CALIFORNIA ENERGY COMMISSION

California Energy Commission

**STAFF REPORT**

# Localized Health Impacts Report

For Selected Projects Awarded Funding Through the Clean Transportation Program Under Solicitation GFO-20-605 BESTFIT Innovative Charging Solutions

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# California Energy Commission

Michael Comiter
**Primary Author**

Brian Fauble
Jane Berner
Katie Herter
Matt Alexander
Matthew Kozuch
Manuel Aguila
Shaun Ransom
Tiffany Hoang
**Commission Agreement Managers**

Charles Smith
**Office Manager**
**TRANSPORTATION POLICY AND ANALYSIS OFFICE**

Hannon Rasool
**Deputy Director**
**FUELS AND TRANSPORTATION DIVISION**

Drew Bohan
**Executive Director**

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# ABSTRACT

Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007) created the Clean Transportation Program (formerly known as the Alternative and Renewable Fuel and Vehicle Technology Program). This statute, amended by Assembly Bill 109 (Núñez, Chapter 313, Statutes of 2008), authorizes the California Energy Commission to "develop and deploy innovative technologies that transform California's fuel and vehicle types 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.

Assembly Bill 118 also directs the California Air Resources Board (CARB) to develop guidelines to ensure air quality improvements. CARB's Air Quality Improvement Program Guidelines, approved in 2008, are published in the *California Code of Regulations, Title 13, Motor Vehicles, Chapter 8.1, AB 118 Air Quality Guidelines for the Clean Transportation Program*. The guidelines require the California Energy Commission, as the funding agency, to analyze the localized health impacts of Clean Transportation Program funded projects that require a permit (California Code of Regulations Section 2343).

This Localized Health Impacts Report analyzes and reports on the potential health impacts to communities from projects seeking California Energy Commission funding under Grant Solicitation GFO-20-605. This initiative seeks to demonstrate innovative electric vehicle charging solutions and work to accelerate successful implementation of these solutions in California. These projects will accomplish this goal by demonstrating electric vehicle infrastructure or business models that highlight innovative charging solutions that are the "best fit" for the local built environment, use case, and vehicle type. Information submitted by awardees is used in this report to help identify communities at a higher risk of adverse health effects from pollution. Under California Code of Regulations Section 2343, this report is available for public comment for 30 days before the approval of projects at a publicly noticed business meeting.

**Keywords:** Air pollution, air quality improvement program (AQIP), California Air Resources Board (CARB), Assembly Bill (AB) 118, California Environmental Quality Act (CEQA), environmental justice (EJ) indicators, Environmental Justice Screening Method (EJSM), electric vehicle (EV), localized health impacts (LHI), zero-emission vehicle (ZEV)

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# EXECUTIVE SUMMARY

The California Energy Commission's (CEC) Clean Transportation Program (CTP) provides funding to support innovation and accelerate the development and implementation of advanced transportation and fuel technologies. Under the California Code of Regulations Title 13, (California Code of Regulations Section 2343), this Localized Health Impacts Report describes the electric charging infrastructure technologies proposed for funding that may require a conditional or discretionary permit or environmental review such as conditional use permits, air-quality permits, wastewater permits, hazardous waste disposal permits, and other land-use entitlements. Since ministerial-level permits do not assess public health-related pollutants, staff does not assess projects requiring only ministerial-level permits in this report.

The CEC is required to assess the local health impacts of projects proposed for CTP funding. This report focuses on the potential health impacts to communities from project-related emissions or pollution. A project location where communities potentially have a higher risk of adverse health impacts from pollution are identified as "high-risk community project locations." High-risk communities are identified using demographic data with environmental data for air quality from the California Air Resources Board.

Environmental justice communities, low-income communities, and minority communities are considered the most impacted by any project that could result in increased criteria and toxic air pollutants within an area. Preventing or minimizing health-risks from pollution is vital in any community, but it is especially important for communities considered to be at high risk due to preexisting poor air quality and other prevalent factors.

