

# Public Fleet Pilot Project Final Report

## Fiscal Year 2014-15

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October 2017

*Prepared for*  
California Air Resources Board

*Prepared by*  
Center for Sustainable Energy



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# I. Executive Summary

As part of the California Air Resources Board's Clean Vehicle Rebate Project (CVRP), the Public Fleet Pilot Project offered a tailored electric vehicle (EV) incentive solution for public agencies serving disadvantaged communities (DACs), as defined by CalEnviroScreen, to reduce emissions in areas disproportionately impacted by air pollution and help achieve greenhouse gas reduction goals.

Local and state government fleets situated in or serving DACs face various financial barriers in replacing conventional gas-powered vehicles with cleaner electric vehicles. While government fleets are eligible for CVRP, certain program conditions complicate their participation, and, unlike private and commercial fleets, they are ineligible for generous federal tax credits and other incentives. As a result, public agency fleets make up a very small number of the total EV rebates disbursed through CVRP.

The Public Fleet Pilot Project brought down EV acquisition costs greatly by increasing rebate amounts for state and local agencies and facilitated purchases by allowing them to reserve rebates in advance of vehicle delivery and to apply for multiple vehicles at once using a semiautomated system. In total, incentives for 376 vehicles were awarded to public entities in 87 separate ZIP codes across the state.

# II. Project Background

## History

In 2007, Governor Arnold Schwarzenegger signed into law the *California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007* (Assembly Bill [AB] 118, Statutes of 2007, Chapter 750). AB 118 created the Air Quality Improvement Program (AQIP), a voluntary incentive program administered by the California Air Resources Board (CARB or Board), to fund clean vehicle and equipment projects, air quality research and workforce training.

As required in Health and Safety Code (HSC) Section 44274(a), the Board adopted regulatory guidelines in 2009 for AB 118 Air Quality Guidelines for the Air Quality Improvement Program (AQIP). The program defined the overall administrative requirements and policies and procedures for program implementation based on the framework established in statute. Central to the guidelines is the requirement for a Board-approved annual funding plan developed with public input. The funding plan is each year's blueprint for expending AQIP funds appropriated to CARB in the annual state budget. The funding plan focuses AQIP on supporting development and deployment of the advanced technologies needed to meet California's longer-term, post-2020 air quality goals.

In 2012, Governor Jerry Brown signed into law three bills – AB 1532 (Pérez, Chapter 807, Statutes of 2012), Senate Bill (SB) 535 (De León, Chapter 830, Statutes of 2012) and SB 1018 (Budget and Fiscal Review Committee, Chapter 39, Statutes of 2012) – that establish the Low Carbon Transportation Greenhouse Gas Reduction Fund (GGRF) to receive proceeds from the distribution of allowances via auction and to provide the framework for how those auction proceeds will be appropriated and expended.

These statutes require that the state portion of the proceeds from the auction of allowances under the cap-and-trade program be deposited in the GGRF and used to facilitate the achievement of greenhouse gas emission reductions and, where applicable and to the extent feasible, to further additional goals of AB 32 and the legislature. In addition, expenditures must comply with the requirements contained in SB 862 (Chapter 836, Statutes of 2014), the trailer bill that establishes requirements for agencies receiving FY 2014-15 appropriations of GGRF monies.

## The Public Fleet Pilot Project

In June 2014, CARB approved the Fiscal Year 2014-15 Funding Plan for the Air Quality Improvement Program and Low Carbon Transportation Greenhouse Gas Reduction Fund Investments (FY 2014-15 Funding Plan), providing up to \$117.36 million in funding for the Clean Vehicle Rebate Project (CVRP) and Increased Incentives for Public Fleets in Disadvantaged Communities Pilot Project (Public Fleet Pilot Project). In order to meet SB 535 obligations on GGRF funding, the FY 2014-15 Funding Plan included several pilot projects to directly benefit California's most vulnerable and pollution-burdened communities. The Public Fleet Pilot Project was one of these projects and was implemented as a set-aside within CVRP.

Up to \$2,877,000 in vehicle incentive funding was available for California public entities located in or serving disadvantaged communities (DACs). The Public Fleet Pilot Project served Californians residing in DACs by providing immediate air pollution emission reductions while stimulating local deployment of the next generation of zero-emission and plug-in hybrid electric light-duty vehicles. It was administered and implemented through a partnership between ARB and a rebate administrator, selected via a competitive ARB grant solicitation.

