California Energy Commission

Clean Transportation Program

FINAL PROJECT REPORT

Reservation-Based Shared Level 2 EV Charging in Multi-Family Properties

An Analysis of Shared Public and Private Multi-Family Charging in Three California Regions

Prepared for: California Energy Commission

Prepared by: EVmatch, Inc.

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PREFACE

Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007) created the Clean Transportation Program. The statute authorizes the California Energy Commission (CEC) to develop and deploy alternative and renewable fuels and advanced transportation technologies to help attain the state's climate change policies. Assembly Bill 8 (Perea, Chapter 401, Statutes of 2013) reauthorizes the Clean Transportation Program through January 1, 2024, and specifies that the CEC allocate up to $20 million per year (or up to 20 percent of each fiscal year's funds) in funding for hydrogen station development until at least 100 stations are operational.

The Clean Transportation Program has an annual budget of about $100 million and provides financial support for projects that:

- Reduce California's use and dependence on petroleum transportation fuels and increase the use of alternative and renewable fuels and advanced vehicle technologies.
- Produce sustainable alternative and renewable low-carbon fuels in California.
- Expand alternative fueling infrastructure and fueling stations.
- Improve the efficiency, performance and market viability of alternative light-, medium-, and heavy-duty vehicle technologies.
- Expand the alternative fueling infrastructure available to existing fleets, public transit, and transportation corridors.
- Establish workforce-training programs and conduct public outreach on the benefits of alternative transportation fuels and vehicle technologies.

To be eligible for funding under the Clean Transportation Program, a project must be consistent with the CEC's annual Clean Transportation Program Investment Plan Update. The CEC issued GFO-20-605 on August 7, 2020. The competitive solicitation offered to fund projects that demonstrate transformative technology solutions and work to accelerate the successful commercial deployment of electric vehicle (EV) charging for both light-duty (LD) and medium- and heavy-duty (MD/HD) applications. In response to GFO-20-605, EVmatch, Inc. submitted application number 12, which was proposed for funding in the CEC's Notice of Proposed Awards on April 16, 2021 and the agreement was executed as ARV-21-002 on July 22, 2021.

ABSTRACT

Renters living in multi-family dwellings (MFDs) in California have limited access to convenient electric vehicle (EV) charging access. This limited access is inhibiting the adoption of EVs and stalling widespread vehicle electrification, which is one of the most promising greenhouse gas (GHG) emissions reduction strategies for the state. This BESTFIT project aimed to demonstrate EVmatch's unique reservation software system and customizable public-private access control platform as a scalable and cost-effective solution for increasing EV charging station access to renters and apartment dwellers throughout California. Between June 2022 to January 2026, EVmatch installed a total of 124 single-port chargers at 21 MFD properties across 4 California counties. Eighty-eight chargers (71%) offer shared public and private access, while 36 chargers provide shared access exclusively to building residents. Between December 1, 2024, to November 30, 2025, the system successfully supported over 6,200 charging sessions and delivered more than 142,000 kWh in electric fuel, with steadily increasing utilization and energy consumption over time. The shared public access model was successful as a flexible, revenue-generating, and utilization-encouraging approach, particularly during periods of lower resident demand. Collectively, the results validate the EVmatch charging management solution as a practical and adaptable technology for expanding EV charging access at multi-family housing, a market segment where maximizing utilization, managing shared access, and minimizing upfront costs are critical objectives.

Keywords: electric vehicle charging, EV charging, Level 2 EV charging, multi-family EV charging, shared EV charging, public EV charging, mixed-use EV charging, apartment charging

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Project Overview

Renters living in multi-family dwellings (MFDs) in California have limited access to convenient electric vehicle (EV) charging access. This limited access is inhibiting the adoption of EVs among this underserved demographic and stalling widespread vehicle electrification, which is one of the most promising greenhouse gas (GHG) emissions reduction strategies for the state.

The goal of this project was to increase access to EV charging at MFDs through widespread deployment of EVmatch's novel hardware/software technology, which increases electric vehicle supply equipment (EVSE) utilization, reduces costs, and enhances charging reliability. Specifically, the project aimed to demonstrate EVmatch's unique reservation software system and customizable public-private access control platform as a scalable and cost-effective solution for increasing EV charging station access to renters and apartment dwellers throughout California.

EVmatch implemented an outreach and marketing campaign in three regions across the state to recruit qualified MFD properties to install shared Level 2 EV charging stations, with 70% or more of those chargers available to both residents and the public. Collectively, 89 sites were screened for project eligibility, of which 40 sites received installation bids and 21 sites proceeded with the installation of charging stations.

Results

This BESTFIT project demonstrated that the combined EVmatch software platform and multi-vendor Level 2 hardware solution (Enel X and Autel EVSE) is a technically viable, cost-effective, scalable, and needed charging solution for multi-family properties. EVmatch installed a total of 124 single-port chargers at 21 MFD properties across 4 California counties. Eighty-eight chargers (71%) offer shared public and private access, while 36 chargers provide shared access exclusively to building residents. Although a subset of chargers had been operational since August 2022, a reduced 12-month snapshot of energy session data was compiled and analyzed for this final report. Between December 1, 2024, to November 30, 2025, the system successfully supported over 6,200 charging sessions and delivered more than 142,000 kWh in electric fuel, with steadily increasing utilization and energy consumption over time. The EVmatch platform reliably managed chargers from multiple manufacturers through a single software interface, enabled flexible public and private access controls, and maintained consistent data collection despite major backend transitions, including the migration of Enel X JuiceBox chargers to a new server.

In addition to providing direct charging benefits to EV drivers, this project resulted in positive economic and environmental results. Between December 1, 2024, to November 30, 2025, this project generated nearly $46,000 in net revenue for property owners and reduced 110 metric tons of CO_2e, the equivalent of removing 26 gasoline-powered vehicles from the road for a year. The project led to over 4.1 FTE jobs created between July 2021 to January 2026, approximately 0.91 FTE jobs per year over the project duration, and also galvanized the additional investment of nearly $390,000 from MFD property owners beyond the CEC's direct funding at their properties.

Conclusions

The shared public access model was successful as a flexible, revenue-generating, and utilization-encouraging approach, particularly during periods of lower resident demand such as the summer. However, data from the 12-month analysis does not support a conclusion that shared public access inherently increases per-charger utilization because there was no clear utilization advantage for shared-access sites. Average sessions per charger were nearly identical between shared-access sites and private-only sites. Instead, public charger sharing functions best as a complementary strategy that expands access without diminishing resident use. Additionally, shared-access sites demonstrated the ability to absorb public demand during periods of reduced resident usage, helping to stabilize overall utilization.

While challenges related to slow permitting, networking connectivity, and underfunded operations and maintenance affected deployment timelines and uptime in some cases, these issues were operational rather than structural, and did not undermine overall system performance or project deliverables. Collectively, the results validate the EVmatch charging management solution as a practical and adaptable technology for expanding EV charging access at multi-family housing, a market segment where maximizing utilization, managing shared access, and minimizing upfront costs are critical objectives.

These outcomes show that the EVmatch-enabled shared-access charging approach advances asset utilization and cost-effectiveness by maximizing use of existing infrastructure rather than relying solely on additional hardware deployment.

CHAPTER 1:
Project Approach and Methodology:

Technology Description:

EVmatch's BESTFIT grant project set out to demonstrate and deploy a novel hardware and software solution designed to maximize electric vehicle supply equipment (EVSE) utilization and accessibility within multi-family dwelling (MFD) environments. This approach utilized charging hardware from multiple manufacturers managed by a single software platform, ensuring both flexibility in deployment and robust data collection. The project aimed to demonstrate at scale EVmatch's unique reservation system and customizable public-private access control settings as a practical and cost-effective solution for increasing EV charging station access to renters and apartment dwellers throughout California.

Hardware Infrastructure:

The project deployed Level 2 EVSE from two manufacturers and ensured a minimum deployment of 120 single-port chargers across the seven target counties. Both charger brands utilized networked, single-port Level 2 EVSE capable of providing 32-amp power delivery, ideal for residential MFD charging needs.

- **Enel X JuiceBox Pro:** This unit served as foundational charging hardware technology, offering integrated network connectivity and dynamic smart charging capabilities. Its widespread use facilitated seamless integration with the EVmatch software platform, allowing for reliable session data transfer and remote management.
- **Autel MaxiCharger AC Elite:** The inclusion of Autel chargers mid-way through the project diversified the hardware portfolio, providing an opportunity to evaluate multi-vendor interoperability. Like the JuiceBox Pro, the MaxiCharger AC Elite was configured to communicate real-time charging status, energy delivered (kWh), and usage data back to the EVmatch platform.
- **Networking Equipment:** A strong network connection is a critical component of the EVmatch platform solution, enabling remote control, reservation enforcement, monitoring, and data transfer. To enable network connectivity, sites leveraged a mix of: 1) local WiFi networks; 2) cellular hotspot routers with SIM cards; or 3) in-unit SIM cards for direct cellular connectivity. If local WiFi was not available or practical, EVmatch installed Ericsson CradlePoint cellular WiFi hotspot routers for JuiceBox EVSE, or KORE SIM cards for Autel EVSE.

Software Platform and Access Control:

The core innovation demonstrated in this BESTFIT project was the utilization of the EVmatch management platform. This software system demonstrated unique features for MFD charging management and tested the value of making EVSE accessible to both public and private users, on a reservation basis. The highly customizable software dynamically managed access and pricing settings based on site host rules.

- **Shared Public Access (70% Minimum):** For the majority of deployed chargers, the EVmatch software allowed for public access, enabling non-residents to reserve and pay for charging sessions through the EVmatch mobile app when the unit was not reserved for MFD tenants. This was crucial for demonstrating increased asset utilization.
- **Resident-Only Access (30% Maximum):** A controlled subset of chargers was restricted to MFD residents only. The software customized user groups to enforce this access limitation, allowing the project to conduct a comparative study on utilization rates between shared public access and resident-exclusive charging.
- **Session Management:** The platform managed all charging events, recording key metrics including session statistics based on user type (public or private), energy delivered, and duration.