Staff proposes eight projects for CTP grant funding awards under Solicitation GFO-20-605, titled "BESTFIT Innovative Charging Solutions." The goal of this initiative is to demonstrate innovative charging technologies that accommodate the local built environment or use case to support both light-duty and medium- and heavy- applications. Light-duty vehicles generally include passenger vehicles like sedans and pickup trucks, whereas medium- and heavy-duty vehicles are heavier vehicles that are generally used for transportation and logistics like buses and shipping trucks. Staff analyzes localized health impact information submitted by the project awardees. Based on project site information provided by the awardees, the proposed project locations of Bakersfield, Huntington Park, and Los Angeles County are all in high-risk communities. Community members near the proposed project sites may be at a higher risk to adverse health impacts from pollution. Staff does not anticipate a net increase in the pollution burden for the communities where these projects are located.

# CHAPTER 1:
# Project Proposed for Funding

## Background

On July 14, 2020, the California Energy Commission (CEC) released a competitive grant solicitation titled "BESTFIT Innovative Charging Solutions" (GFO-20-605), where "BESTFIT" stands for "Built-Environment Electrification Solutions and Form Factors for Fitting Infrastructure to Transportation." GFO-20-605 offered Clean Transportation Program (CTP) grant funding for projects that demonstrate innovative electric vehicle charging solutions for light-duty and medium- and heavy-duty vehicles and accelerate successful commercial use of these solutions. These projects will accomplish this goal by demonstrating electric vehicle infrastructure or electric vehicle deployment that highlight innovative charging solutions and zero-emission vehicle applications that are the "best fit" for the local context which can take the form of different technologies and applications. Two examples are electric vehicle supply equipment (EVSE) installation and siting that is targeted at multifamily dwellings or electric school bus deployment at schools coupled with grid-connected charging EVSE for greater electric vehicle cobenefits. As required by California Code of Regulations (CCR) Section 2343, this Localized Health Impacts Report (LHI report) analyzes the potential community health impacts near the CTP-funded projects 30 days before approval at a publicly noticed meeting.

## Projects Selected

On April 8, 2021, the CEC posted a notice of proposed award (NOPA)[1] identifying the projects awarded grant funding. This LHI report assesses the project locations chosen by each of the eight GFO-20-605 applicants (awardees) identified in the NOPA. Table 1 lists the proposed project location(s) for each of the awardees and their corresponding environmental justice (EJ) indicators.[2] EJ indicator definitions are in Appendix A of this LHI report.

1 See notice of proposed award, https://www.energy.ca.gov/sites/default/files/2021-04/GFO-20-605_NOPA_Cover_Letter_4-16-2021_ADA.docx.

2 EJ indicators developed by the U.S. EPA, Office of Policy. Available at https://www.epa.gov/ejscreen/environmental-justice-indexes-ejscreen. See Appendix A for staff definitions.

**Table 1: Light-Duty Vehicle Sector Project Details Along With EJ Indicators**

| Proposed Awardee | Project Title | Project Location | EJ Indicator(s) |
|---|---|---|---|
| EVmatch, Inc. | EVmatch Reservation-Based Shared EV Charging in Multi-Family Properties | Los Angeles County | Poverty, Minority, Unemployment |
| EVmatch, Inc. | EVmatch Reservation-Based Shared EV Charging in Multi-Family Properties | San Diego County | Minority |
| EVmatch, Inc. | EVmatch Reservation-Based Shared EV Charging in Multi-Family Properties | Santa Clara County | Minority |
| FLO Services USA, Inc. | Unblocking Existing Utility Assets for Curbside EV Charging | 2224 16th St., Santa Monica, CA 90405 | Unemployment |
| FLO Services USA, Inc. | Unblocking Existing Utility Assets for Curbside EV Charging | 2121 16th St., Santa Monica, CA 90405 | Unemployment |
| FLO Services USA, Inc. | Unblocking Existing Utility Assets for Curbside EV Charging | 2569 Saturn Ave., Huntington Park, CA 90255 | Poverty, Minority, Unemployment |
| FLO Services USA, Inc. | Unblocking Existing Utility Assets for Curbside EV Charging | 2619 Zoe Ave., Huntington Park, CA 90255 | Poverty, Minority, Unemployment |
| FLO Services USA, Inc. | Unblocking Existing Utility Assets for Curbside EV Charging | 2616 Clarendon Ave., Huntington Park, CA 90255 | Poverty, Minority, Unemployment |
| FLO Services USA, Inc. | Unblocking Existing Utility Assets for Curbside EV Charging | 6409 Miles Ave., Huntington Park, CA 90255 | Poverty, Minority, Unemployment |
| FLO Services USA, Inc. | Unblocking Existing Utility Assets for Curbside EV Charging | 6650 Miles Ave., Huntington Park, CA 90255 | Poverty, Minority, Unemployment |
| HummingbirdEV | The Advanced Vehicle-to-Vehicle Mobile Charging Project | 3400 Ettie Street, Oakland, CA 94608 | Poverty |
| Powerflex Systems | EV Driver Response, Informed, and Validated Ecosystem (EVDRIVE) | Hopkins Drive and Voigt Lane, San Diego, CA 92037 | Poverty and Minority |
| Powerflex Systems | EV Driver Response, Informed, and Validated Ecosystem (EVDRIVE) | 2880 Torrey Pines Scenic Drive, La Jolla CA 92037 | None |
| Rhombus Energy Solutions | Demonstrate Solar-Storage-Equipped Quad-Port High-Power Vehicle-to-Vehicle Mobile Charging Solution for Light-Duty EVs in the City of Chula Vista | 365 F Street, Chula Vista, CA 91910 | None |