The purpose of providing fleet incentives in DACs was to reduce emissions in areas that are already disproportionately impacted by pollution and address the lack of assistance provided to public fleets. Because the Clean Vehicle Rebate Project is designed and marketed for consumers, local and state government fleets make up a very small number of the total incentives disbursed. Also, unlike consumers, public fleets are not eligible for additional incentives, such as the federal tax credit.

The funding plan included guidance on eligibility and incentives requirements. Fleets were required to domicile vehicles in DACs and regularly submit vehicle usage data. Neighborhood electric vehicles and zero-emission motorcycles were not eligible for increased incentives under

the Public Fleet Pilot Project. Leased vehicles also were not eligible for the Public Fleet Pilot Project rebates.

## III. Project Implementation

### Rebate Processing

To implement the Public Fleet Pilot Project, the Center for Sustainable Energy (CSE) created a parallel but separate rebate processing system. The parallel system utilized CVRP's core systems such as the Salesforce database, but included added features, such as the ability for fleet managers to apply for rebates up to six months in advance and up to six months after delivery of a vehicle. The system also allowed fleets to apply for multiple vehicles at a time. Previously, fleets needed to apply individually for each vehicle.

Using the new system, fleets applied online via the Public Fleet Pilot Project webpage, [cleanvehiclerebate.org/pfp](http://cleanvehiclerebate.org/pfp), housed on the CVRP website (or by contacting the administrator directly by email at [publicfleets@energycenter.org](mailto:publicfleets@energycenter.org) or calling (858) 634-4733). Applicants were required to take possession of and register eligible vehicles before receiving rebates. Rebate applications and documents themselves were processed in a timely manner. On average, processing was completed within 1 to 2 business days from submittal. This was supported by assigning staff that specialized in fleet rebate processing and fleet support.

### Website

Information about the Public Fleet Pilot Project was shared using a Public Fleet Pilot Project microsite contained within the larger CVRP website. The Public Fleet Pilot Project webpage at [cleanvehiclerebate.org/pfp](http://cleanvehiclerebate.org/pfp) included an up-to-date list of eligible vehicles, rebate amounts for each vehicle, the online application, additional application information (e.g., FAQs, T&Cs, Implementation Manual) and a real-time running total of available funds remaining in the program. This "remaining funding tool" allowed the program to be user-friendly while providing project transparency.

## Outreach and Technical Assistance

### Email Outreach

Email marketing was highly effective in reaching fleets with news of the Public Fleet Pilot Project launch, as well as availability of funding and eligibility guidelines. Initial mailings were based on past recipients

of CVRP funding. Additional recipients were continually added through introductions made by community-based organizations and industry associations.



Figure 1 Sample Public Fleet Pilot Project email

### Paid Media

A paid media campaign was created to increase awareness of the project, drive qualified traffic to the program website and increase the program application volume. The target audience was public fleet managers operating in California’s DACs. The secondary target audience was public and private fleet managers operating in California who could qualify for the standard CVRP rebate.

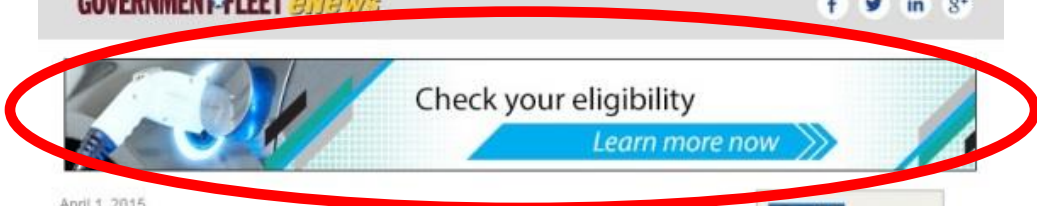
The campaign ran during April–June 2014 with most ad placements happening before the end of May. Media included a mix of digital and print channels with an emphasis on digital to drive users directly to the website (Figure 2). The campaign generated 194,148 impressions (times the message was in front of a person) and 414 clicks. Approximately 14% of total website traffic was generated from paid media.