System Architecture:

The overall system architecture consisted of three interconnected layers: the physical EVSE, the EVmatch cloud platform, and the data layer.

1. **Site Layer:** Enel X and Autel EVSE communicated over Wi-Fi or cellular networks using Open Charge Point Protocol (OCPP).
2. **Aggregation Layer:** The EVmatch platform served as the central integration layer, receiving real-time charging data via OCPP. Drivers authenticated charging sessions with the EVmatch mobile app, initiating charging sessions and initiating OCPP commands. The underlying software architecture facilitated unified data collection and centralized customer service support.
3. **Data & Reporting Layer:** The compiled operational data was housed within the EVmatch database, enabling comprehensive analysis and reporting. The system was designed to capture robust data for analysis of user behavior (e.g., user type and frequency), economic (e.g., pricing), and environmental impact (e.g., kWh delivered) statistics.

This multi-layered approach was essential to demonstrate that a single software solution could effectively manage customized MFD charging access and payments across multiple EVSE brands and user types throughout California.

Regional Site Selection Strategy:

Geographic Scope:

The project initially scoped three geographic regions for charger deployments- Santa Clara, Los Angeles, and San Diego counties. These regions were selected due to a high proportion of MFD housing and relatively high levels of EV adoption at the time of project proposal in 2020. EV adoption in California was dominated by detached housing and homeowners. For example, according to the 2018 American Community Survey, 35% lived in apartments. Yet according to the California Clean Vehicle Rebate Project (CCVRP) EV Consumer Survey (2017 data), only 9% of EV rebate recipients in Santa Clara County lived in apartments. Similar trends were true in Los Angeles County and San Diego County. In 2018 in Los Angeles County, 49% lived in apartments but only 13% of CCVRP EV rebate recipients lived in apartments. In 2018 in San Diego County, 45% lived in apartments but only 8% of CCVRP EV rebate recipients lived in apartments.

After EVmatch conducted extensive outreach and recruitment in these three regions for about 24 months without hitting full recruitment targets, the project Commission Agreement Manager (CAM) approved a revision to the project Scope of Work (SOW) to expand the geographic scope of the project. On May 3, 2024, the project scope was expanded to include the following additional counties: San Francisco, San Mateo, Alameda, and Orange. These counties were selected due to similar demographic characteristics of high levels of renters and apartment dwellers coupled with relatively high EV adoption rates. Additionally, EVmatch's pre-approved and subcontracted electrical installers provided service coverage in these four additional counties, enabling a practical and cost-effective solution for the recruitment challenge. The project timeline was also extended by two years in the May 2024 amendment, extending the completion date from December 31, 2023 to December 31, 2025.

Outreach Methodology:

EVmatch's marketing, communications, and sales teams planned and implemented an extensive site recruitment outreach campaign to educate MFD property owners and managers about the funding opportunity, qualify properties for site eligibility, and coordinate on-site visits with contractors to develop project Scopes of Work (SOWs) and pricing. EVmatch launched a project-specific landing page on its website and conducted extensive email, phone, in-person, partner, and content-based marketing. EVmatch developed numerous blog posts, tabled at community events, hosted webinars, and developed email campaigns together with partner organizations.

The following community, governmental, and non-profit organizations supported the project's community outreach and site host awareness campaigns: Silicon Valley Clean Energy, Stopwaste.org, Peninsula Clean Energy, Association for Energy Affordability, and Southern California Public Power Association. Silicon Valley Clean Energy contributed in-kind match share in the form of outreach and marketing staff time, which contributed to the project's high level of charger deployments (54%) in Santa Clara County.

Site Criteria:

Sites that expressed interest in the project through an initial in-take form were then screened for a variety of criteria to ensure eligibility. The first screen included the following criteria: geographic location in an eligible county, MFD or mixed-used building type, willingness to provide public charging access a minimum of 40 hours per week, existing demand for EV charging from residents and/or the public, willingness to dedicate parking stalls to EV charging only, willingness to convert parking stalls as required to comply with EVSE ADA requirements, and willingness to maintain and operate charging stations for a minimum of 5 years. Project sites were required to install a minimum of 3 charging stations per property, with preference provided to sites installing 6 or more charging stations.

After prospective sites passed the initial eligibility screening, one of EVmatch's subcontracted electrical contractors conducted an in-person site visit to assess parking layout, electrical infrastructure, wiring and trenching distances, and ADA compliance feasibility. Some sites were immediately disqualified due to parking constraints or electrical capacity limitations, which

made the site infeasible considering the grant budget and/or timeline. For sites that were deemed good candidates, EVmatch received a project Scope of Work and budget proposal from the assigned Electric Vehicle Infrastructure Training Program (EVITP)-certified subcontractor. EVmatch then provided a full project proposal to the property owner, outlining project requirements and expectations, and any required site host copay that would not be covered by the allotted grant budget (an average of $6,068 in CEC-reimbursable expenses per charger).

Data Collection Methodology:

The BESTFIT project required collection of a minimum of 12 months of operational data from the deployed charging infrastructure to evaluate economic and environmental impacts, and compare actual performance against project expectations.

Data Collection Test Plan and Duration:

A detailed data collection test plan was executed over the course of the agreement including monthly reports and this final report. The plan ensured continuity and consistency in logging the required data points across all hardware types and geographical locations.

Primary Objectives of the Test Plan:

1. **Data Collection for Utilization Comparison:** In order to test the shared access model's effectiveness, EVmatch collected segregated data to compare utilization rates between public-shared chargers and resident-only chargers, as well as public versus private sessions on publicly-available chargers.
2. **Data Collection for Performance Analysis:** In order to evaluate project performance against grant deliverables, EVmatch continuously monitored, logged, and synthesized the core charging metrics required by the project Scope of Work, including session count and duration, energy delivered, and utilization by user type.

Data Sources and Integration:

Operational data was sourced from multiple platforms, all aggregated by the EVmatch software, which served as the centralized reporting environment.

- **EVSE-Level Data:** Energy delivered (kWh), peak power (kW), and session start and stop times were logged at the EVSE hardware and, in the case of JuiceBox until April 2025, at the hardware vendor software's level called JuiceNet. This raw data was delivered to and processed by the EVmatch platform.
- **Epic Charging Data:** Starting in April 2025, after Enel X Way North America shut down operations, JuiceBox chargers were migrated to a new backend control software operated by Epic Charging, which leverages OCPP messages and controls to collect data and send it to the EVmatch application programming interface (API). This integration ensured that data from all hardware deployments adhered to a unified data schema for consistent comparative analysis.
- **EVmatch Platform Data:** Data from EVSE hardware, the JuiceNet platform, and Epic Charging were delivered to the EVmatch cloud platform to process session and payment receipts to hosts and drivers and store charging data in a unified manner. User

classification data (private vs public), vehicle data, and the holistic view of charging activity on the EVmatch network was stored in the EVmatch database.

Charging Session Data Included in Final Report Analysis:

The analysis portion of this final report relies on a data set of charging sessions collected from December 1, 2024, to November 30, 2025. Eighty-five single-port chargers had been installed as of December 1, 2024, and 102 single-port chargers were installed as of November 30, 2025. Although a full 12 months of charging session data from all 124 installed EVSE were not available at the time of this report writing, the required data set will be collected and provided to the CEC in order to meet all contractual obligations.

- **Geographic Scope:** Alameda, Santa Clara, Los Angeles, and San Diego counties
- **Reporting Range:** Charging sessions between December 1, 2024 - November 30, 2025
- **Data Aggregation:** Raw charging session data was aggregated and analyzed monthly to track progress towards project objectives and to meet reporting requirements. The first aggregated energy report was delivered to the CAM in December 2024, covering the period of August 1, 2022 to November 30, 2024. Energy reports were then provided to the CAM each month thereafter. A 12-month aggregated charging session data set was compiled for this final report to capture a year-long snapshot from all available charging assets at time of final reporting.

CHAPTER 2:
Project Implementation and Execution:

EVmatch implemented an outreach and marketing campaign in three regions across the state to recruit qualified MFD properties to install shared Level 2 EV charging stations. Collectively, 89 sites were screened for project eligibility, of which 40 sites (45% of screened) received site visits and installation bids from an EVITP-certified electrical contractor and 21 sites (24% of screened and 53% of visited) proceeded with installation of charging stations.

San Francisco Bay Area Deployment:

EVmatch staff and partners executed an outreach and marketing campaign from September 2021 to August 2024 to recruit San Francisco Bay Area (Bay Area) multi-family properties to install and operate Level 2 chargers with funding support from the BESTFIT grant. The campaign initially targeted Santa Clara County exclusively, and was later expanded to include San Mateo, San Francisco, and Alameda counties. Ultimately, 67 single-port chargers were installed in Santa Clara County and 13 in Alameda County.

Silicon Valley Clean Energy, Stopwaste.org, Peninsula Clean Energy, and Association for Energy Affordability provided assistance with site host recruitment, primarily through email communication and email blasts to lists of multi-family property owners and managers.

A total of 48 sites were screened, of which 27 sites received site visits and installation bids from an electrical contractor. Fourteen sites, representing 80 single-port chargers, proceeded to installation and final commissioning in the Bay Area region. With an initial target of 10-18 MFDs served in the region, EVmatch installed chargers at 14 sites, which hit right on target.

EVCHARGE4U and Green Water and Power (GWP) installed and commissioned the chargers in the Bay Area. EVCHARGE4U installed 60 charging stations and GWP installed 20 charging stations in two Bay Area counties- Santa Clara and Alameda. Eight of the 14 sites (57%) required a client copay, due to high costs for make-ready construction.

