support EV Charging."
[66] California Public Utilities Commission. "Freight Infrastructure Planning."
[67] California Energy Commission. "Electric Load-Serving Entities in California."
[68] California Energy Commission. "EVSE Deployment and Grid Evaluation Tool."
[69] Davis, Adam, Tiffany Hoang, Thanh Lopez, Jeffrey Lu, Taylor Nguyen, Bob Nolty, Larry Rillera, Dustin Schell, and Micah Wofford. (2023). *Assembly Bill 2127 Second Electric Vehicle Charging Infrastructure Assessment: Assessing Charging Needs to Support Zero-Emission Vehicles in 2030 and 2035*, California Energy Commission. Publication Number: CEC600-2024-003-CMR.
[70] U.S. Council on Environmental Quality. (2022, November 22). "Climate and Economic Justice Screening Tool 1.0."

Caltrans and the CEC will continue to use the NEVI program to bring benefits to both Justice40 communities and California-designated disadvantaged and low-income communities. These groups are referred to collectively in this document as priority populations and are defined as follows:

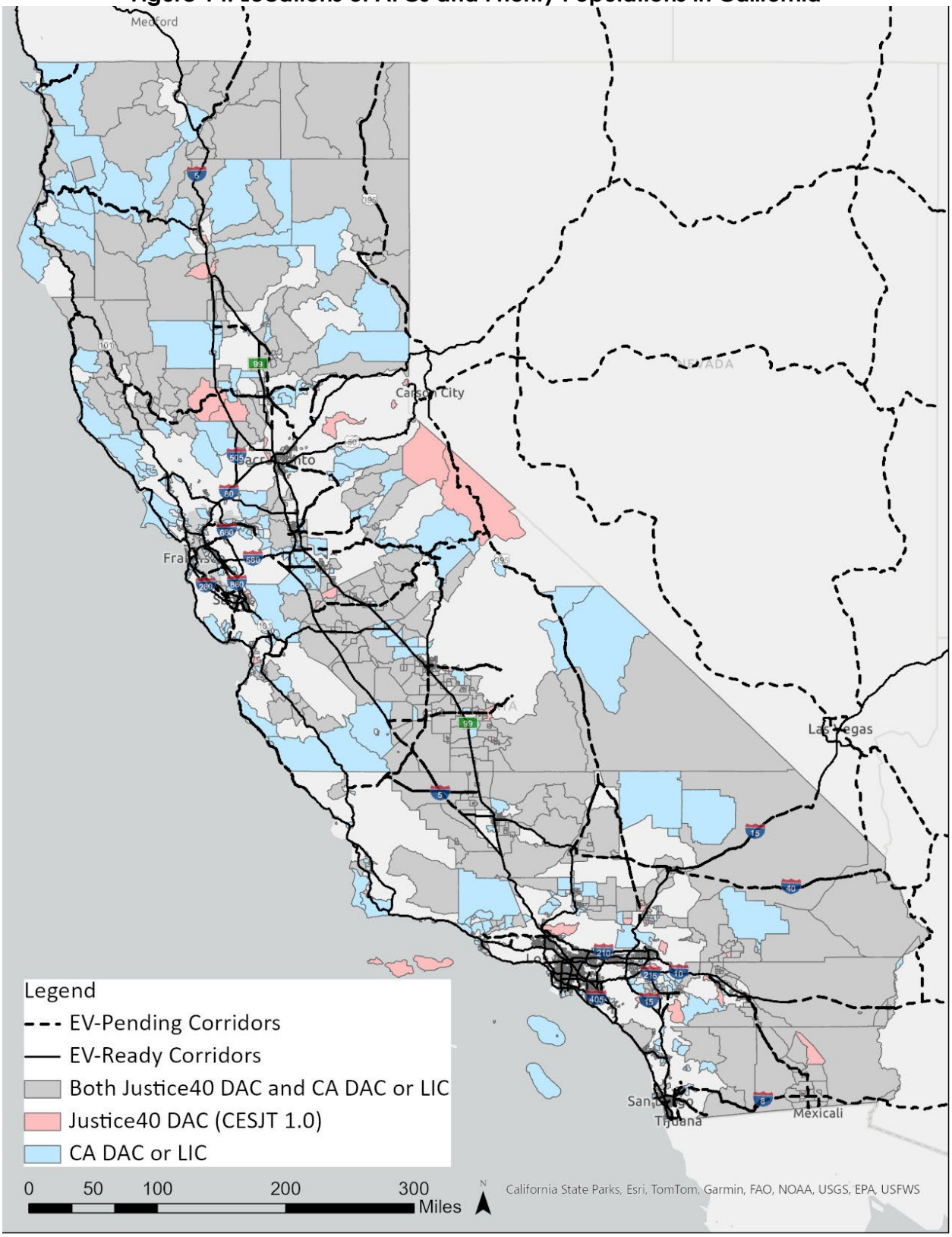
- Justice40 communities are designated by U.S. Department of Transportation and U.S. Department of Energy as communities that experience health, transportation access, and energy burdens, with economies highly dependent on fossil energy sources and exposure to environmental and climate hazards. These communities include federally recognized tribal nations and U.S. territories.