Source: California Energy Commission staff

**Table 2: Medium- and Heavy-Duty Vehicle Sector Project Details Along With EJ Indicators**

| Proposed Awardee | Project Title | Project Location | EJ Indicator(s) |
|---|---|---|---|
| Electriphi, Inc. | The Sacramento Electric School Bus – Vehicle-Grid-Integration Project (ESB-VGI Project) | 3222 Winona Way Suite 200, North Highlands, CA 95660 | Poverty |
| Electriphi, Inc. | The Sacramento Electric School Bus – Vehicle-Grid-Integration Project (ESB-VGI Project) | 1400 B Grand Avenue, Sacramento CA 95838 | Poverty |
| Momentum Dynamics Corporation | Innovative Wireless Charging for Public Transit Project | 6400 Cutting Blvd., El Cerrito, CA 94530 | Minority |
| Momentum Dynamics Corporation | Innovative Wireless Charging for Public Transit Project | 2000 Cadenasso Drive, Fairfield, CA 94533 | None |
| Momentum Dynamics Corporation | Innovative Wireless Charging for Public Transit Project | 177 Main St., Suisun City, CA 94585 | None |
| Momentum Dynamics Corporation | Innovative Wireless Charging for Public Transit Project | Allison Drive and Travis Way, Vacaville, CA 95687 | None |
| Momentum Dynamics Corporation | Innovative Wireless Charging for Public Transit Project | 311 Sacramento Street, Vallejo, CA 94590 | Poverty |
| Momentum Dynamics Corporation | Innovative Wireless Charging for Public Transit Project | 200 Ygnacio Valley Rd., Walnut Creek, CA 94596 | None |
| Momentum Dynamics Corporation | Innovative Wireless Charging for Public Transit Project | York Street, Vallejo, CA 94590 | Poverty |
| Wattever, Inc. | 21st Century Truck Stop – 1st Public MD/HD Charging Station in California | 18812 Highway 65, Bakersfield, CA 93308 | Poverty, Minority, Unemployment |

Source: California Energy Commission staff

Funding for these projects is contingent upon approval at a publicly noticed CEC business meeting and execution of a grant agreement.

## Public Comment

As provided by Title 13 CCR Section 2343, a 30-day public review period applies to this LHI report from the date it is posted on the CEC website. The original posting date for this report is at https://www.energy.ca.gov/altfuels/documents/.

The CEC encourages comments by email. Please include your name or organization's name in the name of the file. Send comments in either Microsoft® Word format (.doc) or Adobe® Acrobat® format (.pdf) to FTD@energy.ca.gov.

The public can email comments to FTD@energy.ca.gov or send them to:

California Energy Commission
Fuels and Transportation Division
1516 Ninth Street, MS-44
Sacramento, CA 95814-5512

All written comments will become part of the public record and may be posted to the internet.

News media should direct inquiries to the Media and Public Communications Office at (916) 654-4989 or by email at mediaoffice@energy.ca.gov.

# CHAPTER 2:
# Project Description

As part of the GFO-20-605 process for selecting projects, applicants must provide LHI information for their proposed project and location(s). This chapter summarizes the LHI information submitted by the awardees regarding the expected impact of their project on local communities and the outreach efforts they have made to engage disadvantaged communities[3] or other local communities. Disadvantaged communities are identified by the awardees using the CalEnviroScreen[4] screening tool developed by the Office of Environmental Health Hazard Assessment (OEHHA) to identify communities facing the burdens of pollution and socioeconomic disadvantage.

