



California Energy Commission

**STAFF REPORT** 

# Localized Health Impacts Report

Projects Awarded Funding Under Solicitation SOL-2404-363 — Advanced Technology Demonstration and Pilot Projects

July 2024 | CEC-600-2024-053



# **California Energy Commission**

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#### DISCLAIMER

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### PREFACE

This Localized Health Impacts Report (LHI Report) assesses the local health impacts from projects proposed to receive Clean Transportation Program (CTP) or similar funding. Preventing or minimizing health risks from pollution is vital in any community, but especially in those that are at high-risk due to preexisting poor air quality and other factors. Environmental justice (EJ) communities, low-income communities, and minority communities are considered the most impacted by any project that could increase air pollution. Therefore, they are considered "high-risk communities." This LHI Report:

- Identifies proposed projects located in high-risk communities.
- Analyzes the potential health impacts to communities from project-related emissions or pollution, based on information submitted by the project awardees.
- Describes the plans for community outreach for each project.

Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007), which created the CTP, also directed the California Air Resources Board (CARB) to develop guidelines to ensure the CTP improves air quality. CARB's *AB 118 Air Quality Guidelines*, approved in 2008, are published in the California Code of Regulations (CCR), Title 13, Motor Vehicles, Chapter 8.1. Those guidelines require the CEC to issue LHI Reports (13 CCR Section 2343):

"(6) Localized health impacts must be considered when selecting projects for funding. The funding agency must consider environmental justice 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 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."

In addition, the CEC issues LHI Reports for certain projects that are similar to CTP projects but do not receive CTP funding.

The CEC publishes this LHI Report at least 30 days before approving projects at a publicly noticed meeting. This report includes projects 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 review public health–related pollutants, CEC staff does not assess projects requiring only ministerial-level permits in this report.

### ABSTRACT

This Localized Health Impacts Report describes the potential health impacts to communities from projects seeking California Energy Commission (CEC) funding under Solicitation SOL-2404-363. This solicitation, a partnership between the CEC and California Air Resources Board (CARB), seeks to accelerate the next generation of advanced technology vehicles, equipment, or emission controls which are not yet commercialized by funding the purchase and demonstration of zero-emission aviation, locomotive, and marine vehicles, as well as off-road and green zone vehicles. The CEC provided up to \$50 million to fund the infrastructure portion of projects that were awarded in the CARB solicitation process. Under California Code of Regulations Title 13, Section 2343, this report is available for public comment for 30 days before projects can be approved at a publicly noticed business meeting.

CEC staff has proposed six projects for awards under Solicitation SOL-2404-363. Based on project site information provided by the awardees, 7 out of 10 communities where these projects are located are considered high-risk communities. Staff does not anticipate a net increase in the pollution burden for the communities where these projects are located.

**Keywords:** Air pollution, California Air Resources Board (CARB), Assembly Bill (AB) 118, California Environmental Quality Act (CEQA), electric vehicle (EV), electric vehicle supply equipment (EVSE), environmental justice (EJ) indicators, Environmental Justice Screening Method (EJSM), localized health impacts (LHI)

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### **EXECUTIVE SUMMARY**

The California Energy Commission's (CEC's) Clean Transportation Program provides funding to support innovation and accelerate the development and implementation of advanced transportation and fuel technologies. The CEC also provides funding from programs that are similar to but separate from the Clean Transportation Program. An example of a similar program is the funding described in Section 36 of Assembly Bill 211 (Committee on Budget, Chapter 574, Statutes of 2022).

Under California Code of Regulations Title 13, Section 2343, this Localized Health Impacts Report describes the infrastructure projects proposed for funding that may require certain kinds of permits or environmental review. These permits include conditional-use permits, airquality 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 Clean Transportation Program funding.

This report focuses on how project-related emissions or pollution could affect community health. Environmental justice communities, low-income communities, and minority communities are at higher risk of harm from pollution. Project locations in these communities are considered "high-risk community project locations." CEC staff identifies high-risk communities using a combination of demographic and environmental data. Environmental data for air quality come from the California Air Resources Board. Demographic data are from the U.S. Census Bureau and the California Employment Development Department.