Public Fleet Pilot Project - Paid Media FY 14 - 15																		
Placement	April					May				June					Cost	Actual Impressions		
	30	6	13	20	27	4	11	18	25	1	8	15	22	29				
<b>Government Fleet Magazine</b>																		
Dedicated E-mail																	\$1,750	903
Online Banner Ad																	\$2,000	21,002
E-newsletter Banner Ad																	\$2,000	26,765
Print Ad - May																	\$3,598	28,843
<b>Green Fleet Magazine</b>																		
Website Banner Ad																	\$1,150	13,071
<b>Automotive Fleet</b>																		
Website Banner Ad																	\$1,500	21,004
<b>Fleets &amp; Fuels</b>																		
E-newsletter Banner Ad																	\$2,916	54,252
<b>Fleet Management Weekly</b>																	\$1,495	
Dedicated E-mail																		1,717
E-newsletter Banner Ad																		15,248
Website Banner Ad																		7,795
News Article																		1,252
Editorial Content																		2,296
<b>TOTALS:</b>																	<b>\$16,409</b>	<b>194,148</b>

Figure 2 Paid media outreach tracking

The campaign far outperformed transportation industry averages. Ad placements in trade press email digests exceeded the industry average of a 20.6% open rate. Government Fleet Magazine emails had open rates of 24.2% and 42.5% (Figure 3). The single Fleet Management Weekly email had an open rate of 25.7%. All email marketing exceeded the transportation industry email average of 20.6%.





April 1, 2015



### Miami-Dade PD Launches \$13.2M Vehicle Financing Plan

The Miami-Dade Police Department has purchased 642 Ford vehicles for \$13.2 million and will finance the purchase over five years as part of a new vehicle replacement plan.



### 2016 Malibu Update Includes 47 MPG Hybrid

The 2016 Chevrolet Malibu received a facelift from the previous model year to offer improved fuel efficiency on a lighter and longer frame. A new hybrid model is expected to offer a combined 47 mpg.

### Ill. County's Anti-Idling Plan Would Save 790 Gallons

Kane County, Ill., is considering an idle-reduction plan that's expected to save 790 gallons of fuel a year and prevent 15,800 pounds of carbon-dioxide from entering the atmosphere.



### Ford Recalls F-Series Ambulances

The action covers 6,472 vehicles that may have a malfunctioning exhaust gas temperature sensor.



the  
public fleet  
professional's  
conference

June 8-11, 2015  
Denver, CO



**REGISTER**

#### WEB POLL

**Are you having problems hiring and retaining technicians?**

- A. Yes, we have problems hiring technicians
- B. Yes, we have problems retaining technicians

Figure 3 Ad placement on Government Fleet Magazine emails

### **Partner Outreach Events**

Outreach for the Public Fleet Pilot Project required a broad geographic reach because of the dispersed spread of disadvantaged communities across the state. Project outreach extended from Sacramento through the San Joaquin Valley to Los Angeles and San Diego Metro Areas. Interactions were made with more than 1,200 industry professionals during 35 separate events.

Most contacts were with fleet managers or representatives of local government departments of public works. Common titles included fleet manager, fleet administrator and director. Local government, environmental or sustainability staff were an important secondary stakeholder group. Though these individuals are not generally a part of the procurement process, they were effective in introducing the project to procurement decision-makers and advocating for electric vehicles within their organizations.

### **EV Suitability Assessments**

Through the project's regular outreach with public fleets, eligible agencies were invited to participate in a free plug-in electric vehicle (PEV) suitability assessment. FleetCarma, a telematics provider specializing in electric vehicles, partnered with CSE to gather information from participants.

Telematics devices were installed to track vehicle usage and provide a baseline for comparison with potential replacement models. The second-by-second utilization and performance data was uploaded to "drive" virtual PEV models that simulated different adoption scenarios. The result was a series of reports on the suitability and business case for PEVs under individualized fleet conditions.

Sixty-eight of 85 vehicles (80%) analyzed were recommended for replacement with a PEV. Estimated savings over the life of each vehicle ranged from \$23 to \$4,747, with an average of \$1,309. Sedans were the most often recommended for replacement (52/56), while pickups were least often recommended for replacement (10/20). If each fleet replaced all the recommended vehicles with the best-fit PEV, the fleets would save an average of approximately \$75,000, or nearly 25% of estimated total cost of ownership over the life of the vehicles. Recommended replacements also would prevent an average of 67% of each fleet's modeled vehicle emissions.

All post project questionnaire respondents answered that they were "very satisfied" with the experience. "This assessment was a great opportunity to evaluate our future needs for electric vehicles and related equipment to change our carbon footprint" said Roseann Galvan with the city of Selma.

Six of the seven respondents indicated that they were "more likely to acquire electric vehicles" after completing the suitability assessment. These six agencies also said they were "very likely" to acquire PEVs within the next year. The information on potential cost savings was most valued by participants.