## EVmatch, Inc.

EVmatch's proposed project, titled "EVmatch Reservation-Based Shared EV Charging in Multi-Family Properties," will deploy 120 shared Level 2 electric vehicle charging stations, focusing on multiunit dwellings (MUDs) across Los Angeles, San Diego, and Santa Clara Counties. Over the project timeline, 20 to 30 sites will be selected for each of these counties, with a focus on areas with a high proportion of minority residents and the goal to increase equity in EVSE deployment and access for MUDs. These chargers will be made available to the public and lead to increased EV usage. EVmatch does not anticipate negative health impacts from criteria pollutants associated with this infrastructure and estimates 12,016 metric tons of carbon dioxide equivalent ($CO_2e$) greenhouse gas (GHG) reductions over the project lifespan.

EVmatch will use a combination of digital and physical forms of outreach to notify, educate, and collaborate with communities about the project. EVmatch will hire staff as a local point-of-contact to each targeted county to manage the project and provide outreach to users. Ongoing marketing and technical assistance will be provided to site hosts to ensure chargers are online, are working properly, and have desirable site-specific settings. Various outreach measures will be used to increase local awareness of new EV charging access, including digital and physical marketing campaigns and marketing charger locations on open-source charging station locator platforms.

3 Disadvantaged communities are identified using the CalEnviroScreen tool, which ranks U.S. Census tracts based on geographic, socioeconomic, public health and environmental hazard criteria.

4 See Office of Environmental Health Hazard Assessment website, https://oehha.ca.gov/calenviroscreen.

## FLO Services USA, Inc.

FLO Services USA's proposed project, titled "Unlocking Existing Utility Assets for Curbside EV Charging," will establish curbside EV charging infrastructure, focusing on priority populations and MUD locations that would otherwise not have access to off-street EV charging stations. This project will support increased access of EV charging access and increase the adoption of EVs. The project will incorporate at least 12 Level 2 chargers and at least one direct current (DC) fast charger. DC fast chargers provide charging through a direct current plug, typically at a rate of 50 kilowatts or higher. These chargers will be made available to the public and are not expected to generate negative health impacts from criteria pollutants. Flo Services estimates 8,135 metric tons of $CO_2e$ GHG reductions over the EVSE lifespan.

Flo Services will use a combination of digital and physical forms of outreach to notify, educate, and collaborate with communities about the project. Phone banking, workshops, and webinars are also planned, which would include an overview of EVs, ways to charge properly, ways to locate charging stations, charging levels, and available rebates and incentives for used and new EV purchases. Flyer distribution will be used to increase awareness locally, and resident surveys will be used to assess the level of interest and knowledge of EVs, project satisfaction, and feedback.

## HummingbirdEV

HummingbirdEV's proposed Advanced Vehicle-to-Vehicle Mobile Charging Project will demonstrate two all-electric vehicle-to-vehicle (V2V) mobile charging units to replace conventionally fueled tow trucks for EVs. This project will help ease range anxiety of EV drivers, thereby increasing EV adoption; additionally, the all-electric design of the project helps reduce criteria pollutants that are associated with tow trucks. HummingbirdEV estimates 2,900 metric tons of $CO_2e$ GHG reductions over the project lifetime. The mobile chargers will have visible decals that will advertise the availability and use to the public. They will also partner with AAA, a national vehicle towing and emergency services company, to help deploy outreach and build consumer awareness of the V2V mobile chargers for EV emergency situations.

## Powerflex Systems

Powerflex Systems' proposed EV Driver Response, Informed, and Validated Ecosystem (EVDRIVE) will convert 15 behind-the-meter parking stalls to create a multipurpose workplace/public EVSE plaza consisting of six DC fast chargers and nine Level 2 chargers with on-site battery energy storage. The objective is to demonstrate PowerFlex's Adaptive Load Management technology, and the goals are to increase charging accessibility and minimize EVSE operation, installation, and purchase costs. The applicant did not provide information on expected emissions generated from installation or reduced from operations. However, CEC staff does not anticipate significant criteria emissions and expects the project to improve local air quality and lead to reductions in GHG emissions.