CEC staff proposes six projects for Clean Transportation Program or similar grant funding awards under Solicitation SOL-2404-363, "Advanced Technology Demonstration and Pilot Projects." This initiative seeks to accelerate the next generation of advanced technology vehicles, equipment, or emission controls which are not yet commercialized. The solicitation funds the purchase and demonstration of emerging opportunities that include zero-emission aviation, locomotive, and marine vehicles, as well as off-road and vehicles for use in Green Zones or community buffers from major sources of air pollution.

Staff analyzed localized health impact information submitted by the six project awardees. Based on project site information provided by the awardees, 7 of the 10 communities where proposed projects are located are considered high-risk. Community members near the proposed project sites may be at a higher risk of negative health impacts from pollution. However, staff does not anticipate a net increase in the pollution burden for the communities where these projects are located. Instead, staff expects the projects to reduce pollution levels.

# CHAPTER 1: Projects Proposed for Funding

#### Background

This solicitation uses the processes established under the Clean Transportation Program (CTP) and Assembly Bill (AB) 118 (Núñez, Chapter 750, Statutes of 2007). AB 118, amended by Assembly Bill 109 (Núñez, Chapter 313, Statutes of 2008), authorizes the California Energy Commission (CEC) 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 126 (Reyes, Chapter 319, Statutes of 2023) most recently reauthorized the CTP through July 1, 2035. Section 36 of Assembly Bill 211 (Committee on Budget, Chapter 574, Statutes of 2022) provides funding that is related to but separate from the CTP.

On July 14, 2023, the California Air Resources Board (CARB) released a competitive grant solicitation, "Advanced Technology Demonstration and Pilot Projects" (SOL-2404-363). SOL-2404-363 offered \$175 million from CARB's Funding Plan for Clean Transportation Incentives for projects to help accelerate the next generation of advanced technology vehicles, equipment, or emission controls which are not yet commercialized. Eligible project activities include the purchase and demonstration of emerging opportunities such as zero-emission aviation, locomotive, and marine vehicles, as well as off-road and green zone vehicles. Demonstration projects are those that are beyond the research and development phase and typically within 3 years of commercialization. Pilot projects are early commercial deployments intended to enhance market introduction and bring down costs. SOL-2404-363 will support a wide array of zero-emission off-road equipment and vessel projects as well as Green Zones,<sup>1</sup> and is intended to advance innovative and economically viable technologies into the commercial marketplace while also supporting the State's equity and emission reduction goals.

The CEC offered an additional \$50 million to fund the infrastructure portion for the projects that were awarded in the CARB solicitation process.

### **Projects Selected**

On March 29, 2024, the CEC posted a notice of proposed awards (NOPA)<sup>2</sup> identifying the six projects awarded grant funding for purchase and installation of infrastructure under SOL-2404-363. Several of the projects have multiple locations. This report assesses the locations of each of those projects. **Error! Reference source not found.** lists the proposed project locations f

03/ATDPP\_NOPA\_Cover\_Letter\_2024-03-29.docx, and table of awardees available at

<sup>1</sup> *Green Zones* are a broad category of projects that help a city, municipality, or group of cities transition certain operations to zero emissions.

<sup>2</sup> Landberg, Earl. 2024. "Notice Of Proposed Awards." California Energy Commission. Accessed June 26, 2024. Cover letter available at https://www.energy.ca.gov/sites/default/files/2024-

https://www.energy.ca.gov/sites/default/files/2024-03/ATDPP\_NOPA\_Results\_Table2024-03-29.xlsx.

or each of the awardees and the corresponding environmental justice (EJ) indicators. EJ indicator definitions are in Chapter 3 of this report, and EJ indicator analysis is in **Error! R eference source not found.** In some cases, the city listed in the postal address for a project may differ from the geographic entity assigned by the U.S. Census Bureau. In these cases, the census location (county, place, or census designated place) used for EJ indicator analysis is listed in parentheses in **Error! Reference source not found.**.