In all three deployment regions, partner and referral-based outreach proved most successful in terms of leads converting into completed projects, indicating that pre-existing and trusting relationships with property owners are critical for project approvals, especially as many projects required a substantial capital investment copay from the property owner. EVmatch also leveraged a number of existing customer relationships to expand EV charging to additional properties within its current clients' housing portfolios.

Slow permitting timelines and expensive make-ready construction work presented challenges at many projects, often requiring a complex and creative sales process to get projects approved, designed, permitted, and constructed. Oakland's permitting process was the fastest, averaging 13 days from application to approval, and Sunnyvale's was the slowest, requiring almost 11 months from application to approval.

Los Angeles County Deployment:

EVmatch staff executed an outreach and marketing campaign from September 2021 to October 2025 to recruit Los Angeles County multi-family properties to install and operate chargers with grant funding. A total of 20 sites were screened, of which 7 sites received site visits and installation bids from an electrical contractor. Ultimately, 35 single-port chargers were installed in Los Angeles County at 4 unique MFD properties. The initial target for the region was 4-12 MFD sites.

The region proved more difficult from a property recruitment perspective, largely due to limited parking at MFDs and hesitancy to provide public access to charging stations. Additionally, EVmatch had fewer existing partner relationships to leverage for outreach efforts. Southern California Public Power Association provided some email marketing assistance to spread the word about the funding opportunity with property owners. Once the grant Scope of Work was amended to allow resident-only access at a portion of sites (30% maximum), recruitment efforts in Los Angeles were more successful. Of the 35 single-port chargers installed in the region, 28 are available to the public and 7 restrict access to residents.

ABM was initially the sole electrical contractor in the region. After completing one project with ABM, EVmatch opted to bring in another contractor for the project, Baker Electric, who provided more competitive pricing. ABM installed 4 charging stations in Glendale, while Baker Electric installed 31 chargers in Los Angeles and Lynwood.

Parking access is a highly coveted amenity in Los Angeles, and noticeably more so than in Santa Clara County. The grant requirement for property owners to offer some public charging access, even with reservations, limited hours, and at higher prices, was a difficult proposition in the region, who generally wanted to preserve all parking resources for residents only.

San Diego County Deployment:

EVmatch staff executed an outreach and marketing campaign from September 2021 to August 2024 to recruit San Diego County multi-family properties to install chargers with grant funding. A total of 21 sites were screened, of which 6 sites received site visits and installation bids from an electrical contractor. Ultimately, 9 single-port chargers were installed in San Diego County at 3 unique MFD properties. The initial target for the region was 4-12 MFD sites. The CAM approved this reduction of sites in San Diego County after a large project fell through due to numerous factors. This project is further described below.

Baker Electric completed all installation work in San Diego County. Baker was initially slated as the contractor for only San Diego County. Their scope and budget was expanded to also include Los Angeles County mid-way through the project after demonstrating highly competitive pricing, efficient project management, and high-quality craftsmanship.

A challenging project with an HOA in San Diego fell through after EVmatch spent over 18 months on the project. The client initially agreed to a 12 charger project and a significant project copay, proceeded with permitting (which took 7 months), and then learned from SDG&E that the project could not be completed without the HOA updating wiring in the switchgear to bring it up to code. This new information increased the client copay to a level they were unwilling to tolerate and they terminated the project. The set-back left EVmatch with limited time to complete a replacement project in San Diego, thus the CAM approved that the chargers be installed in different geographic area to meet the project timeline.

Overall, the public access requirement of the grant proved challenging in all regions, though most prominently in Los Angeles County. Long permitting timelines posed another obstacle, which varied widely depending on the authority having jurisdiction (AHJ), ranging from only 13 days to over 11 months.

Customer and Technical Support and Driver Recruitment:

EVmatch's customer onboarding process ensures that charging station owners and EV drivers understand how to access and use EVmatch charging products, including the web and mobile apps, charging station hardware, and customer and technical services. Each BESTFIT site host was paired with an EVmatch customer success agent at the beginning of the project. After charging station installation, the customer success agent conducted an onboarding meeting with the site host to configure customized software settings, including pricing, availability schedules, and public/private access rules.

As the liaison to MFD residents, EVmatch provided the site host with an informational flyer explaining how to use the chargers and apps. The site host then distributed the flyer to residents, often through email and by posting a physical copy onsite. Additionally, with the consent of site hosts, EVmatch conducted a driver education campaign via email or physical mail, ensuring residents at the site became aware of the new charging stations.

Once chargers are commissioned and the software activated, EVmatch provides ongoing customer and technical support to both site hosts and EV drivers. Customers reach EVmatch via phone, email, and in-app chat to provide support on issues such as offline chargers, app errors, payment discrepancies, and general questions.

The property site hosts in this project are responsible for directly maintaining and repairing the charging assets, since funding for operations and maintenance services was not covered. EVmatch staff support site hosts with software troubleshooting and remotely resolvable technical issues, such as troubleshooting offline chargers. If an issue cannot be resolved remotely, the EVmatch support team helps the host secure in-field technicians for more complex issues, such as electrical problems or equipment damage. The site host is responsible for covering the cost of any on-site visits from technicians or electricians.

A major challenge faced across the EV charging industry - and these sites are no exception - is maintaining charger network connectivity. Chargers go offline for a variety of reasons. For example, sometimes the WiFi router is located too far from the stations, the router power is disrupted, or there is an issue with the cellular network serving the SIM card in the charger. EVmatch notifies site hosts daily of any offline chargers and/or routers, and has created a troubleshooting flow chart to help hosts resolve offline issues as fast as possible. Power cycling chargers typically resolves offline issues, but even this process presents challenges. It requires an on-site person to receive the request and complete the physical process of flipping the electrical breakers off and on again. Circuit breaker boxes are often locked, and not all on-site staff have access to keys. Chargers can remain offline for days or even weeks if power-cycling is not completed promptly.

EVmatch is constantly working to improve uptime and reliability for the chargers in its network. Mid-way through this project, EVmatch integrated with the SIM card-compatible Autel MaxiCharger AC Elite, in part to improve connectivity and charger reliability.

CHAPTER 3:
Data Analysis and Results:

Overall Results by County:

Table 1: Overall Project Results by County

County	Number of Sites	Number of Chargers (single-port)	Public & Private Access Chargers	Private Access Only Chargers	Total Charging Sessions	Total Energy Delivered (kWh)
San Diego	3	9	7	2	295	6,661
Santa Clara	11	67	53	14	1,962	45,557
Los Angeles	4	35	28	7	2,144	44,923
Alameda	3	13	0	13	1,806	45,021
Total	**21**	**124**	**88**	**36**	**6,207**	**142,163**

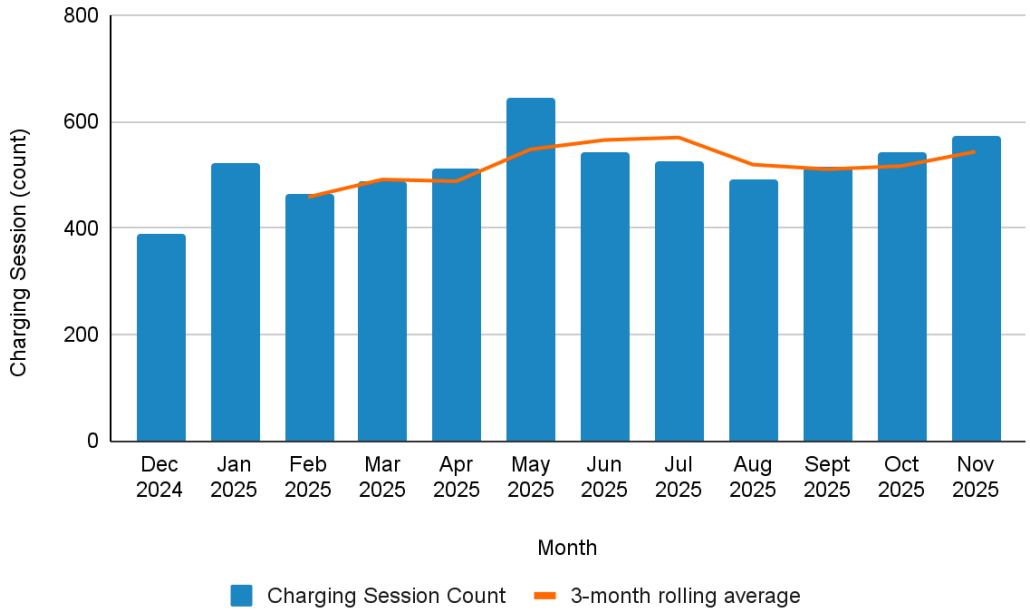
EVmatch installed a total of 124 single-port chargers at 21 MFD properties across 4 California counties. Eighty-eight chargers (71%) offer shared public and private access, while 36 chargers provide shared access exclusively to building residents. Between December 1, 2024, to November 30, 2025, 6,207 charging sessions were completed and 142,163 kWh delivered from the installed charging stations (ranging 85 to 102 charging stations over the data collection period).

As shown in Table 1, the majority (54%) of chargers were deployed in Santa Clara County, but based on charging activity, utilization per charger is much higher at the sites in Los Angeles (average 1,284 kWh/charger) and Alameda (average 3,463 kWh/charger) counties. The average charger in Santa Clara County dispensed 680 kWh. This may indicate that charger saturation in Santa Clara County is higher than in the others, but it may also be explained by higher EV adoption at the specific properties in Los Angeles and Alameda counties.

The sites in Alameda County provide no public access but account for almost 30% of all charging sessions with only 10% of the chargers. This contradicts our original hypothesis that public access increases utilization. Perhaps private users conduct longer charging sessions (high dwell time) and use the chargers more often (frequent utilization) because they do not worry about competing with the public, resulting in higher overall utilization, but confounding variables may be present. The sample size of sites and chargers is small, and high utilization in Alameda County may simply be explained by high demand at those particular multi-family properties rather than indicating anything definitive about public/private access or geographic location. Notably, one high-rise condominium property in Alameda County with 4 chargers shows extremely high utilization, likely due to the high ratio of residential units to chargers (121 housing units per charger).