## Rhombus Energy Solutions

Rhombus Energy Solutions' proposed project, titled "Demonstrate Solar-Storage-Equipped Quad-Port High-Power Vehicle-to-Vehicle Mobile Charging Solution for Light-Duty EVs in the City of Chula Vista," will demonstrate mobile electric vehicle charging systems housed in an electric van. The system does not require any infrastructure installation and will not emit criteria pollutants. The technology has a target service life of 10 years and uses solar power generated to provide EVs with mobile charging service. Rhombus Energy Solutions estimates 50 metric tons of $CO_2e$ GHG reductions over the project demonstration period.

Outreach to the community will be continuous. Outreach methods include brochures and notices posted at the base location, the Chula Vista Public Library, to increase awareness of the project. A town hall meeting will also be held at the start of the project to provide project goals, a description of the technology, and operation hours.

## Electriphi, Inc.

Electriphi's proposed Sacramento Electric School Bus – Vehicle-Grid-Integration Project (ESB-VGI Project) will demonstrate advanced utility and grid-integrated smart charging management for an existing electric school bus fleet across two school districts. At each site, 10 DC fast chargers will be installed with two-way charging capability for more efficient energy management. The project will also support greater clean mobility options in the form of eight carshare and four vanpool zero-emission vehicles. Moreover, the project plans to replace 138 of the non-bus light- and medium-duty conventionally fueled vehicle fleet with EV alternatives, including zero-emission maintenance and service vehicles. The applicant did not provide information on expected emissions generated from installation or reduced from operations. However, CEC staff does not anticipate significant criteria emissions and expects the project to improve local air quality and lead to reductions in GHG emissions.

Electriphi will use a combination of means of outreach, including traditional and trade media, sharing of information through online platforms, presentations at quarterly intradistrict meetings, and webinars or workshops. The long-term goal is to take the insights gained from this case study to reassure other fleet operators and decision makers that fleet electrification is economically advantageous and operationally viable.

## Momentum Dynamics Corporation

Momentum Dynamics' proposed Innovative Wireless Charging for Public Transit Project will enable electrification of SolanoExpress' routes and aid in the electrification of other transit agency fleets. This project will deploy 13 EV buses and install seven wireless DC fast chargers. These actions will support the creation of a replicable charging model and roadmap for California public transit agencies and accelerate the commercial deployment of transformative wireless EV charging for future applications. This project will lead to overall criteria pollution reductions, and Momentum Dynamics estimates 35,031 metric tons of $CO_2e$ GHG reductions over the 15-year equipment lifetime.

Momentum Dynamics will use bus vinyl wraps or paint design to advertise the project and will use transit centers and depots for education and outreach to create awareness and support for riders and the surrounding community.

## Wattever, Inc.

Wattever's proposed project, titled "21st Century Truck Stop — 1st Public MD/HD Charging Station in California," will commission and construct a zero-emission battery-electric truck stop that, once in operation, will provide significant reductions in criteria air pollutants and greenhouse gases. This construction will support medium- and heavy-duty vehicle electrification, increase adoption of longer-range EVs, and ensure equity among fleets that lack the physical and financial resources for on-site charging infrastructure. The construction of this truck stop is expected to generate from 136 to 181 metric tons of emissions from equipment used. However, these emissions are only for the initial construction, and no further construction would be expected. This project will lead to overall criteria pollution reductions and an estimated 18,507 metric tons of CO2e GHG reductions over the 15-year equipment lifetime. In addition, this project will rely on solar power generation and the use of battery energy storage, so the creation of electricity to charge the electric trucks using the truck stop will not negatively affect local air quality.

Wattever will use a combination of digital and physical forms of outreach to notify and educate medium- and heavy-duty fleets about the project. This outreach includes the creation of a website, marketing documents, and a network mobile application. On-site staff training will be conducted for troubleshooting and providing fleets and users technical assistance. A community advisory board will be created to provide a channel for communication between the community and the project organizers to conduct regular community meetings to solicit feedback, provide project updates, and promote related employment opportunities.

# CHAPTER 3:
# Location Analysis

Under CCR Title 13 (CCR Section 2343), this LHI report describes projects proposed for Clean Transportation Program funding that may require a conditional use permit, discretionary permit, or California Environmental Quality Act (CEQA) review. The CEC interprets "permits" to suggest discretionary and conditional use permits because they require a review of potential impacts to communities and the environment before issuance. Since ministerial-level permits do not assess public health-related pollutants, CEC staff does not assess projects requiring only ministerial-level permits in this report.