- California disadvantaged communities are designated by the California Environmental Protection Agency as communities that experience the highest pollution burden and are especially vulnerable to the effects of pollution.

- California low-income communities are designated by CARB as census tracts with median household incomes at or below 80 percent of the statewide median income or with median household incomes at or below the threshold designated as low income by the California Department of Housing and Community Development.

Please see the Public Engagement section for information on outreach to priority populations.

Figure 14: Locations of AFCs and Priority Populations in California



Source: CEC staff using the Climate and Economic Justice Screening Tool 1.0

Process to Identify, Quantify, and Measure Benefits to Priority Populations

With the announcement of proposed awards for Solicitation 1 on June 3, 2024,[71] California's NEVI Agencies can begin to estimate equity benefits for Corridors 6A, 6B, 7, 16, 19, and 20. These corridors represent some of the most heavily traveled freeway and highway segments in the state, including Interstates 5, 8,10, 15, 40, 405, and 710. Data for the benefit metrics were taken from the application information from the 11 winning awards, which total 70 stations and 504 charging ports. These are the best available data to date; the final benefit metrics can be derived from station operators when stations become operational.

Results are reported in Table 9 in five-year increments unless otherwise noted. This period corresponds with NEVI's five-year maintenance requirement. Some benefit metrics cannot be reported until the projects become operational, such as Benefit Category 6 for the amount of funding for clean energy jobs and job training.

Table 9: Equity Benefits from Solicitation 1 Measured in Five-Year Increments

Benefit No.	Benefit Category	Metric	5-Year Total
1	Improve transportation access through charger locations	No. of NEVI-compliant ports in priority populations	426 of 504 ports
2	Decrease transportation energy cost burden	Average dollars saved in fuel and maintenance costs	$294,192,865
2	Decrease transportation energy cost burden	Gallons of displaced fossil fuels	62,534,163
3	Reduce transportation emissions	Total number tons of CO_2 reduced over five years	576,449
3	Reduce transportation emissions	Grams of CO_2 reduced per dollar of NEVI investment	210,946
3	Reduce transportation emissions	5-year reductions in $PM_{2.5}$	2,497,804
3	Reduce transportation emissions	5-year reductions in reactive organic gases	235,587,150
3	Reduce transportation emissions	5-year reductions in NO_X	43,435,248
4	Increase parity in clean transportation access	Percentage of NEVI-compliant chargers in priority populations	83%
5	Increase access to low-cost capital	Dollars spent on capital and percentage of revenues spent on businesses in priority populations	$31,309,704
6	Increase clean energy jobs and training	Total training dollars spent in priority populations	$18,785,822

[71] California Energy Commission. (2024, June 3). "GFO-23-601 Notice of Proposed Awards."

6	Increase clean energy jobs and training	Total no. of apprentices and dollars spent on trainings and apprenticeships	Data not yet available
6	Increase clean energy jobs and training	Total no. of jobs created and percentage of hires from priority populations	157 (83%)
7	Charging for ride shares	No. of companies engaged	No data available on TNC use of NEVI chargers.
8	Increase equitable access to the grid	Dollars spent to electrify sites. No. of sites needing increased electrical service	Data not yet available
9	Increased wealth in priority populations	No. of contracts and dollars awarded to small and underrepresented companies	TBD

Source 1: GFO-23-601 awardee provided information and CEC staff analysis.

Assumptions, methods, and / or results for each Benefit Category are as follows:

Benefit 1 – Number of NEVI-compliant chargers in priority populations: 426 of the total 504 charging ports are in priority populations (California disadvantaged or low-income communities or federal Justice 40 communities)

Benefit 2 – Average dollars saved in fuel and maintenance: Cost savings were calculated from five-year forecasts for the number of battery-electric vehicle miles enabled, multiplied by a cost savings per mile of $0.164.[72] Savings include maintenance and refueling costs when comparing the national average of 22.9 miles per gallon for a gasoline-fueled light-duty vehicle, and 122 miles per gallon equivalent for a battery-electric light-duty vehicle. Assumptions for fuel cost include $5.12/gallon of gasoline (based on May 2024 cost)[73] and $0.40/kWh, which is equivalent to $0.22/mile about $0.11/mile, respectively.