# Project Transparency and Evaluation

## Funding Availability

Funding availability was shared in real time through the project homepage. Funding status was visually represented with a simple pie chart and a table with declining balance amounts.

## Rebate Distribution

Information on rebate distribution was collected based on air district, ZIP code, county, organization name and census tract. Rebate distribution data was reported on request and made public through an interactive online mapping tool.

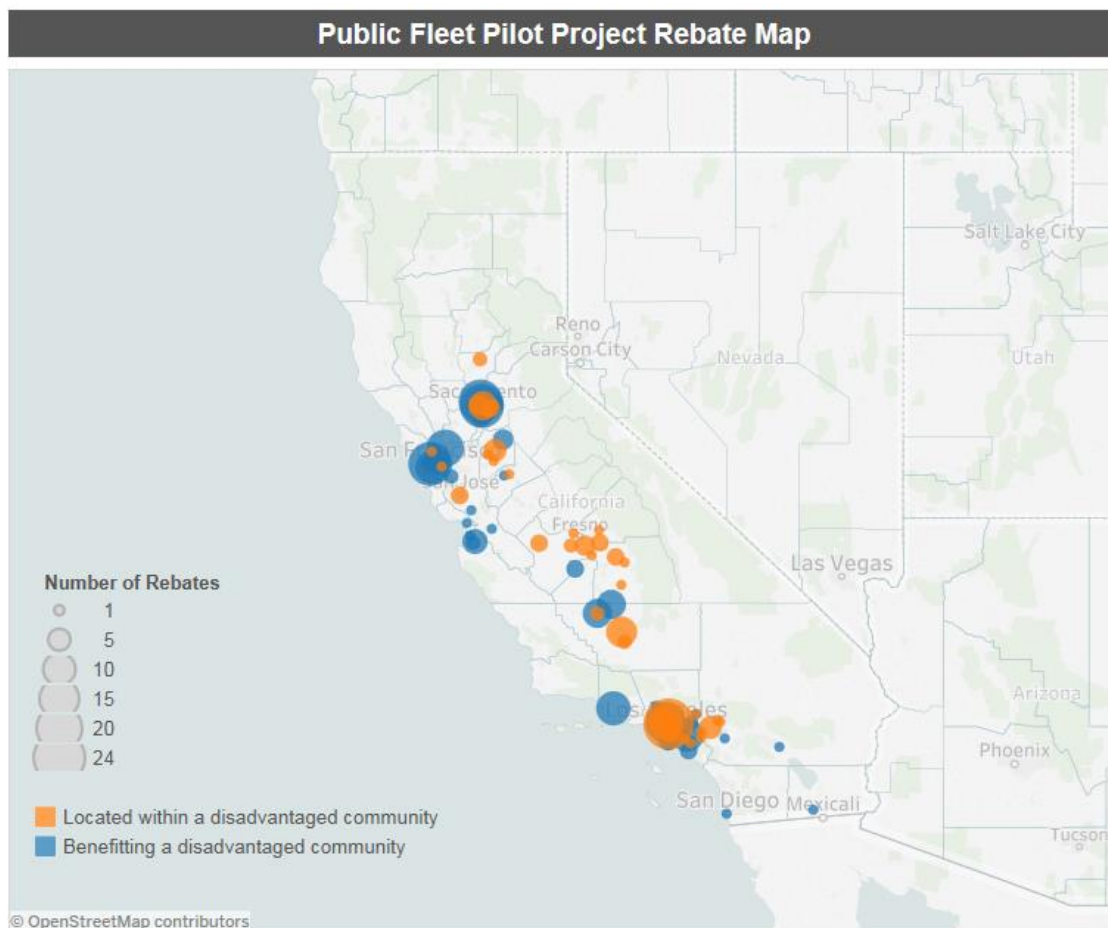


Figure 4 Map of rebate distributions

## Vehicle Usage Data

The sharing of annual usage data of rebated vehicles was established from the beginning as a requirement for fleets receiving funds. Vehicle usage data included make, model, domicile location, estimates of mileage driven in DACs, information on what vehicle was replaced, buying motivations, charging equipment choice, overall satisfaction and any challenges encountered.

Vehicle usage data allowed the administrator to identify opportunities to provide technical assistance or adjust the processing system. By the end of the first year of data collection, for example, it became clear that fleets required special technical guidance on how to monitor and control electric vehicle miles traveled or eVMT—a key performance indicator for success of any fleet’s EV project.