Proposed Awardee	Project Title Project Location		EJ Indicator(s)
CALSTART	California Advanced Technology Portable Off-Road Worksite Energy Resource Hub (CAT POWER Hub)	Sacramento County APN 063-0040-041 (northeast of 9721 Farm Ln, Sacramento, CA 95827) (Sacramento County)	Poverty
Center for Transportation and the Environment	Megawatt Charging System: Beachheads to Marine Decarbonization	425 S Palos Verdes St, San Pedro, CA 90731 (Los Angeles city)	Minority, Poverty, Unemployment
Center for Transportation and the Environment	Megawatt Charging System: Beachheads to Marine Decarbonization	415 W Ocean Blvd, Long Beach, CA 90802	Minority, Poverty, Unemployment
Center for Transportation and the Environment	Megawatt Charging System: Beachheads to Marine Decarbonization 1960 National Ave, Sar Diego, CA 92113		Minority
Center for Transportation and the Environment	Glendale Municipal Green Zone Construction Work Crew	1138 E Broadway, Glendale, CA 91205	Age, Poverty, Unemployment
Center for Transportation and the Environment	Glendale Municipal Green Zone Construction Work Crew	1220 Cottage Grove Ave, Glendale, CA 91205	Age, Poverty, Unemployment
Center for Transportation and the Environment	Glendale Municipal Green Zone Construction Work Crew	335 W Windsor Rd, Glendale, CA 91204	Age, Poverty, Unemployment
Foundation for California Community Colleges California Zero-Emission Aviation Demonstration Project		16021 CA-4, Holt, CA 95234 (San Joaquin County)	Minority, Poverty, Unemployment
Port of Oakland	Port of Oakland Bay Area Zero-Emissions Tug		Poverty
Western Riverside Council of Governments	Western Riverside ouncil of Governments Western Riverside County Municipal Green Zones Pilot Project		Age, Minority, Poverty, Unemployment
Western Riverside Council of Governments	/estern Riverside ncil of Governments Western Riverside County Municipal Green Zones Pilot Project		Minority, Poverty, Unemployment

#### Table 1: Project Details With EJ Indicators

Proposed Awardee	Project Title	Project Location	EJ Indicator(s)
Western Riverside Council of Governments	Western Riverside County Municipal Green Zones Pilot Project	4293 Orange St, Riverside, CA 92501	Minority, Poverty
Western Riverside Council of Governments	Western Riverside County Municipal Green Zones Pilot Project	4080 Lemon St, Riverside, CA 92501	Minority, Poverty

Source: CEC 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 of the 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 <u>original posting date for this</u> <u>report</u> is at https://www.energy.ca.gov/programs-and-topics/programs/clean-transportation-program/localized-health-impacts-reports.

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

A hard copy can be mailed to:

California Energy Commission Fuels and Transportation Division 715 P 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 <u>mediaoffice@energy.ca.gov</u>.

# CHAPTER 2: Project Descriptions

As part of the SOL-2404-363 process for selecting projects, applicants must provide LHI information for their proposed project and location. This information includes the expected impact of the project on local communities and outreach the applicant has made to engage disadvantaged communities or other local communities. This chapter summarizes the information submitted by the awardees. The awardees identify disadvantaged communities using the CalEnviroScreen<sup>3</sup> screening tool developed by the Office of Environmental Health Hazard Assessment.

Applicants use different methods for estimating emissions reductions, so estimates may vary significantly between similar projects.

#### CALSTART, Inc.

CALSTART, Inc.'s proposed project, "The California Advanced Technology Portable Off-road Job Site Energy Resource Hub (CAT POWER Hub)," will develop a centralized, off-road job-site energy hub in Sacramento County to demonstrate solutions for zero-emission off-road equipment, in particular, charging in inaccessible or remote locations. The hub will provide grid energy resilience through solar and battery energy storage systems. By starting to electrify job sites, the CAT POWER Hub aims to demonstrate a technology ecosystem that reduces a total of 1,376 metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) and 1.8 tons of criteria pollutants over two years. Deploying advanced zero-emission machines and equipment to job sites also carries economic benefits for communities, such as job creation, specialized training and education, higher wage potential, enhanced worker health, local business opportunities, and economic resilience.