Monthly Charging Data Analysis:

Figure 1: Charging Session Count Over Time with 3-Month Rolling Average



In Figure 1, monthly charging sessions show a steady upward trend over the year, growing roughly 47% from December 2024 to November 2025, peaking in May and dipping to a summer low in August before rebounding at the end of the year. The summer dip might be explained by summer travel, especially given that 98% of the chargers operational in November were already deployed by August.

December 2024 shows the lowest session count (390) when 85 single-port chargers were operational. May 2025 shows the highest session count (644) when 92 single-port chargers were operational. In November 2025, 102 single-port chargers were operational and the session count (572) was 11% higher than the monthly average of 517.

The number of installed chargers grew 8% between December 2024 and May 2025, while charging sessions grew 65% over the same time period. This most likely indicates an increase in awareness of the chargers over time and/or an increase in EV adoption, as expected. This is especially likely given that the 7 additional single-port chargers installed during this time period (at an affordable housing community) accounted for an 8% inventory increase but had nearly zero utilization.

Figure 2: Energy Consumption (kWh) Over Time with 3-Month Rolling Average

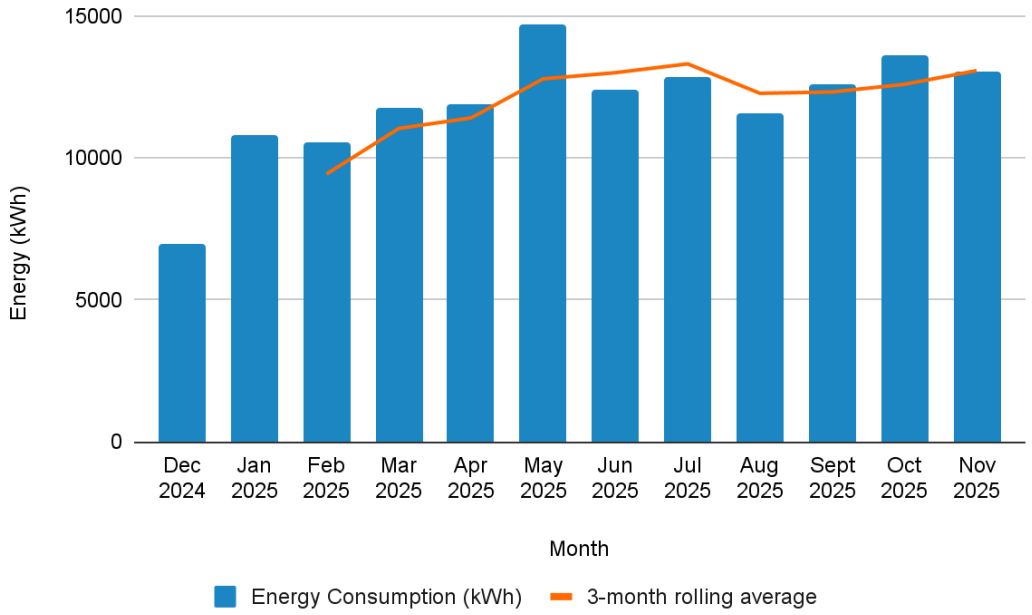


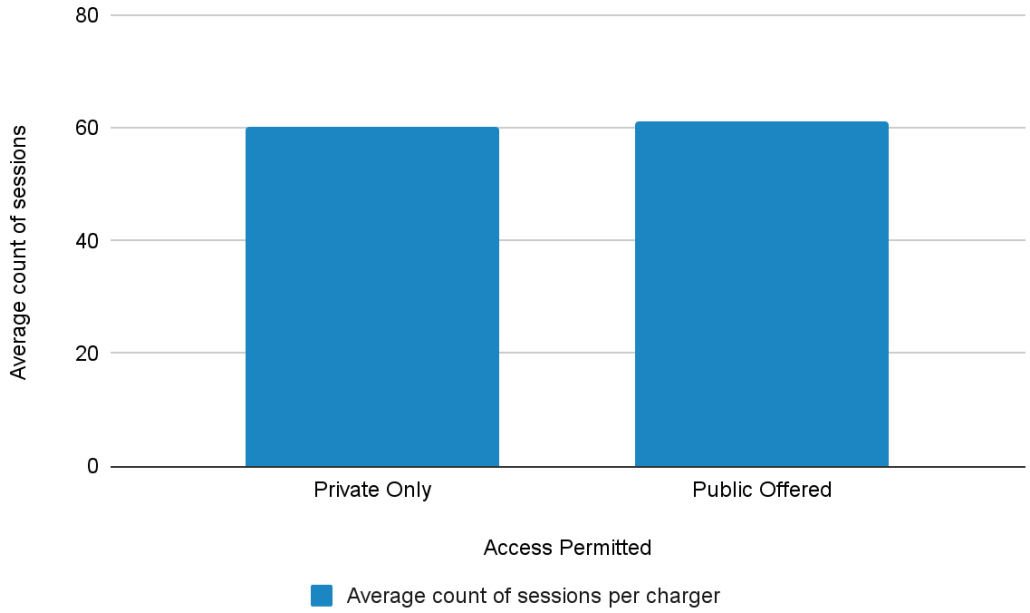
Figure 2 shows how monthly charging station energy delivery over the course of one year grew by 87% from 6,900 kWh in December 2024 to 13,000 kWh in November 2025. As more multi-family residents purchase EVs, attributed in part to the new charging stations at their buildings, energy delivery for electric fuel will continue to rise.

The average energy dispensed per session grew by 28% from 17.8 kWh in December 2024 to 22.8 kWh in November 2025. This increase might reflect one or more of the following:

- maturing user behavior on how to optimize charging timing and duration;
- an increase in battery electric vehicles (BEVs) and a decrease in plug-in hybrid electric vehicles (PHEVs) as a ratio of all of plug-in vehicles;
- an increase in vehicles with larger battery capacities, both BEVs and PHEVs.

Charging Session Analysis by Site Type:

Figure 3: Average Session Count per Charger at Publicly Shared vs. Private Sites



At the outset of the project, EVmatch hypothesized that sites offering both public and resident (private) access would see more charging sessions than sites restricting access to residents only. Surprisingly, Figure 3 shows that the average count of sessions per charger at these two site types is nearly equal, at 60 sessions/charger, indicating no conclusive evidence that one site type is likely to have more sessions on a per-charger basis.

There are notable limitations to our data in this Figure 3. The sample size is small, as only 6 of 21 sites restricted to private access only. Rather than comparing private vs. public sessions, the data in Figure 3 represents the difference between utilization at sites that offer public access of any kind - a non-monolithic categorization where chargers at one site may be available to the public on a limited basis (the weekend only, for example) whereas chargers at another site may be available 24/7 to the public - and sites that never offer public access. As we discussed from Table 1, the non-public sites in Alameda County account for just 10% of chargers across the project portfolio, but 30% of all charging sessions, indicating that factors other than private/public access rules influence utilization trends.

Moreover, we classify 65% of all charging sessions as "private," since these sessions were completed by drivers who had entered at least one access code into their app account. An access code indicates that a site host has set usage restrictions on the charger(s) that either include full restriction for resident (private) use only or semi-public use. Given that only 35% of charging sessions were conducted by the general public, it is reasonable to conclude that limiting charger access to private users would not greatly reduce the number of sessions per charger.

Figure 4: Average Session Count per Charger at Large vs. Small Deployments

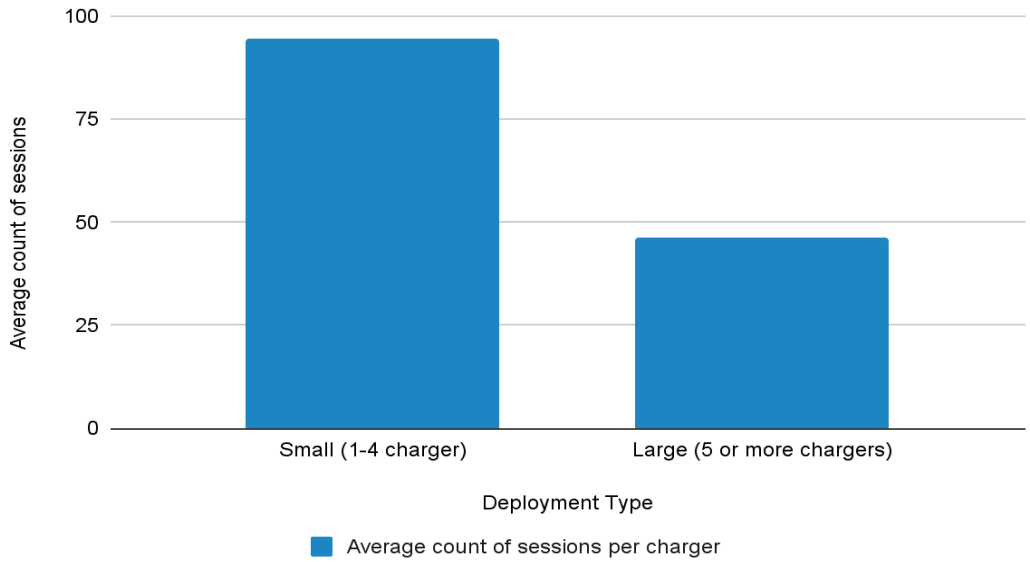


Figure 4 shows that properties with 4 or fewer single-port chargers (small deployments) demonstrated roughly twice the per-charger utilization on average compared to sites with 5 or more single-port chargers (large deployments) during their first year - an average of 94 sessions per charger compared to 46 sessions. Historically, we have observed that 2-5 residents can efficiently share one charger, so we expect the delta between average charger use at small and large deployments to decrease over time as more residents purchase EVs. The number of sessions one charger can support reaches a ceiling due to time constraints in a day, which limits the continual growth of sessions/charger at small deployments.