Benefit 2 – Gallons of displaced fossil fuels: Assuming 12.5 percent utilization based on peak charging speed, this enables more than 359 million miles per year by battery-electric vehicles. Over a five-year period, nearly 1.8 billion electric miles are estimated to bedriven, displacing 62.5 million gallons of gasoline.

Benefit 3 – Reduce transportation emissions: Staff used the Argonne-developed Alternative Fuel Life-Cycle Environmental and Economic Transportation Tool to calculate the emissions reductions from the 1.8 billion electric miles enabled by the

[72] Burnham, Andrew, David Gohlke, Luke Rush, Thomas Stephens, Yan Zhou, Mark A. Delucchi, Alicia Birky, Chad Hunter, Zhenhong Lin, Shiqi Ou, Fei Xie, Camron Proctor, Steven Wiryadinata, Nawei Liu, and Madhur Boloor. (2021). *Comprehensive Total Cost of Ownership Quantification for Vehicles with Different Size Classes and Powertrains*, Argonne National Laboratory.
[73] U.S Energy Information Administration. "California All Grades All Formulations Retail Gasoline Prices."

504 NEVI charging ports. Emissions reductions are calculated for CO_2, NO_x, particulate matter 2.5 micrometers and smaller in diameter ($PM_{2.5}$), and reactive organic gases.

Benefit 4 – Increase parity in clean transportation access: A total of 426 of the 504 new charging ports (83 percent) are in priority populations.

Benefit 5 – Increase access to low-cost capital: Of the $37.7 million awarded in Solicitation 1, $31.3 million, or 83 percent, is allocated to those chargers within priority populations.

Benefit 6 – Increase clean energy jobs and training: Job creation is estimated at five jobs per million dollars of public investment in infrastructure. This estimate is consistent with international studies[74] on public investment and job creation, and internal reviews using IMpact Analysis for PLANning tools to estimate benefits of the CTP. Using the $31.3 million of investment in priority populations, 157 jobs are estimated for these communities. The dollar amount spent on job training will be assessed at the end of construction when actual data become available.

Benefit 6 – Estimated training dollars spent in priority populations: The percentage of chargers in a priority population (83 percent), multiplied by the CTP average On-the-Job Training percentage of 60 percent, multiplied by the amount of NEVI dollars allocated ($31,309,704). The "On-the-Job Training" percentage is an estimate from the National Renewable Energy Laboratory CTP Benefits Report that found 60 percent of jobs supported required less than six months of on-the-job training.[75]

Benefit 7 – Charging for ride shares: Portion of charging events by transportation network companies. Data are not yet available on the use of NEVI-funded stations by these companies.

Benefit 8 – Increase equitable access to the grid: Investments required for grid access or service upgrades will not be known until project completion.

Benefit 9 – Increased wealth in priority populations: The number of contracts and dollars awarded to small and underrepresented companies. Data will begin to become available after projects are authorized and agreements are executed.

Labor and Workforce Considerations

The CEC and Caltrans continue to advance labor and workforce discussions to deliver on NEVI objectives of supporting EV charger installation and maintenance with a trained, experienced, and diverse workforce. During the past year, the state has

[74] Moszoro, Marian. (2021). *The Direct Employment Impact of Public Investment*, International Monetary Fund.
[75] California Energy Commission Contract with the U.S. Department of Energy's National Renewable Energy Laboratory for technical support services on benefits assessment of CTP investments. CEC Contract 600-22-008.

continued to engage with industry, labor, and training partners to grow the workforce for installing, maintaining, and repairing chargers and ensure the workforce has the appropriate training and certifications in compliance with 23 CFR Section 680.106(j). In addition, California's NEVI Agencies have been working closely with other state agencies to ensure workforce training efforts support electric vehicle infrastructure and occupations for people from communities most in need.

In January 2024, the CEC formalized collaboration efforts with the California Workforce Development Board (CWDB) to increase economic opportunities for all Californians by approving a *Partnership Agreement & Business Use Case Proposal*. This agreement will support the development of workforce training to meet California's clean energy goals and promote greater access to quality employment in the clean energy sector. Tasks in the agreement include providing cross-agency education, technical assistance, and support; exchanging relevant industry and workforce information; and analyzing existing CEC and CWDB workforce development efforts and program outcomes.