The community engagement program, led by Aura Planning, will focus on creating an inclusive training program to enable disadvantaged and underrepresented communities to participate in the green economy. The program will seek to target women, students, refugees, and veterans for recruitment as trainees. The program will rely on partnerships with Sacramento's Community Resource Project and other community organizations to develop a training module for zero-emission technologies based on the existing Zero Emission Vehicle Sustainable Equitable Employment Destination program. This collaboration will ensure that the project empowers local communities with sustainable job opportunities, higher wages, and benefits. The program is intended to enable participants to achieve vocational opportunities that provide for family-sustaining jobs but do not require a college education. To enable participation in the program for the above-mentioned groups, the program will provide various forms of assistance

<sup>3</sup> This tool ranks U.S. Census tracts based on geographic, socioeconomic, public health and environmental hazard criteria. See "<u>CalEnviroScreen</u>." Office of Environmental Health Hazard Assessment. Accessed June 28, 2024. Available at https://oehha.ca.gov/calenviroscreen.

such as transportation, soft skills, childcare, food, language, formerly incarcerated support, and housing. The project team will also conduct outreach with and provide internships to Delta College, Capitol College, Career Academy, Sacramento Academic Vocational Academy, and Gateway Charter Schools.

#### **Center for Transportation and the Environment**

Center for Transportation and the Environment's (CTE's) proposed project, "Glendale Municipal Green Zone Construction Work Crew," will pilot four types of heavy-duty electric vehicles to determine the usability of new and innovative electric vehicle technologies for construction work crews. Project partner the City of Glendale will acquire four electric vehicles, including a dump truck, excavator, pick-up truck, and wheel loader, to support construction work crews. Required supporting infrastructure for these vehicles includes three 19-kilowatt (kW), Level 2 dual-port depot chargers to support overnight charging for the excavator, wheel loader, and pick-up truck, and one 60-kW, Level 3 single-port direct-current fast charger to support the dump truck.

A virtual fleet training program and in-person vehicle training workshop will be provided for electric vehicle fleet operators and technicians. This group of electric vehicles will be sent to construction sites located within Glendale's disadvantaged communities. Community benefits from zero-emission technology include improving air quality and diminishing negative health impacts from construction emissions. The project is expected to reduce 0.41 tons of particulate matter ( $PM_{2.5}$ ), 0.30 tons of nitrogen oxides ( $NO_x$ ), 0.118 tons of reactive organic gas (ROG), 0.0318 tons of diesel particulate matter (DPM), and 694.25 metric tons of CO<sub>2</sub>e per year.

CTE and the City of Glendale will partner with the Glendale Environmental Coalition to conduct community outreach. The Glendale Environmental Coalition will use social media, email contacts, websites, and tabling to engage with the local community and priority populations to raise awareness about the project and associated benefits. They will also aid the City of Glendale with in-person meetings and family events. Construction vehicles from this project will be featured at Glendale's Touch a Truck event, a free event that allows children a chance to explore, climb, and touch large vehicles, raising awareness of the project and electric vehicles in general. Glendale Environmental Coalition will help organize the event and will be on site to help answer questions and provide further information about the equipment.

#### **Center for Transportation and the Environment**

Center for Transportation and the Environment's (CTE's) proposed project, "Megawatt Charging System: Beachheads to Marine Decarbonization," will develop a marine-ruggedized<sup>4</sup> megawatt charging system (MCS) standard for widespread industry adoption. The system will be introduced on two Crowley vessel platforms: a new plug-in battery-electric hybrid tug, to be

<sup>4</sup> Rugged construction is specifically designed to operate in challenging environmental conditions with extreme temperatures, water, dust, vibration, and other potential hazards. Marine-ruggedized equipment is built to endure extreme environmental conditions and protected internal components against water ingress.

deployed at the Port of Los Angeles, and an existing e-Wolf all-electric tug, deployed at the Port of San Diego. The project includes MCS charging infrastructure supported by microgrids at two locations at the Port of Los Angeles and upgrades to existing infrastructure at the Port of San Diego. In a separate project component, Cal Maritime plans to retrofit an existing training vessel to accommodate zero-emission powertrains for the training of students and the demonstration of emerging alternative fuel technologies for the maritime sector. Finally, the project also proposes deploying two electric shuttles and supporting infrastructure at the Chicano Park Museum. The project is expected to reduce emissions by 0.0108 tons of PM<sub>2.5</sub>, 0.0829 tons of NO<sub>x</sub>, 0.013 tons of ROG, 0.0004 tons of DPM, and 995.62 metric tons of greenhouse gas (GHG) per year.