Vehicle and User Analytics:

Figure 5: Proportion of Public Sessions with 3-Month Rolling Average

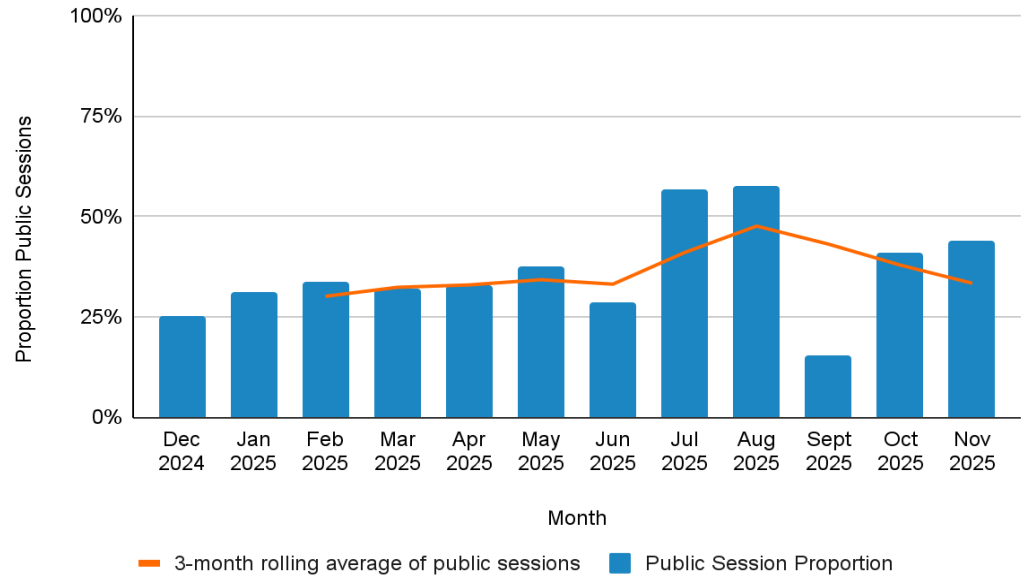


Figure 6: Charging Session Count - Public vs. Private Use

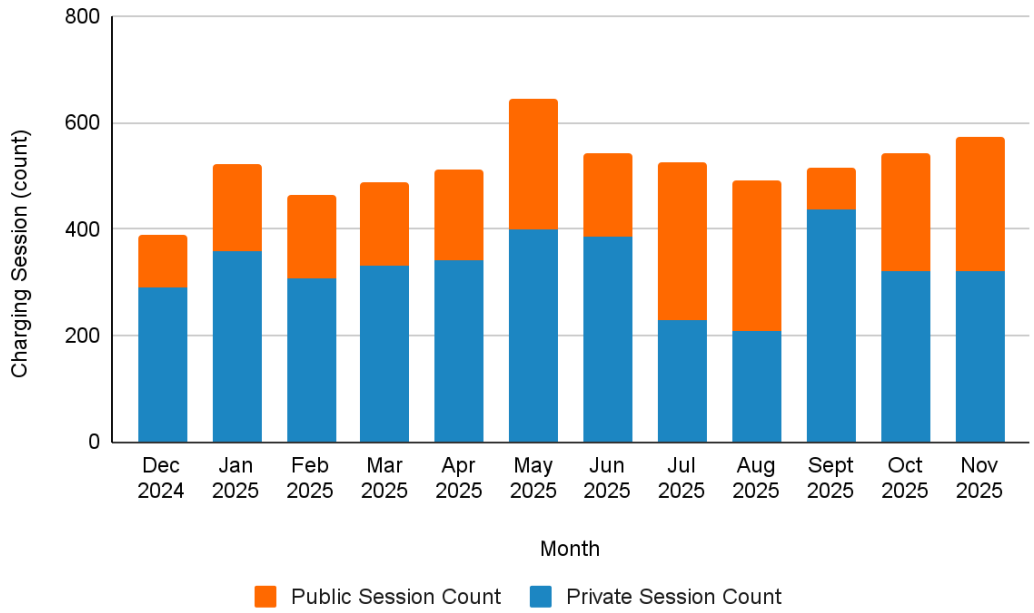


Figure 5 shows that the proportion of monthly public sessions nearly doubled over the course of the year from 25% in December 2024 to 44% in November 2025. We observed significant public usage in July and August at 57% each, a nearly 20% and 30% increase from May and June, respectively.
Figure 6 shows that total sessions in July and August decreased slightly, but are still within the general upward trend of the year. For July and August, Figure 6 also illustrates an observed dip in private sessions - from roughly 380 to 230 sessions - and a spike in public sessions - from roughly 200 to 300 sessions. This dip in private sessions and growth in public sessions is possibly explained by summer travel where residents left town and non-local drivers were seeking novel charging.

The proportion of public sessions retracted significantly in September, possibly reflective of the end of summer travel. The public proportion rebounded in October and November to 41% and 44%, respectively, and since we cannot attribute the high public charging proportion to high travel times as we did in the summer, the increase may indicate greater public awareness of the chargers.

Overall, Figure 6 shows a 73% increase in the public charging proportion from December 2024 to November 2025. Average monthly charging session counts for private use (328 sessions) and public use (189 sessions) show about a 60% to 40% split. The proportion of monthly private sessions before June was between 63-75% and then flipped to 43-59% (with the exception of September) after June, illustrating the trend toward higher public utilization in the second half of the year. As mentioned above, the growth in public charging could be attributed to higher public awareness of the chargers.

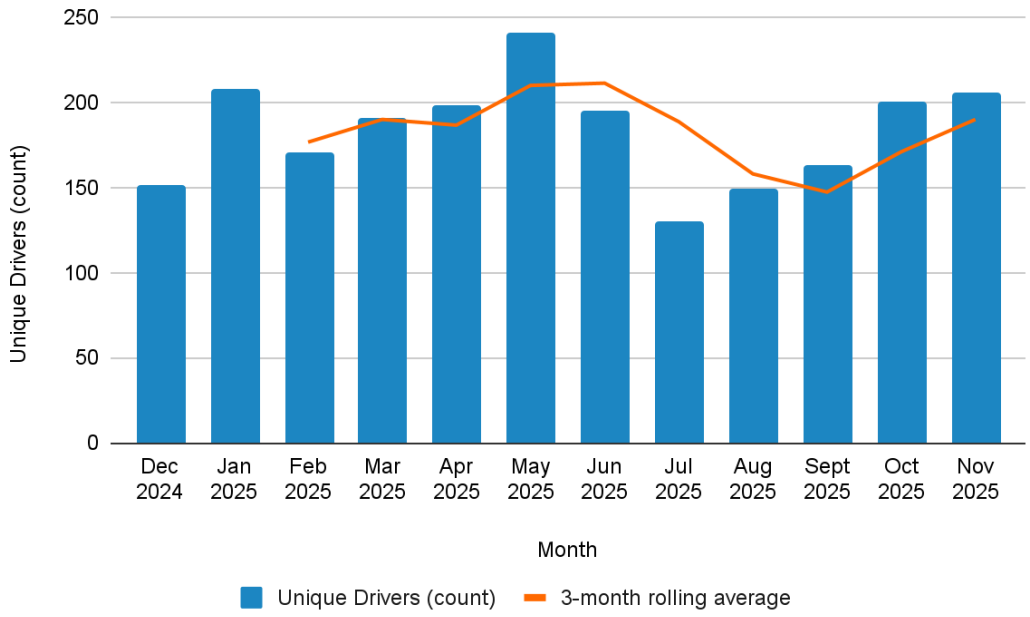
Table 2: Proportion of Charging Sessions by Vehicle Make

Vehicle Make	Charging Sessions	Proportion of Sessions
Tesla	1,429	41%
Other*	643	18%
Toyota	362	10%
Chevrolet	309	9%
Kia	296	8%
Polestar	248	7%
Ford	244	7%
Total	**3,531**	**100%**

* "Other" combines sessions from vehicle makes accounting for less than 4.5% of total sessions

The variety of EVs making use of the chargers increased over time, but Tesla remained the dominant vehicle maker, accounting for over 40% of all sessions. Note that only 57% of charging sessions were attributed to a specific vehicle. EVmatch did not collect vehicle data for the other 43% of charging sessions because it is optional for customers to enter their vehicle information through their app account.

Figure 7: Count of Unique Drivers with 3-Month Rolling Average



Drivers are identified based on the EVmatch mobile app user ID. A unique driver is defined as a distinct user ID that initiated at least one charging session. A repeat driver is a unique driver whose user ID is associated with more than one charging session. All repeat drivers are therefore unique drivers, but not all unique drivers are repeat drivers.

We expected the number of unique drivers to increase over time as we added additional chargers at new sites and as more drivers discovered the chargers through our app map and other public listing sites, such as PlugShare and Google Maps. Instead, we observed a fluctuation in the number of unique drivers throughout the year, peaking in May with nearly 250 unique drivers and dipping to a low of 130 unique drivers in July. Therefore, we were unable to conclude any particular trends regarding the number of unique drivers using the chargers, except for a modest 36% growth in unique drivers between December 2024 and November 2025. That growth trend may be due to overall increased EV adoption, yet the month-to-month patterns are difficult to explain.

Economic Analysis:

Table 3: Pricing and Revenue Summary

Host Price Range (per kWh)	Number of Sites	Number of Chargers (single-port)	Total sessions (12-month period)	Gross Revenue (12-month period)	Net Revenue (12-month period)
Price Bracket A: $0.20-$0.35	8	65	5,292	$41,166	$36,260
Price Bracket B: $0.36-$0.40	3	13	136	$1,674	$1,521
Price Bracket C: $0.41 and above	8	24	779	$8,682	$7,706

Table 3 categorizes sites and chargers into 3 brackets based on the price of electricity charged to EV drivers. The table summarizes total charging sessions, net revenue, and gross revenue to site hosts over the 12-month collection period between December 1, 2024, to November 30, 2025. Net revenue is gross revenue minus EVmatch service fees. However, the net revenue calculation does not deduct the cost of electricity charged to the site host since this data is not available to EVmatch.