In March 2024, the CEC approved a $3.0 million interagency agreement with the California Employment Training Panel to train and certify 3,000 electricians through the EVITP. The Employment Training Panel, a department under the California Labor and Workforce Development Agency, provides training through a pay-for-performance method that advances high-road economic principles while providing skills training for industry work such as EV charger installation and maintenance. The Employment Training Panel will use CEC funding to offer training for C-10 licensed electricians to become EVITP-certified. Outreach, engagement, and 50 percent of project funds will be targeted at rural communities and priority populations. This is imperative because state law requires the use of EVITP certified electricians for EV chargers installed using certain state funds. A lack of EVITP certified electricians throughout the state could slow down equitable access to EV chargers. Therefore, the CEC and Employment Training Panel are collaborating to mitigate the potential of that occurring, while ensuring good paying jobs.

The CEC is also implementing 14 awards from its Inclusive, Diverse, Equitable, Accessible, and Local ZEV Workforce Pilot Project solicitation, including:

- **South Valley ZEV Talent Pipeline Project with Kern Community College District.** This project will develop EV charging curricula and training to address skill gaps in EV charging installation, service, and replacement, including preparation of electricians for EVITP certification.

- **ZEV Sustainable Equitable Employment Destination with the Community Resource Project, Inc.** The project will provide classroom-based hands-on training for ZEV manufacturing and maintenance; EV charger installation, operation, and service; and ZEV driving and operation.

More recently, the CEC released the first draft of the *ZEV Workforce Training and Development Strategy, A Roadmap for Clean Transportation Program Funding.*[76] The strategy outlines the CEC's role in ZEV workforce development, recognizes existing opportunities, and serves as a roadmap to building the career pathways necessary to support ZEVs and ZEV infrastructure. The draft identifies eight workforce program objectives and funding priorities to support workforce training and development for ZEVs and electric vehicle charging infrastructure.

On June 25, 2024, the CEC hosted a virtual ZEV Workforce Training and Development Workshop[77] to provide information on program updates and new activities related to workforce training and development for ZEVs and related infrastructure. The workshop was attended by 163 participants from municipal, state, and federal government agencies, as well as tribal representatives, utility providers, labor unions, educational providers, vehicle and charging manufacturers, charging network operators and service providers, advocacy groups and consulting agencies.

California's NEVI Agencies will include compliance, verification, and validation of all licensed trades, crafts, and contractors performing work under NEVI. In solicitation responses, these labor and workforce requirements will require specific documentation (for example, contractor's license number, EVITP certification number, and so forth). The agreements for NEVI projects will also specify ongoing documentation and data collection to validate compliance with all licensing requirements; ensure all businesses, electricians, or tradespeople are in good standing; and identify any incidences related to labor violations.

Physical Security and Cybersecurity

Caltrans and the CEC recognize the critical importance of cybersecurity in protecting EV charging infrastructure and the data it collects. Robust cybersecurity measures are essential to ensuring the reliability, security, and privacy of EV drivers. With the assistance from the Joint Office and national associations such as the American Association of State Highway and Transportation Officials and the National Association of State Energy Officials, the CEC and Caltrans are developing new cybersecurity policies. The measures below are best practices that have been shared with the CEC and Caltrans and are measures that may be included into future NEVI solicitations.

Physical Security and Cybersecurity Practices

California's NEVI Agencies are exploring additional requirements for NEVI grant recipients that address both physical and cybersecurity risks. These new measures may include:

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[76] McKinny, Jana. (2024). *Zero-Emission Vehicle Workforce Training and Development Strategy: A Roadmap for Clean Transportation Program Funding*, California Energy Commission. Publication Number: CEC-600-2024-049-SD.

[77] California Energy Commission. (2024, June 25). "Clean Transportation Program – ZEV Workforce Training and Development Workshop."

- **Physical security controls:** Limiting access to electrical equipment and data centers to authorized personnel only. These controls may involve security cameras, fencing, and access control systems.

- **Data security controls:** Implementing strong data security practices to protect sensitive information, such as encryption of data at rest and in transit and following the principle of least privilege for user access.

- **Cybersecurity awareness and training:** Providing regular cybersecurity awareness training to all personnel involved in the operation and maintenance of charging stations. This training should educate staff on cyber threats and ways to identify and report suspicious activity.

Grant recipients would also be required to oversee the implementation and maintenance of their cybersecurity program. The CEC would work with the grant recipient to ensure that cybersecurity risks are identified, addressed, and reported.

Cybersecurity Plan

Grant recipients may be required to develop a written cybersecurity plan that outlines the organization's approach to cybersecurity. This plan should address:

- **Risk assessment:** A comprehensive risk assessment to identify potential cybersecurity threats and vulnerabilities associated with the charging station infrastructure and data collection systems.