CTE will partner with community-based organizations, the Coalition for Clean Air and the Chicano Park Museum and Cultural Center, in developing a community engagement strategy to support public outreach on the project benefits, emissions reductions and local economic benefits, and commercial product goals. The project will support workforce development through sponsoring scholarships, Electric Vehicle Infrastructure Training Program (EVITP) certifications, and community-based EV technician and maintenance training programs. Also, the Chicano Park Museum and Cultural Center aims to transform an EV into a lowrider to become an iconic symbol of sustainability in the community and mobile teaching tool. The attention the conversion will generate will help the community connect with the other clean-energy programs being initiated to inspire EV adoption and more sustainable living and to enjoy the environmental and economic benefits they can deliver.

#### Foundation for California Community Colleges

The Foundation for California Community Colleges' (FoundationCCC's) proposed project, "California Zero-Emission Aviation Demonstration Project," will demonstrate and deploy five Federal Aviation Administration (FAA) approved zero-emission autonomous aircraft for applying agricultural chemicals to crops. Pyka Inc. in Oakland developed and manufactured the autonomous aircraft, named the Pelican Spray. They will be powered by three off-grid solar mobile charging systems and supported by two zero-emission pick-up trucks for repositioning the aircrafts around the Victoria Island Farm in the San Joaquin Valley. Direct benefits to the surrounding priority populations include eliminating emissions, minimizing the amount of chemicals applied, and reducing chemical spray drift and noise pollution. The estimated avoided emissions over the 10-year project lifetime are 7,678 tons of  $CO_2e$ , 10.54 tons of  $NO_x$ , 2.01 tons of ROG, 0.35 tons of  $PM_{10}$ , and 0.031 tons of DPM for the proposed project.

FoundationCCC and Pyka will design a robust, equity-based workforce development and training plan to enable college students to gain meaningful paid work experience and placement in living-wage green jobs. Partnering colleges include Modesto Junior College, San Joaquin Delta College, and the Bay Area Community College Consortium, representing 28 colleges surrounding the San Francisco and Monterey Bay Areas. FoundationCCC staff will coordinate with community-based organization NPower to provide project updates and solicit community input to guide future student training and onboarding pathways, ensuring that local concerns are understood and considered while developing the workforce plan. Project

information regarding site demonstrations, scholarships, college program tracks and career talks, and ongoing opportunities for feedback will be shared through fact sheets and flyers, convenings and surveys, announcements in listservs through the colleges and other associations, and social media. Three listening sessions will be held in accessible and convenient locations to the local population for FoundationCCC and Pyka to hear directly from stakeholders and discuss training pathways to future green jobs.

#### Port of Oakland

The Port of Oakland's proposed project, "Bay Area Zero-Emissions Tug," will design and build a zero-emissions electric tugboat that will operate in the San Francisco Bay. The project will promote the first zero-emissions vessel deployment at the port and will be powered by a stateof-the-art microgrid system. The microgrid will consist of a containerized energy storage system and associated switchgear, sized to provide electric power to support purely batteryelectric tug daily operations. The electric tug demonstration will provide substantial environmental and workforce benefits while advancing the commercialization of zero-emissions harbor craft technology. Using American Navigation Company's existing Tier 2 harbor tug as a baseline, powered by electricity sourced from 82 percent renewable energy, the electric tug is estimated to save 302.2 metric tons of CO<sub>2</sub>e, 11.55 tons of NO<sub>x</sub>, 0.49 tons of ROG, 0.22 tons of DPM, and 0.21 tons of PM<sub>2.5</sub> per year.

In early 2023, port officials met with staff from Earthjustice, a nonprofit public interest environmental law organization, and the West Oakland Environmental Indicators Project (WOEIP) to discuss the pursuit of grants in partnership with the port's tenants to advance electrification efforts. WOEIP is a resident-led, community-based environmental-justice organization dedicated to achieving healthy homes, healthy jobs, and healthy neighborhoods for all who live, work, learn, and play in West Oakland. In addition to direct engagement with stakeholders in the community, the port implements best practices to ensure its activities are fully compliant with Title VI of the Civil Rights Act of 1964 and other equal access laws.