The data in Table 3 provides strong support for the hypothesis that lower per-kWh pricing is associated with higher charger utilization. Sites in Price Bracket A ($0.20–$0.35/kWh) represent 42% of sites and 64% of chargers, yet account for 85% of all charging sessions over the 12-month period. On a normalized basis, these sites averaged approximately 81 sessions per charger, compared to 11 sessions per charger in Price Bracket B and 32 sessions per charger in Price Bracket C. This indicates that utilization at the lowest-priced sites was as much as 7 times higher per charger than at higher-priced sites. However, one limitation in this finding is that the high-density site in Alameda County is included in Price Bracket A, which may be skewing the sample and overrepresenting the impact of price on utilization.

From a revenue perspective, although higher-priced chargers generate more revenue per session, total net and gross revenue were maximized in the lowest price bracket due to substantially higher usage volume. Price Bracket A generated $558 per charger in net revenue, exceeding the combined per charger net revenue of the mid- and high-price brackets ($249 per charger) despite lower unit pricing.

These results suggest that price sensitivity is a critical determinant of charging behavior at multi-family properties, where users are likely cost-conscious and need charging on a recurring basis. This observed price elasticity also implies the availability of substitutes, such as Level 2 charging at work or DCFC public charging. Importantly, the findings indicate that lower pricing can simultaneously advance utilization, revenue performance, and equity goals, reinforcing affordable pricing as an effective strategy for maximizing the value of shared charging infrastructure in multi-family residential settings.

CHAPTER 4:
Project Benefits and Impacts:

Environmental Benefits:

Table 4: Environmental Benefits

Date Range of Data	Number of Months Covered	CO_2e Reduced (metric tons)	Equivalent Number of Gas Cars Removed For 1 Year	Equivalent Gallons of Gasoline Saved
12/1/2024 - 11/30/2025	12	110	26	12,378
8/1/2022 - 11/30/2025	39	137	32	15,416

Greenhouse gas equivalencies data source: United States Environmental Protection Agency

Table 4 shows that over the 12-month reporting period from December 2024 through November 2025, the BESTFIT project delivered meaningful and measurable greenhouse gas (GHG) reductions, avoiding an estimated 110 metric tons of CO_2e. This reduction is equivalent to removing approximately 26 gasoline-powered vehicles from the road for a year or displacing roughly 12,378 gallons of gasoline, demonstrating the near-term environmental value of increased EV charging access at multi-family properties.

When viewed across the full 39-month project period (August 2022 through November 2025), cumulative emissions reductions reached 137 metric tons of CO_2e, equivalent to 32 gasoline-powered vehicles removed from the road for one year or 15,416 gallons of gasoline avoided. The fact that approximately 80% of total lifetime GHG reductions occurred during the most recent 12-month period underscores the accelerating environmental impact of the deployed charging infrastructure as EV adoption and utilization increased, and more residents relied on EV charging at home.

This concentration of emissions benefits in the final year aligns with observed growth in charging sessions and energy delivered, indicating that the environmental impact of multi-family charging infrastructure scales with user adoption and behavioral maturation over time. As utilization continues to increase and additional residents adopt EVs, the project's annual emissions reductions are expected to grow, reinforcing the long-term climate benefits of sustained investment in shared EV charging solutions at multi-family properties.

Economic Development:

The BESTIFIT project contributed to economic development through: 1) direct and indirect job creation; 2) investments in EV charging capital and operating expenses on behalf of MFD property owners; and 3) supplemental project sponsorship that supported additional labor and material expenses exceeding the grant's reimbursable budget.

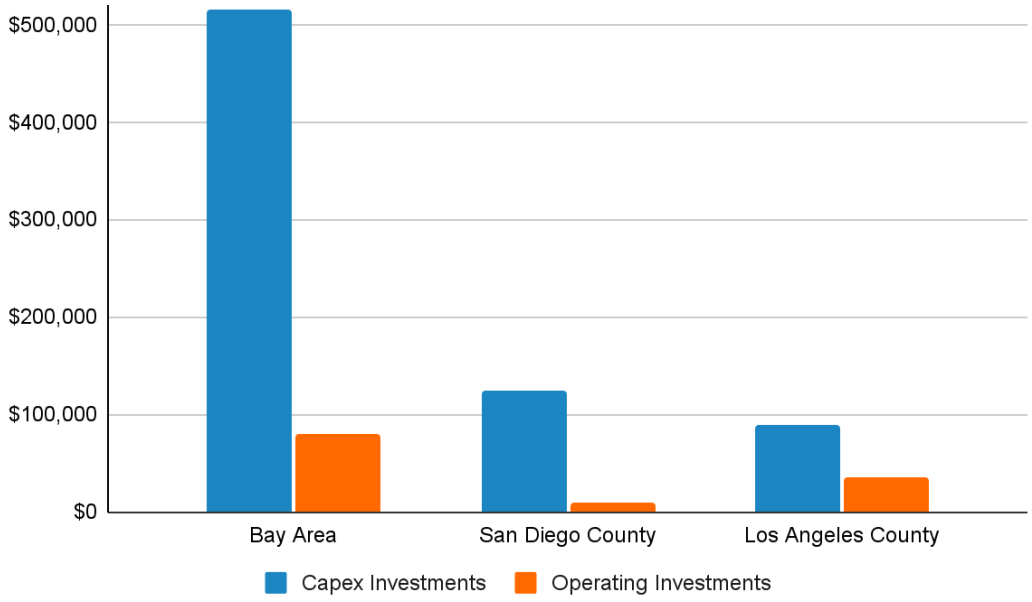
This BESTIFIT project led to over 4.10 FTE jobs created between July 2021 to January 2026, approximately 0.91 FTE jobs per year over the project duration. A variety of job types and classifications were supported, including employees and contractors, and direct and indirect jobs. Direct jobs created include full-time employees, part-time employees, and independent contractors at EVmatch. Indirect jobs include employees and contractors of outreach partners, namely Silicon Valley Clean Energy, and EVmatch's electrical subcontractors. Time committed to this project by EVmatch's direct employees and consultants are combined in the direct jobs created statistics in Table 5. The indirect jobs created statistics in Table 5 include time committed to this project by employees and contractors of EVmatch's partners and subcontractors, but do not include indirect jobs related to hardware manufacturing, permitting, shipping, and project financing, thus actual job creation and benefits to the labor market exceed those reported in Table 5.

Table 5: Full-Time Equivalent (FTE) Jobs Created by BESTFIT Project

Year	**Direct Jobs Created (FTE)**	**Indirect Jobs Created (FTE)**
2021	0.29	0
2022	1.11	0.03
2023	1.28	0.29
2024	0.41	0.38
2025	0.18	0.13
Total	**3.27**	**0.83**

The BESTFIT project invested $728,250 in direct capex investments benefiting MFD property owners and $124,000 in in-kind software operating investments (Figure 8). These capex investments immediately support property owners in modernizing their properties, meeting sustainability objectives, and retaining tenants. The project's software investments will benefit MFD owners over the course of 5 years from the time of charger commissioning. By reducing operational costs for owners over the first few years, the project supports owners in setting reasonable charging prices (Table 3) and accelerating EV adoption, especially among price-sensitive residents.

Figure 8: Project EV Charging Investments Benefitting MFD Owners



In addition to job creation and direct project funding, this BESTFIT project also contributed to economic development by bolstering investments into EV charging projects from MFD property owners across the state. MFD property owners contributed a total of $389,337 as direct project cost share to cover extra labor and material costs. Many projects exceeded the CEC's reimbursement budget due to high costs for make-ready construction, ADA compliance, and design and permitting services. Nine out of the 21 sites (43%) required a copay from the property owner. EVmatch's sales and operations team worked diligently to negotiate with property owners and to develop detailed proposals and contracts outlining shared cost structures, payment timelines, and responsibilities.

The relatively high number of projects requiring a client copay indicates that the reimbursable budget amount of $6,068 on average per port was too low, given the site types and use case requirements. At time of report writing, the CEC's Communities in Charge program, which is focused on expanding charging infrastructure at multi-family properties, now offers $8,500 in funding per Level 2 MFD charging port. This funding level is much more in line with the realistic investment required to efficiently develop Level 2 MFD charging projects and set properties up for long-term operational success (with 5-6 years of prepaid services). As noted previously, all O&M responsibilities for BESTFIT projects lie with the property owner, thus the total copay summary in Table 6 (below) provides an underestimate of the full investments committed to keeping the chargers maintained and operational for the required 5-year service period. EVmatch estimates that an additional $100-$200k in property owner investments will be leveraged over the remaining service period to cover O&M expenses.

Table 6: Property Owner Project Copay by Region

Region/Properties with Copay	Property Owner Project Copay Total
San Francisco Bay Area- 8 properties	$378,103
Los Angeles- 0 properties	$0
San Diego- 1 property	$11,234
Total- 9 properties	**$389,337**

Advancements in Science and Technology:

The BESTFIT project demonstrates that shared public access at multi-family properties, enabled by the EVmatch software platform, represents a transformative operational model rather than a purely hardware-driven innovation. The transformation lies in the platform's ability to dynamically allocate charging access between residents and the public through reservations, user authentication, and configurable access rules, effectively turning traditionally underutilized residential chargers into shared community assets without compromising resident availability.

The system proved capable of managing heterogeneous hardware from multiple manufacturers through a single interface and maintaining consistent data reporting and access controls across geographically distributed sites.