- **Security controls:** A description of the security controls that will be implemented to address identified risks.[78]

- **Incident response plan:** A plan for responding to cybersecurity incidents, including procedures for detection, alerting the CEC and Cybersecurity and Infrastructure Security Agency, containment, eradication, and recovery.

Grant recipients would be encouraged to collaborate with electric utilities and other stakeholders to ensure the security of the electric grid. This collaboration may involve sharing information about potential threats and vulnerabilities and developing coordinated incident response plans.

Continuous Improvement and Cybersecurity Scorecard

Grant recipients would be required to continuously monitor and improve their cybersecurity programs. This monitoring may involve conducting periodic risk assessments, updating security controls as needed, and providing ongoing cybersecurity awareness training to staff.

[78] For example: Joint Office of Energy and Transportation. "Cybersecurity Procurement Language Clauses for RFPs and EVSP Contracts."

A cybersecurity scorecard could be one measure to assess the effectiveness of grant recipients' cybersecurity programs. The scorecard would evaluate grant recipients on a range of criteria, including:

- The existence and adequacy of a cybersecurity program.
- The implementation of physical and data security controls.
- The completion of a risk assessment.
- The development of a cybersecurity plan.
- The provision of cybersecurity awareness training.

The results of the cybersecurity scorecard would be used to identify areas for improvement and provide targeted assistance to NEVI grant recipients. Implementing these cybersecurity measures could help ensure the secure and reliable operation of EV charging infrastructure in California.

Program Evaluation

California has tools for evaluating program effectiveness, monitoring charger deployment, and assessing charger needs for existing state programs. These tools include the CEC's biennial Zero-Emission Vehicle Infrastructure Plan[79] and the CEC's biennial assessment of benefits and contributions from the CTP.[80]

To determine statewide charger needs, the CEC publishes biennial assessments, which include discussions of current charging infrastructure.[81] To monitor charger deployment, the CEC publishes a dashboard with bi-annual updates on the number of EV chargers in California. All documents and tools related to program monitoring and effectiveness include public workshops, drafts, or opportunities for public comment, and all assist the state in monitoring and reporting progress on the EV charging network. Activities under the state's NEVI Plan are included in California's statewide assessments of infrastructure needs and reporting efforts.

As NEVI projects are awarded funding, begin construction, and open for service, the annual Deployment Plan will continue to be used for evaluation and reporting of NEVI-funded projects. Updates in the Deployment Plan will include the status of charging station deployment, equity and accessibility metrics, and operations and reliability for projects supported with NEVI funding.

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[79] Lopez, Thanh and Madison Jarvis. (2022). *Zero-Emission Vehicle Infrastructure Plan*, California Energy Commission. Publication Number: CEC-600-2022-054.
[80] Bailey, Stephanie, Jennifer Campagna, Mathew Cooper, Quentin Gee, Heidi Javanbakht, and Ben Wender. (2023). *2023 Integrated Energy Policy Report*, California Energy Commission. Publication Number: CEC-100-2023-001-CMF. (See Appendix D.)
[81] Davis, Adam, Tiffany Hoang, Thanh Lopez, Jeffrey Lu, Taylor Nguyen, Bob Nolty, Larry Rillera, Dustin Schell, and Micah Wofford. (2023). *Assembly Bill 2127 Second Electric Vehicle Charging Infrastructure Assessment: Assessing Charging Needs to Support Zero-Emission Vehicles in 2030 and 2035*, California Energy Commission. Publication Number: CEC600-2024-003-CMR.

California has developed a program evaluation template to track NEVI projects across the following categories:

- **Charging station deployment:** Metrics include the power level and number of chargers installed.
- **Equity and accessibility:** Metrics include Justice40 status, operating hours, and restroom and food access.
- **Operations and reliability:** Metrics include uptime percentages, duration of charging sessions, and payment methods used.
- **Program funding and budget management:** Metrics include the average public dollar per charging port and match funding.
- **Project delivery:** Metrics include progress towards completing project phases and activities.
- **Environmental:** Metrics include anticipated GHG reductions per public dollar invested and expected air emissions reductions.
- **Economic:** Metrics include data on potential job creation and workforce development.
- **Stakeholder engagement:** Metrics include opportunities capturing user experience and engagement with NEVI stakeholders.

Metrics will be informed through a combination of data pulled from EV-ChART and other data reported directly from awardees to the CEC's commission agreement managers. CEC agreement managers will also track progress on NEVI projects through monthly calls, quarterly reports, invoice reviews, and critical project reviews with awardees.

Furthermore, lessons learned from funding solicitations, application review, and contract agreement processes will be incorporated into future solicitations and agreements in an effort to continually improve California's NEVI Plan.