Further, the port will continue to engage the community through the Seaport Air Quality 2020 and Beyond Technical Working Group (TWG), which meets monthly to discuss Port projects that have the potential to reduce community impacts. The TWG includes West Oakland residents, environmental justice organizations, regulatory agencies, tenants, and industry organizations. Port staff and American Navigation Company will share updates about the project, ensuring that community input and equity considerations are incorporated throughout project implementation. These TWG meetings are held virtually to increase access for all participants.

#### Western Riverside Council of Governments

The Western Riverside Council of Governments' proposed project, "Western Riverside County Municipal Green Zones Pilot Project," will deploy four fleets (two city fleets and two county fleets), with a total of 11 zero-emission vehicles (ZEVs) to serve priority populations in Riverside County and demonstrate that ZEV adoption is practical and economical. The project includes creating a toolkit to guide and accelerate zero-emission technology adoption by other city and county fleets. Four dual-port Level 2 EV chargers and three solar-powered EV chargers will be installed to support the fleets. The project is expected to improve air quality by reducing 230 pounds  $PM_{2.5}$ , 4,690 pounds  $NO_x$ , 78 pounds ROG, and 2,716 metric tons of  $CO_2e$ .

Outreach methods include engaging with local jurisdictions, vehicle and equipment manufacturers, Riverside Public Utilities, Banning Electric Utility, Moreno Valley Public Utility, industry partners, vehicle and equipment dealers, workforce development and training partners, and so forth. Members of the Inland Zero-Emission Network will be provided with regular updates on the project progress and will be asked for feedback as appropriate. This group includes local agencies, regulators, utilities, vehicle and equipment manufacturers, community-based organizations, educational institutions, health organizations, and others. The project will also be highlighted during pop-up events designed to inform the community about project benefits.

# CHAPTER 3: Location Analysis

This LHI Report identifies projects located in high-risk communities, using staff's adaptation of the Environmental Justice Screening Method (EJSM).<sup>5</sup> *High-risk communities* are those with social vulnerability indicators, high exposure to pollution, and greater health risks. 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 as part of the California Environmental Quality Act (CEQA).

CEC staff identifies high-risk community project locations using data from the California Air Resources Board (CARB), the U.S. Census Bureau, and public agencies. CEC staff analyzes the data to assign EJ indicators for each project location specified in the report. The proposed project location must meet a two-part environmental and demographic standard to be considered in a high-risk community.

#### Part 1: Environmental Standard

Communities meet the environmental standard if they have a high concentration of air pollutants. These pollutants include ozone, particulate matter 2.5 microns in diameter or smaller (PM<sub>2.5</sub>), or particulate matter 10 microns in diameter or smaller (PM<sub>10</sub>). The environmental standard uses CARB air quality monitoring data on nonattainment<sup>6</sup> status for these pollutants.

Using 2022 data,<sup>7</sup> all projects are in communities that meet the environmental standard since they are within a nonattainment zone for ozone,  $PM_{2.5}$ , or  $PM_{10}$ . This finding indicates that there may be existing poor air quality where the proposed projects are located.

### Part 2: Demographic Standard

Communities meet the demographic standard if they have two or more EJ indicators for minority, age, poverty, and unemployment. Staff defines the EJ indicator thresholds as:

1. A minority subset that represents more than 30 percent of a given city's population.

<sup>5</sup> Pastor Jr., Manuel (University of Southern California), Rachel Morello-Frosch (University of California, Berkeley), and James Sadd (Occidental College). 2010. <u>Air Pollution and Environmental Justice: Integrating Indicators of</u> <u>Cumulative Impact and Socio-Economic Vulnerability Into Regulatory Decision-Making</u>. California Air Resources Board. Accessed June 27, 2024. Available at

https://ww2.arb.ca.gov/sites/default/files/classic/research/apr/past/04-308.pdf.

<sup>6</sup> A *nonattainment* area is a geographic area that does not meet the Ambient Air Quality Standards (state, national, or both) for a given pollutant. See "<u>Maps of State and Federal Area Designations</u>." California Air Resources Board. Accessed June 27, 2024. Available at https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.