While the shared-access model did not universally increase per-charger utilization relative to private-only sites, it successfully demonstrated that public charging can be layered onto MFD infrastructure in a controlled, host-approved manner, overcoming a long-standing barrier to charger deployment at multi-family properties.

The project achieved measurable advancements in asset utilization by increasing both the frequency and depth of charger use over time. Charging sessions grew by 47% over the 12-month period, while total energy delivered increased by 87%, indicating that chargers were not only used more often, but also more intensively. This divergence reflects increased average kWh per session over the 12-month period (+28%), suggesting maturing charging behavior, higher dwell times, and greater reliance on shared Level 2 charging as a primary fueling source.

Utilization increased throughout the year despite relatively modest growth in charger inventory, particularly in the early months of the project, underscoring the effectiveness of the software-enabled access model in driving demand. Additionally, shared-access sites demonstrated the ability to absorb public demand during periods of reduced resident usage, such as summer travel months, helping to stabilize overall utilization.

Collectively, these outcomes show that the EVmatch-enabled shared-access approach advances asset utilization by maximizing use of existing infrastructure rather than relying solely on additional hardware deployment.

CHAPTER 5:
Assessment of Goals:

Performance Metrics Comparison:

Table 7: Target Versus Actual Number of Sites and Chargers

County	Target Number of MFDs	Actual Number of MFDs	Target Number of Chargers Installed (single-port)	Actual Number of Chargers Installed (single-port)
Alameda, San Francisco, San Mateo, Santa Clara	10 to 18	14	40 to 108	80
Los Angeles, Orange	4 to 12	4	25 to 70	35
San Diego	2 to 10	3	4 to 50	7
Total	**Minimum 16**	**16**	**Minimum 120**	**124**

The project initially aimed to install a minimum of 120 single-port chargers at a minimum of 16 unique sites over three counties - Santa Clara, Los Angeles, and San Diego counties. The project Scope of Work (SOW) was amended on May 3, 2024, to expand the geographic range of the project due to challenges with site recruitment, as described in the Project Implementation and Execution section. At the same time, the project SOW also expanded site host eligibility requirements, allowing deployment of some EV chargers (a maximum of 30%) for MFD resident use only.

EVmatch deployed a total of 124 single-port chargers across 16 sites, exceeding the total charger goal by 2.5%. Expanding the geographic range of the project to include Alameda County increased outreach and recruitment success. EVmatch received several project applications in Orange, San Francisco, and San Mateo counties, but did not proceed with any sites in those counties, primarily due to high project costs.

Amending the site host requirements to allow private-only access at 30% of sites accelerated project approvals and deployments. Thirty-six of the 124 installed chargers allow resident-only access (29%). These site hosts would not have proceeded with a project with a public-access requirement due to limited parking, security and insurance liability concerns, and a desire to reserve property amenities for residents rather than the public.

Public Assessment of Success:

The project set out to determine if the public/private shared EVmatch charging system increases EV adoption among renters and is in demand by local EV drivers. EVmatch's deployment of chargers at 21 multi-family properties likely contributed to increased EV

adoption among renters by removing a key structural barrier—access to reliable charging—but adoption impacts cannot be conclusively isolated from usage data alone.

We did not directly survey residents or track EV purchases and leases, but the charging data strongly suggests that charging availability supports sustained EV ownership among renters because:

- Private charging sessions grew by 10% between December 2024 and November 2025;
- 65% of all charging sessions were completed by residents;
- Between December 2024 and May 2025, charger count grew only 8%, while sessions increased 65%, implying growing adoption or increased reliance among repeat users who are most likely residents.

The shared public access model was successful as a flexible, revenue-generating, and utilization-encouraging approach, particularly during periods of lower resident demand. However, the limited data does not support a conclusion that shared public access inherently increases per-charger utilization because there was no clear utilization advantage for shared-access sites. Average sessions per charger were nearly identical between shared-access sites (61 sessions per charger) and private-only sites (60 sessions per charger). Instead, it functions best as a complementary strategy that expands access without diminishing resident use.

The BESTFIT project demonstrated that while increased charging access at multi-family properties supports EV adoption among renters, and shared public access is operationally viable and increasingly utilized, charger utilization is ultimately driven more by site-specific demand and resident behavior than by a public access model alone.

CHAPTER 6:
Conclusions and Recommendations:

Conclusions:

This BESTFIT project demonstrated that the combined EVmatch software platform and multi-vendor Level 2 hardware solution (Enel X and Autel EVSE) is a technically viable, scalable, and needed charging solution for multi-family properties. Across 4 counties and 21 sites, the system successfully supported over 6,200 charging sessions and delivered more than 142,000 kWh in its first year, with steadily increasing utilization and energy consumption over time. The platform reliably managed chargers from multiple manufacturers through a single interface, enabled flexible public and private access controls, and maintained consistent data collection despite major backend transitions, including the migration of Enel X JuiceBox chargers to a new server.

While challenges related to connectivity, permitting, and underfunded O&M affected uptime in some cases, these issues were operational rather than structural and did not undermine overall system performance. Collectively, the results validate the EVmatch charging management solution as a practical and adaptable technology for expanding EV charging access at multi-family housing, a market segment in which maximizing utilization, managing shared access, and minimizing upfront costs are critical objectives.
While the hardware-software solution proved effective, the project identified several implementation challenges that warrant future attention, including intermittent connectivity issues, long and inconsistent permitting timelines, and the absence of dedicated funding for O&M services. Addressing these factors through improved networking redundancy, streamlined permitting processes, and inclusion of multi-year O&M support in future funding programs will enhance charger uptime, user experience, and long-term system performance.

Recommendations for Future Projects:

Site hosts began expecting EVmatch to deliver ongoing on-site O&M services, despite these services being explicitly excluded from both service agreements and grant funding. EVmatch recommends that upcoming CEC grants for multi-family charging also support multi-year O&M service plans, helping guarantee timely charger upkeep and proper budgeting for O&M expenses. This will increase charger uptime, charger reliability for EV drivers, and consumer confidence in EV technology. EVmatch also recommends that future MFD projects scope cellular SIM card-enabled EVSE to reduce downtime due to WiFi disconnections and to reduce reliance on site host intervention for reliability.

Furthermore, slow, costly, and inconsistent EVSE permitting processes continue to delay the widespread deployment of charging infrastructure. EVmatch recommends the state investigate this issue more closely and develop AHJ data reporting and accountability measures to ensure cities do not continue to hold back state-level zero-emissions vehicle adoption objectives.

A useful follow-up research investigation could examine the EV purchasing behavior of MFD residents after EVSE is installed at their properties to better understand the influence of at-

home EVSE access on purchasing behavior for renters, and what other interventions, or combination of activities, are required for widespread EV adoption after an installation project.

Recommendations for Fuels and Transportation Division Project Management Process:

The CEC's Fuels and Transportation Division (FTD) grant administration process is transparent, with reporting and invoicing requirements clearly defined in writing. The invoice submittal process changed throughout this project with the introduction of the digital ECAMs system for invoice processing. While the ECAMs system outperformed the earlier process in terms of efficiency and effectiveness, areas remain for enhancement and updates.

The FTD grant reporting process required for this project was labor intensive, costly, and burdensome for small companies. EVmatch recommends the CEC consider moving from monthly to quarterly reporting to reduce the level of administrative time and resources required to execute a project. Reducing administrative burden may encourage more small, privately-held businesses to participate in the agency's grant-making programs.

The FTD project management process allows for flexibility in Scope of Work (SOW) and budget revisions as a project evolves over time. Timeline extensions and SOW amendments were critical for the completion and success of this project, especially considering the extended impacts of COVID-19 on permitting timelines and equipment supply chain delays. EVmatch appreciated this flexibility and encourages the CEC to maintain this adaptive management approach in the future.

APPENDIX A:
Initial Project Fact Sheet

California Energy Commission
Fuels and Transportation Division
EVmatch Reservation-Based Shared
EV Charging in Multi-Family Properties

120 New Public, Reservable EV Charging Stations at Apartments Across California

The Issue

Residents in underserved communities and multi-family properties in California, and across the country, do not have convenient access to EV chargers. This lack of access is a big reason that members of these communities are less likely to consider an electric vehicle (EV) as a realistic form of transportation. By increasing the quantity and accessibility of chargers at multi-family properties, such as apartments and condos, within California and addressing the range anxiety that prevents so many from shifting to a zero-emissions EV, EVmatch hopes to contribute to an uptake in the use of EVs across the state.

Project Innovation and Advantages

EVmatch will construct 120 publicly available Level 2 EV charging stations – currently the most affordable charging option available – with its unique sharing software at apartment buildings throughout Santa Clara, Los Angeles, and San Diego counties. With this grant, EVmatch will address the increasing demand for charging stations by residents at multi-family properties. It will also provide shared charging access for the communities surrounding the new stations. With the proprietary reservation features available on the EVmatch app, charging stations that may otherwise sit empty for part of the day can be conveniently reserved by the general public, maximizing their use and providing an essential resource for communities who currently lack reliable charging infrastructure.

Anticipated Benefits to California

General Benefits: The state of California is working steadily toward phasing out gasoline-powered cars, with a goal of 5 million ZEVs (zero-emission vehicles) on the roads by 2030 and 250,000 electric vehicle charging stations by 2025 (California Public Utilities Commission). EVmatch is committed to helping the state meet these goals through its efforts to significantly increase the number of publicly available EV chargers in the state, both in this work funded by the BESTFIT grant and through other partnerships and programs.

GFO-20-605

Specific Benefits:

- **Business Opportunities:** With the installation of these chargers across the state, EVmatch is strengthening its business partnerships with a variety of companies and stakeholders, including Enel X (the company that manufactures the chargers), ABM and Suacci Solar, who are supporting with planning, installation and engineering work, and local utility and government entities. Additionally, multi-family building property owners will increase their net operating income with the addition of a new revenue stream, and EVmatch's existing 4,000+ customers will benefit from access to the new charging stations being added to the network.