### **Qualitative Feedback**

The Public Fleet Pilot Project solicited qualitative feedback at project milestones. After an initial project launch questionnaire, feedback was received through annual usage reports from all incentive recipients. Clear patterns emerged. Incentive recipients were positive about their experiences applying for and receiving rebates. They indicated that their EV fleet projects would not have been possible without the incentive funding. Two fleets, unsolicited by the usage report, provided feedback on the administration of incentives.

“The rebates made it possible for our city to procure its first electric vehicles,” said Russ Robertson, director of Public Works in Reedley, Calif. “The savings in fuel costs, as well as knowing that we are doing our part to improve our air quality, is nearly invaluable.”

East Orange Water County District, which had the pilot project’s highest rate of vehicle utilization (an important EV fleet metric) provided the second comment on the program’s administration. “Applying for and receiving approval for the grant was very easy and primarily facilitated our ability to purchase the vehicle” said General Manager Lisa Ohlund.

Generally, comments were reserved for the vehicles themselves. Fleet staff commented on challenges in project implementation, not only related to the procurement of vehicles and charging stations, but those unique to fleet management and operations as well. These indicated a need to develop resources and share information on fleet EV management best practices.

In the next phase of the project, based on fleet feedback and usage data reports from 2014-2015, outreach efforts matured. A greater emphasis was placed on technical presentations on EV procurement and management best practices. Usage data collected after 12 months from vehicles incentivized in the 2014-2015 period was used to help fleets set goals, benchmark against peers and validate performance.

## **IV. Project Outcomes**

### **Disadvantaged Communities Rebate Distribution**

All 374 rebates were administered to fleets in 87 disadvantaged community ZIP codes. ZIP code eligibility was the only DAC eligibility requirement for the 2014-15 period. Census tract eligibility was not phased in until 2016.

### **Rebate Distribution by Air District**

The South Coast, San Joaquin Valley and Sacramento Metro Air Districts received the largest number of vehicle rebates. Rebates were distributed by air district as follows.

### Incentives Distribution

District	Number of Vehicle Rebates
Bay Area	63
Imperial	1
Monterey Bay Unified	10
Sacramento Metro	84
San Diego	1
San Joaquin Valley Unified	91
South Coast	112
Ventura	11
Yolo-Solano	1

### Rebate Distribution by Applicant Type

The majority of rebates were administered to local government entities. Thirty percent were received by state government entities.

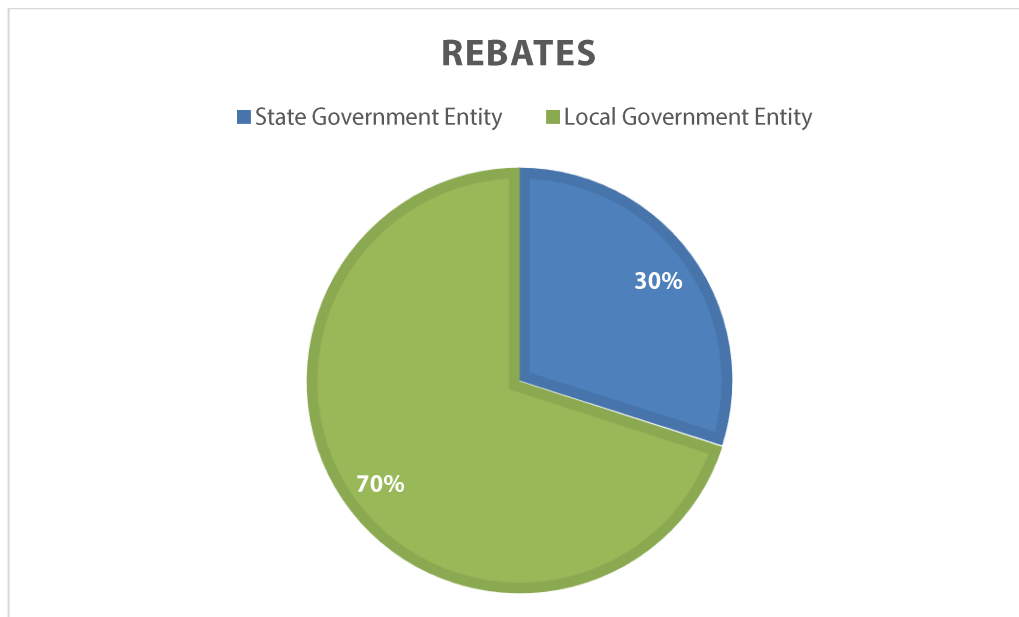


Figure 5 Rebate Distributions by applicant type

## Rebate Distribution by Vehicle Category

Rebates were distributed by vehicle category as follows.