- 2. The percentage of people living in a city who are younger than 5 years of age, or who are 65 years of age or older, is more than 1.2 times (more than 20 percent higher than) the state average for those categories.
- 3. A city's poverty rate that exceeds the state average poverty rate.
- 4. The city (or county if city data are unavailable) unemployment rate exceeds the average state unemployment rate.

The demographic standard uses the U.S. Census Bureau's American Community Survey fiveyear estimates<sup>8</sup> on race, ethnicity, age, and poverty, and the California Employment Development Department's monthly data<sup>9</sup> on unemployment. Specifically, this LHI Report uses city-level<sup>10</sup> and county-level<sup>11</sup> unemployment data. Unemployment data are not seasonally adjusted.

#### **Analysis Results**

Staff finds that 7 of 10 communities where these projects are located meet the criteria for high-risk communities since they meet both the environmental and demographic standards. In **Error! Reference source not found.**, a **bold** number followed by an asterisk (\*) indicates c ategories that exceed a given EJ indicator threshold. A city/county name in **bold**, followed by a dagger (†), indicates a high-risk community.

<sup>8</sup> American Community Survey codes DP05 and S1701 were used to find data. See "<u>Explore Census Data</u>." U.S. Census Bureau. Accessed June 27, 2024. Available at https://data.census.gov/cedsci/.

<sup>9</sup> Overview page with data from most recent and previous months: "<u>Unemployment Rate and Labor Force</u>." Employment Development Department. Accessed June 27, 2024. Available at https://labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html.

<sup>10</sup> Most recent data only: "<u>Monthly Labor Force Data for Cities and Census Designated Places (CDP)</u>." Employment Development Department. Accessed June 27, 2024. Available at https://labormarketinfo.edd.ca.gov/file/lfmonth/allsubs.xls.

<sup>11</sup> Most recent data only: "<u>Monthly Labor Force Data for Counties</u>." Employment Development Department. Accessed June 27, 2024. Available at https://labormarketinfo.edd.ca.gov/file/lfmonth/countyur-400c.pdf.

Site Location	American Indian and Alaska Native (2022)	Asian (2022)	Black or African American (2022)	Hispanic or Latino (Any Race) (2022)	Native Hawaiian and Pacific Islander (2022)	Under 5 Years of Age (2022)	65 Years of Age and Over (2022)	Below Poverty Level (2022)	Unemploy- ment (May 2024)
California	1.0%	15.1%	5.6%	39.7%	0.4%	5.7%	14.9%	12.1%	4.5%
EJ Indicator Threshold	30.0%	30.0%	30.0%	30.0%	30.0%	6.8%	17.9%	12.1%	4.5%
Banning†	2.0%	5.5%	7.4%	49.1%*	0.0%	6.0%	27.6%*	18.9%*	5.9%*
Glendale†	0.4%	13.7%	1.8%	18.9%	0.2%	4.9%	18.4%*	13.4%*	4.8%*
Long Beach†	1.3%	12.7%	12.0%	44.1%*	0.6%	5.4%	12.5%	15.1%*	5.2%*
Los Angeles†	1.0%	11.8%	8.6%	48.1%*	0.1%	5.3%	13.4%	16.6%*	5.3%*
Moreno Valley†	0.8%	5.6%	17.6%	60.3%*	0.5%	6.5%	9.4%	12.9%*	4.6%*
Oakland	1.2%	15.9%	21.8%	26.6%	0.5%	5.7%	14.1%	13.2%*	4.3%
Riverside <sup>+</sup>	0.8%	8.5%	5.8%	55.4%*	0.4%	5.8%	11.3%	12.8%*	4.0%
Sacramento County	0.7%	17.2%	9.6%	24.0%	1.1%	6.1%	14.6%	13.1%*	4.0%
San Diego	0.6%	17.4%	5.9%	30.1%*	0.4%	5.4%	13.8%	11.4%	3.6%
San Joaquin County†	1.0%	17.2%	7.0%	42.5%*	0.6%	6.7%	13.0%	12.9%*	5.5%*

#### Table 2: EJ Indicators by Project Location City Demographic

Sources: CEC staff, Employment Development Department, and U.S. Census Bureau

#### Summary

If funded, the proposed projects would support a wide array of zero-emission off-road equipment and vessel projects as well as vehicles for use in Green Zones. Based on EJSM standards, CEC staff has identified seven out of the ten communities where these projects are located as high-risk communities. These communities are at a higher risk of adverse health effects from pollution. However, staff found no indication that the projects identified in this LHI Report would negatively affect community health. 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. These proposed projects may create a net benefit for the communities, by reducing harmful criteria air pollutants, toxic air contaminants, and greenhouse gases (GHGs) that contribute to climate change.