- **Job Creation:** In addition to creating three new full-time equivalent jobs at EVmatch, this project is also creating jobs with project partners and subcontractors.

- **Greenhouse Gas Emissions Reduction:** For every dollar invested in this project, EVmatch will reduce 123,275 grams of CO_2 equivalent (CO_2e) over the lifetime of the charging stations. That amounts to a total of 89,775 metric tons of CO_2e reduced from the project, which is equivalent to removing nearly 20,000 gasoline-powered passenger vehicles from the road for a year (US EPA Greenhouse Equivalencies Calculator).

- **Impact to Low Income and Disadvantaged Communities:** These chargers will be constructed strictly at multi-family properties in Santa Clara, Los Angeles, and San Diego counties. Many of these multi-family properties are in low-income communities where the chargers will be available for the residents in those dwellings, as well as publicly available for the surrounding communities. Nationally, over 80% of EV owners charge their vehicles at home, but approximately a third of the population does not have access to home charging. EVmatch projects serving approximately 20,000 additional California renters with these 120 charging stations.

Contacts:

Recipient: Heather Hochrein, CEO and Founder, EVmatch, Inc.
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Email: heather@evmatch.com

Amount: $728,250
Co-funded Amount: $439,259
Project Location(s): Santa Clara, Los Angeles, and San Diego counties
Project Team: EVmatch, Inc., ABM, Suacci Solar, and Enel X

APPENDIX B:
Final Project Fact Sheet

California Energy Commission
Fuels and Transportation Division
EVmatch Reservation-Based Shared Level 2
EV Charging in Multi-Family Properties

124 Reservable EV Charging Stations Installed in Multi-Family Dwellings Across California

The Issue

Renters living in multi-family dwellings (MFDs) in California have limited access to convenient electric vehicle (EV) charging access. This limited access is inhibiting the adoption of EVs and stalling widespread vehicle electrification, which is one of the most promising greenhouse gas (GHG) emissions reduction strategies for the state. Efficient charger sharing and reliable charging access in MFDs presents many operational challenges for property managers. This project demonstrated EVmatch's unique reservation software system and customizable public-private access control platform as a scalable and cost-effective solution for increasing EV charging station access to renters and apartment dwellers throughout California.

Project Innovation and Advantages

This project demonstrated that the combined EVmatch software and multi-vendor Level 2 charging station platform is a technically viable, cost-effective, scalable, and needed solution for MFDs. EVmatch installed 124 single-port chargers at 21 MFDs across four counties. Eighty-eight chargers offer shared public and private access, while 36 chargers offer shared access exclusively to building residents.

EVmatch addressed the increasing demand for EV charging access from residents at MFDs, while also providing shared charging support for surrounding communities. Between December 1, 2024 to November 30, 2025, the project supported over 6,200 charging sessions and delivered 142,000 kWh in electric fuel, with steadily increasing utilization and energy delivery over time. Thirty-five percent of reported charging sessions were completed by the general public. The EVmatch platform reliably managed chargers from multiple manufacturers through a single software interface and enabled flexible public and private access controls.

Benefits to California

General Benefits: The state of California is working steadily toward phasing out gasoline-powered cars, with a goal to have 100% of new passenger carsand truck sales zero-emission by 2035. At least 250,000 public and shared private EV charging stations are required in the near-term, yet much higher numbers are needed by 2030 (California Public Utilities Commission). EVmatch is committed to helping the state meet these goals through its efforts to significantly increase the number and efficient utilization of EV chargers for renters and apartment-dwellers throughout the state.

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Specific Benefits:

- **Greenhouse Gas Emissions Reduction:** This project delivered meaningful and measurable GHG reductions. From August 2022 through November 2025 , cumulative emissions reductions reached 137 metric tons of CO_2e, equivalent to 32 gasoline-powered vehicles removed from the road for one year or 15,416 gallons of gasoline avoided (US EPA Greenhouse Equivalencies Calculator). Approximately 80% of these GHG reductions occurred during the most recent 12-month reporting period, underscoring the accelerating environmental benefits of the charging infrastructure as EV adoption and charger utilization increases.

- **Economic Development:** With the installation of these 124 chargers, EVmatch strengthened its business partnerships with a variety of companies and industry leaders, including Autel Energy, EVCHARGE4U, Baker Electric, ABM, Green Water and Power, and Silicon Valley Clean Energy. This project also contributed to economic development by bolstering private investments into EV charging projects from MFD property owners across the state. MFD property owners contributed a total of $389,337 as direct project cost share to cover additional labor and material costs not funded by the state. MFD owners added a new long-term revenue stream to their properties with these charging station investments, while also attracting and retaining tenants.

- **Job Creation:** This project led to over 4.1 full-time equivalent (FTE) jobs created between July 2021 to January 2026, approximately 0.91 FTE jobs per year over the project duration. A variety of job types and classifications were supported, including employees and contractors, and direct and indirect jobs. Direct jobs created include full-time employees, part-time employees, and independent contractors at EVmatch. Indirect jobs include employees and contractors of outreach partners, namely Silicon Valley Clean Energy, and EVmatch's electrical subcontractors.

- **Impact to Low Income and Disadvantaged Communities:** Charging stations were installed at underserved multi-family properties, and many in low-income or disadvantaged communities. Nationally, over 80% of current EV owners charge their vehicles at home, but approximately one third of the population does not have access to home charging. This project helped bridge that gap, providing more people in California with access to convenient, reliable, and affordable home charging.

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Project Location(s): Santa Clara, Los Angeles, San Diego and Alameda counties
Project Team: EVmatch, Inc., EVCHARGE4U, Baker Electric, ABM, Green Water and Power, Autel Energy, Enel X Way, and Silicon Valley Clean Energy

GLOSSARY

AUTHORITY HAVING JURISDICTION (AHJ)—An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

BATTERY ELECTRIC VEHICLE (BEV)—Also known as an "All-electric" vehicle (AEV), BEVs utilize energy that is stored in rechargeable battery packs. BEVs sustain their power through the batteries and therefore must be plugged into an external electricity source in order to recharge.

COMMISSION AGREEMENT MANAGER (CAM)— A Commission Agreement Manager (CAM) at the California Energy Commission (CEC) is a staff member responsible for overseeing the lifecycle of research, development, or demonstration projects funded by the state. They monitor progress, evaluate work quality, verify invoices, and ensure compliance with contract terms, often using the Energy Commission Agreement Management System (ECAMS).[1]

CALIFORNIA CLEAN VEHICLE REBATE PROJECT (CCVRP)— The California Clean Vehicle Rebate Project (CVRP) was a major initiative by the California Air Resources Board (CARB) that provided cash rebates of $1,000–$7,500 to residents, businesses, and government entities for purchasing or leasing new electric, plug-in hybrid, or fuel-cell vehicles. As of November 8, 2023, the program is closed to new applications.[2]

CALIFORNIA ENERGY COMMISSION (CEC)— The state's primary energy policy and planning agency. The agency was established by the California Legislature through the Warren-Alquist Act in 1974. It has seven core responsibilities:

- Developing renewable energy
- Transforming transportation
- Increasing energy efficiency
- Investing in energy innovation
- Advancing state energy policy
- Certifying thermal power plants
- Preparing for energy emergencies

ELECTRIC VEHICLE INFRASTRUCTURE TRAINING PROGRAM (EVITP)— The Electric Vehicle Infrastructure Training Program (EVITP) is a comprehensive, non-profit training and certification program for electricians specializing in electric vehicle supply equipment (EVSE) installation. It ensures high-quality, safe, and code-compliant installations across residential and commercial markets.[3]

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE)— Infrastructure designed to supply power to EVs. EVSE can charge a wide variety of EVs including BEVs and PHEVs.

1 https://www.energy.ca.gov/funding-opportunities/funding-resources/ecams-resources
2 https://cleanvehiclerebate.org/en
3 https://evitp.org/

FUELS AND TRANSPORTATION DIVISION (FTD)— The California Energy Commission's (CEC) Fuels and Transportation Division advances California's clean energy goals by funding the development of zero-emission vehicle (ZEV) infrastructure and promoting alternative fuel technologies. It administers the $100 million+ annual Clean Transportation Program to reduce petroleum reliance, improve air quality, and accelerate the transition to sustainable transportation.[4]

GREENHOUSE GAS (GHG)—Any gas that absorbs infra-red radiation in the atmosphere. Greenhouse gases include water vapor, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), halogenated fluorocarbons (HCFCs), ozone (O3), perfluorinated carbons (PFCs), and hydrofluorocarbons (HFCs). (EPA)

MULTI-FAMILY DWELLING (MFD)— Per the California Energy Commission (CEC) 2022 and 2025 Energy Code (Title 24, Part 6), a multi-family building is generally defined as a structure with three or more dwelling units.[5]

PLUG-IN HYBRID ELECTRIC VEHICLE—(PHEV) PHEVs are powered by an internal combustion engine and an electric motor that uses energy stored in a battery. The vehicle can be plugged in to an electric power source to charge the battery. Some can travel nearly 100 miles on electricity alone, and all can operate solely on gasoline (similar to a conventional hybrid).

SCOPE OF WORK (SOW) — As defined by the California Energy Commission (CEC), a Scope of Work (SOW) is a detailed, actionable document that serves as a roadmap for completing a project funded by a CEC grant or agreement. It explicitly defines the project's objectives, tasks, deliverables, and timelines. The SOW serves as a legally binding, contractual framework that ensures stakeholders are aligned on the project's goals, and it is used to evaluate performance and compliance.[6]

4 https://www.energy.ca.gov/about/divisions-and-offices/fuels-and-transportation-division
5 https://energycodeace.com/download/259953/file_path/fieldList
6 https://www.energy.ca.gov/sites/default/files/2020-02/2019-02-07_Avoiding_Audit_Findings_ADA.pdf