This LHI report analyzes the project locations by applying the Environmental Justice Screening Method (EJSM).[5] A proposed project location must meet a two-part environmental and demographic standard for staff to identify it as a high-risk community project location. The environmental standard uses California Air Resources Board (CARB) air quality monitoring data on nonattainment[6] status for areas with a high concentration of air pollutants. The demographic standard uses data from the California Employment Development Department's *Monthly Labor Force Data*[7] and the U.S. Census Bureau's *American Community Survey*[8] data on age, poverty, race, and unemployment.

## Environmental Standard

Based on CARB air quality monitoring data,[9] each project location is within a nonattainment zone for either ozone, particulate matter[10] 2.5 microns in diameter or less ($PM_{2.5}$), or particulate matter 10 microns in diameter ($PM_{10}$). This finding indicates that there may be existing poor air quality where the proposed projects are located.

## Demographic Standard

Staff finds that the proposed projects in Bakersfield, Huntington Park, and Los Angeles County meet the criteria for a high-risk community project location as they exceed the demographic

5 CARB, *Air Pollution and Environmental Justice, Integrating Indicators of Cumulative Impact and Socio-Economic Vulnerability Into Regulatory Decision-Making*, 2010. (Sacramento, California) Contract authors: Manuel Pastor Jr., Ph.D., Rachel Morello-Frosch, Ph.D., and James Sadd, Ph.D.

6 Nonattainment area is a geographic area identified by the U.S. EPA or CARB or both as not meeting either National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards CAAQS standards for a given pollutant. See https://ww3.arb.ca.gov/desig/adm/adm.htm.

7 Employment Development Department Labor Force Data, https://www.labormarketinfo.edd.ca.gov/file/lfmonth/countyur-400c.pdf.

8 U.S Census Bureau American Community Survey, https://data.census.gov/cedsci/.

9 See CARB air quality monitoring data, https://ww3.arb.ca.gov/desig/adm/adm.htm.

10 *Particulate matter* is unburned fuel particles that form smoke or soot and stick to lung tissue when inhaled. The number following "PM" represents particle size in micrometers.

standard threshold for more than one EJ indicator (Table 3). The project locations also meet the environmental standard due to existing poor air quality.

**Table 3: EJ Indicators by Project Location City Demographic**

| Site Location | Below Poverty (2019) | Black or African American (2019) | American Indian and Alaska Native (2019) | Asian and Native Hawaiian and Pacific Islander (2019) | Hispanic or Latino Race (2019) | Persons Under 5 Years of Age (2019) | Persons Over 65 Years of Age (2019) | Unemployment (March 2021) |
|---|---|---|---|---|---|---|---|---|
| **California** | **11.8%** | **6.5%** | **1.6%** | **16.0%** | **39.4%** | **6.0%** | **14.8%** | **7.9%** |
| **EJ Indicator Threshold** | **11.8%** | **30%** | **30%** | **30%** | **30%** | **26.0%** | **34.8%** | **7.9%** |
| **Bakersfield** | 17.4%* | 7.6% | 0.9% | 7.8% | 50.2%* | 8.3% | 10.0% | 11.1%* |
| Chula Vista | 10.5% | 13.4% | 1.3% | 6.1% | 18.5% | 6.0% | 16.5% | 6.9% |
| El Cerrito | 8.5% | 5.0% | 0.9% | 30.9%* | 10.2% | 6.0% | 19.8% | 6.8% |
| Fairfield | 8.6% | 15.2% | 0.5% | 18.2% | 29.3% | 7.3% | 12.2% | 7.8% |
| **Huntington Park** | 23.6%* | 1.2% | 0.7% | 0.5% | 97.1%* | 7.7% | 9.2% | 10.9%* |
| La Jolla | 10.5% | 13.4% | 1.3% | 6.1% | 18.5% | 6.0% | 16.5% | 6.9% |
| **Los Angeles County**** | 13.4%* | 9.0% | 1.4% | 15.8% | 48.6%* | 5.8% | 14.1% | 10.9%* |
| North Highlands | 25.0%* | 12.9% | 0.8% | 6.9% | 26.2% | 7.9% | 11.5% | 7.4% |
| Oakland | 16.7%* | 23.8% | 0.9% | 16.1% | 27.0% | 6.3% | 13.1% | 6.5% |
| Sacramento | 16.6%* | 13.2% | 0.7% | 20.6% | 28.9% | 6.6% | 13.1% | 7.4% |
| San Diego | 12.8%* | 6.4% | 0.5% | 17.1% | 30.3%* | 5.9% | 12.6% | 6.9% |
| San Diego County** | 10.3% | 5.5% | 1.3% | 13.2% | 34.1%* | 6.1% | 14.5% | 6.9% |
| Santa Clara County** | 6.1% | 2.8% | 1.2% | 39.5%* | 25.0% | 5.8% | 13.9% | 5.1% |
| Santa Monica | 9.9% | 4.5% | 0.3% | 10.3% | 15.4% | 4.7% | 17.8% | 10.9%* |
| Suisun City | 10.5% | 13.5% | 1.3% | 6.1% | 18.5% | 6.0% | 16.5% | 7.8% |
| Vacaville | 7.4% | 10.1% | 0.7% | 8.7% | 24.8% | 5.8% | 14.0% | 7.8% |
| Vallejo | 12.6* | 20.3% | 0.4% | 24.9% | 26.3% | 6.2% | 15.8% | 7.8% |
| Walnut Creek | 5.3% | 2.1% | 0.2% | 15.8% | 9.1% | 4.9% | 29.6% | 6.8% |