Technology	Number
Fuel Cell Electric Vehicle	4
Battery Electric Vehicle	158
Plug-in Hybrid Electric Vehicle	212

## V. Lessons Learned

### Processing

The Public Fleet Pilot Project demonstrated the unique needs of public fleet agencies and several approaches to meeting them. Fleet rebate programs must be suited to procuring dozens of vehicles at a time and require flexibility in timing. Approvals for procurement can be delayed because of internal processes, including approval by city councils and other elected bodies that present specific challenges, even to the level of just getting on a meeting agenda.

The Public Fleet Pilot Project addressed practical challenges in the application process by allowing fleets to apply for up to thirty vehicles at one time and reserve rebates prior to taking delivery of vehicles. This added significant operational flexibility and assisted fleet managers in assuring their management that incentive funding could be counted on and that elected officials wouldn't be disappointed by funding failing to materialize.

### Outreach

At every stage of the pilot, the need for outreach was confirmed by frequent questions regarding program eligibility and general electric vehicle knowledge. The collection of usage data and regular outreach work confirmed that fleets need and benefit extensively from market education and outreach activities.

Usage data and anecdotal evidence suggested that the majority of fleets struggled to identify fleet management best practices for the introduction of EVs. Several struggled to provide adequate charging for vehicles, training for staff and key performance indicators for their analyst staff to track program effectiveness.

Public Fleet Pilot Project outreach for 2014-15 raised statewide awareness of the availability of funding, identified best practices, collected usage data to identify future challenges and, overall, positioned the pilot for technical assistance outreach in the subsequent 2016-17 period.

## VI. Summary

The Public Fleet Pilot Project established itself in 2014-15 as a superior approach to administering incentives to fleets and an effective tool for reducing vehicle emissions in communities statewide. It was the first DAC pilot to launch in California and is the nation's first DAC-type fleet program.

The project's design leveraged the efficiencies and best practices developed in the administration of the regular CVRP program and adapted them to meet the needs of fleet managers and their stakeholders in local government. Implementation of the project demonstrated, similar to consumer programs, that extensive market education and outreach activities are necessary for program success. In the case of a fleet program, education and outreach includes discussion of procurement, management and training best practices.

## VII. Appendix – Miscellaneous Program Collateral

### Increased Incentives for Public Fleets in Disadvantaged Communities: **Public Fleet Pilot Project**



Administered by the Center for Sustainable Energy for the California Air Resources Board, the Public Fleet Pilot Project offers up to \$15,000 in rebates for the purchase of new, eligible zero-emission and plug-in hybrid light-duty vehicles.

The Public Fleet Pilot Project replaces standard CVRP rebates with **Increased Incentives for public agencies** operating in California's most vulnerable and pollution-burdened areas.

Whether your fleet is planning to acquire an eligible vehicle, has ordered a vehicle or has already taken delivery of a vehicle, you can apply online to reserve rebate funds. Eligibility is based on the location of the facility where the vehicle will be domiciled and where it will be primarily operated.

#### Check Your Eligibility

Enter your ZIP code in the tool provided at [cleanvehiclerebate.org/PFP](http://cleanvehiclerebate.org/PFP).

If your fleet is not eligible for this pilot project, you may still be eligible for the standard CVRP rebates. A list of eligible vehicles is also available at the project webpage.

#### Max. Rebate Amounts

- \$15,000**  
FUEL-CELL ELECTRIC VEHICLE
- \$10,000**  
BATTERY ELECTRIC VEHICLE
- \$5,250**  
PLUG-IN HYBRID ELECTRIC VEHICLE

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For more information visit [cleanvehiclerebate.org/PFP](http://cleanvehiclerebate.org/PFP) or contact [publicfleets@energycenter.org](mailto:publicfleets@energycenter.org).



# Electric Vehicle Suitability for Public Fleets in Disadvantaged Communities

*Summary Report*

October 2016

Prepared for  
California Air Resources Board

Prepared by  
Center for Sustainable Energy



Center for  
Sustainable Energy®

California Environmental Protection Agency

 **Air Resources Board**



As a mission-driven nonprofit organization, CSE works with energy policymakers, regulators, public agencies and businesses as an expert implementation partner and trusted information resource. Together, we are the catalysts for sustainable energy market development and transformation.

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SAN DIEGO

| LOS ANGELES

| BERKELEY, CA

| BOSTON