Sources: CEC staff, Employment Development Department, and U.S. Census Bureau. *The city/county names in **bold** indicate a high-risk community, while the asterisk (*) next to the percentages indicate which categories exceed the EJ indicator threshold. Threshold percentages with a dagger (†) indicate the threshold is met when greater than or equal to this value. The double-asterisk (**) signifies aggregate county-level data corresponding to the selected counties for planned site by EVmatch.

## Summary

If funded, the proposed projects would result in expanded innovative EV charging and infrastructure. The project will support the conversion and acceleration from conventionally fueled vehicles to EVs in both the light-duty vehicle and medium-/heavy-duty fleet space. As greater EV adoption takes place, there will be reductions in criteria air pollutants and GHG emissions.

Based on EJSM standards, staff has identified the Bakersfield, Huntington Park, and Los Angeles County projects as high-risk community locations. This finding indicates that the communities near the proposed project location are at a higher risk of adverse health effects from pollution. However, staff does not anticipate a significant increase in local pollutants, and the project awardees identify no major construction that would generate criteria emissions or pollutants. Staff's analysis found no indication that there would be adverse community health impacts associated with the identified projects in this LHI report as selected for Clean Transportation Program grant funding. Moreover, a net benefit from these proposed projects may be realized for the surrounding communities by reducing harmful criteria pollutants and supporting infrastructure to replace fossil fuel-powered bus fleets.

# GLOSSARY

AIR QUALITY IMPROVEMENT PROGRAM — Established by the California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007 (AB 118, Statutes of 2007, Chapter 750), is a voluntary incentive program administered by CARB to fund clean vehicle and equipment projects, research of biofuels production.

CALIFORNIA CODE OF REGULATIONS — The official compilation and publication of the regulations adopted, amended, or repealed by state agencies under the Administrative Procedure Act (APA). Properly adopted regulations that have been filed with the Secretary of State have the force of law.

CALIFORNIA ENVIRONMENTAL QUALITY ACT — A statute that requires state and local agencies to identify the significant environmental impacts of their actions and avoid or reduce those impacts, if feasible.

CALENVIROSCREEN — A screening tool that evaluates and ranks census tracts in California based on potential exposures to pollutants, adverse environmental conditions, socioeconomic factors, and prevalence of certain health conditions.

CRITERIA AIR POLLUTANT — An air pollutant for which acceptable levels of exposure can be determined and for which the U.S. Environmental Protection Agency has set an ambient air quality standard. Examples include ozone ($O_3$), carbon monoxide (CO), nitrogen oxides ($NO_X$), sulfur oxides ($SO_X$), and particulate matter ($PM_{10}$ and $PM_{2.5}$).

DC FAST CHARGERS — Equipment that provides charging through a direct current plug, typically at a rate of 50 kilowatts or higher to facilitate recharging of electric vehicles.

DISADVANTAGED COMMUNITIES — A designation by the California Environmental Protection Agency used to identify areas disproportionately affected by environmental pollution or hazards due to geographic, socioeconomic, public health, and environmental hazard present.

ENVIRONMENTAL JUSTICE — The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

ENVIRONMENTAL JUSTICE SCREENING METHOD — A screening approach for combining environmental and demographic indicators to inform agency outreach and engagement practices regarding environmental justice.

GRANT FUNDING OPPORTUNITY — Where the California Energy Commission offers applicants an opportunity to receive grant funding for projects meeting the solicitation requirements.

LEVEL 2 CHARGER — Equipment that provides charging through a 240-volt (typical in residential applications) or 208-volt (typical in commercial applications) alternative-current plug. This equipment requires a dedicated 40-amp circuit.

LOCALIZED HEALTH IMPACTS — Potential health impacts to communities.

METRIC TON — A unit of weight equal to 1,000 kilograms or 2,205 pounds.

PARTICULATE MATTER — Any material besides pure water that exists in a solid or liquid state in the atmosphere. The size of particulate matter can vary from coarse, wind-blown dust particles to fine particle combustion products.

ZERO-EMISSION VEHICLE — A vehicle that produces no pollutant emissions from the onboard source of power.

# LIST OF ACRONYMS

| | |
|---|---|
| AB | Assembly Bill |
| AQIP | Air Quality Improvement Program |
| CalEPA | California Environmental Protection Agency |
| CARB | California Air Resources Board |
| CCR | California Code of Regulations |
| CEQA | California Environmental Quality Act |
| CNG | Compressed Natural Gas |
| CO | carbon monoxide |
| CO2 | carbon dioxide |
| EJ | environmental justice |
| EJSM | Environmental Justice Screening Method |
| EVSE | electric vehicle supply equipment |
| FCEB | fuel cell electric bus |
| GFO | grant funding opportunity |
| HC | hydrocarbons |
| LHI | localized health impact |
| NOPA | notice of proposed award |
| NOx | nitrogen oxide |
| OEHHA | Office of Environmental Health Hazard Assessment |
| $PM_{2.5}$ | particulate matter; 2.5 microns or smaller in diameter |
| $PM_{10}$ | particulate matter; 10 microns in diameter |
| SB | Senate Bill |
| SOx | sulfur oxide |
| U.S. EPA | United States Environmental Protection Agency |
| VOC | volatile organic compound |
| ZEV | zero-emission vehicle |

# APPENDIX A:
# Localized Health Impacts Report Method

This LHI Report assesses the potential health impacts on communities from projects proposed to receive Clean Transportation Program funding. This LHI Report is prepared under the *California Code of Regulations, Title 13, Motor Vehicles, Chapter 8.1 (CCR Section 2343)*:

"(6) Localized health impacts must be considered when selecting projects for funding. The funding agency must consider EJ consistent with state law and complete the following:

(A) For each fiscal year, the funding agency must publish a staff report for review and comment by the public at least 30 calendar days prior to the approval of projects. The report must analyze the aggregate locations of the funded projects, analyze the impacts in communities with the most significant exposure to air contaminants or localized air contaminants, or both, including, but not limited to, communities of minority populations or low-income populations, and identify agency outreach to community groups and other affected stakeholders.

(B) Projects must be selected and approved for funding in a publicly noticed meeting."

This LHI Report is not intended to be a detailed pollution analysis of proposed projects nor is it intended to substitute for the environmental review conducted during CEQA. This LHI report includes staff's application of the EJSM developed by the U.S. EPA to help identify projects in areas where social vulnerability indicators, high exposure to pollution, and greater health risks are present.

CEC staff identifies high-risk community project locations using data from CARB, the U.S. Census Bureau, and other public agencies. The data are analyzed to assign EJ indicators for each project location specified in the LHI Report. The proposed project location must meet a two-part standard:

**Part 1 – Environmental Standard:**

- Communities located within an air quality nonattainment zone for ozone, PM 2.5, or PM 10, as designated by CARB for criteria pollutants.

**Part 2 – Demographic Standard:**

- Communities having more than one of the following EJ indicators for (1) minority, (2) poverty, (3) unemployment, and (4) age. The EJ indicator thresholds is defined by staff as:
    1) A minority subset represents more than 30 percent of a given city's population.
    2) A city's poverty level exceeds the state average poverty level.
    3) The city (or county if city data is unavailable) unemployment rate exceeds the state average unemployment rate.

4) The percentage of people living in a city who are younger than 5 years of age or older than 65 years of age is 20 percent higher than the state average for persons under 5 years of age or over 65 years of age.