### GLOSSARY

#### Definition Term Assessor Parcel Numbers Numbers used to inventory or identify a property and are (APN) assigned by the local county assessor's office. California Code of The official compilation and publication of the regulations Regulations (CCR) adopted, amended, or repealed by state agencies under the Administrative Procedure Act (APA). Adopted regulations that have been filed with the Secretary of State have the force of law. California Environmental A statute that requires state and local agencies to identify the significant environmental impacts of their actions and avoid or Quality Act (CEQA) 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. CALSTART A nonprofit organization working nationally and internationally with businesses and governments to develop clean, efficient transportation solutions. CALSTART is a network that connects companies and government agencies and helps them do their jobs better. Carbon dioxide equivalent A measure used to compare the emissions from various greenhouse gases based upon the associated global warming $(CO_2e)$ potential. **Census Designated Places** A statistical entity defined by the U.S. Census Bureau representing closely settled, unincorporated communities that are locally recognized and identified by name. The statistical equivalents of incorporated places. Census Place A legally bounded entity such as an incorporated city or a town with a functioning governmental structure. Community-based An organization that is intended to serve a particular organization (CBO) geographic area and is based mainly in the community which it serves. 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

Term	Definition
	oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and particulate matter ( $PM_{10}$ and $PM_{2.5}$ ).
Diesel particulate matter (DPM)	A component of diesel exhaust that includes soot particles made up primarily of carbon, ash, metallic abrasion particles, sulfates, and silicates
Direct-current fast charger (DCFC)	High-speed charger for electric vehicles, also known as Level 3. DC fast charging uses direct current (DC) and can provide more power than either Level 1 or Level 2 charging.
Disadvantaged community	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 factors.
Electric vehicle (EV)	A vehicle that is powered partly or completely by electricity. This definition often refers to battery-electric vehicles, which have no engine and store all the energy in batteries. The term can also include other vehicle types, such as plug-in hybrids.
Electric Vehicle Infrastructure Training Program (EVITP)	A certification program for electricians who wish to work on electric vehicle charging infrastructure. State law requires EVITP certification in some cases for installing electric vehicle infrastructure funded by state agencies.
Environmental justice (EJ)	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 (EJSM)	An approach that combines environmental and demographic indicators to inform agency outreach and engagement practices regarding environmental justice.
Greenhouse gas (GHG)	Any gas that absorbs infrared radiation in the atmosphere. Greenhouse gases include water vapor, carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), halogenated fluorocarbons (HCFCs), ozone (O <sub>3</sub> ), perfluorinated carbons (PFCs), and hydrofluorocarbons (HFCs).
Green zone	A broad category of projects that help a city, municipality, or group of cities transition certain operations to zero emissions.
Level 2 charger	Medium-speed charger for electric vehicles. Level 2 uses alternating current (AC) at a higher voltage (for example, 240 volts) than Level 1, providing more power.

Term	Definition
Localized health impacts (LHI)	Potential health impacts to communities.
Megawatt charging system (MCS)	A charging connector under development for large battery electric vehicles. The connector will be rated for charging at a maximum rate of 3.75 megawatts. A megawatt is equal to 1,000 kilowatts or 1 million watts.
Metric ton	A unit of weight equal to 1,000 kilograms or 2,205 pounds.
Microgrid	A combination of localized electricity generation sources, energy storage devices, and multiple loads that acts as a small electric grid with respect to the main electric grid. The microgrid can operate interconnected or isolated from the main electric grid.
Nitrogen oxides (NO <sub>x</sub> )	A general term including nitric oxide (NO), nitrogen dioxide (NO <sub>2</sub> ), and other oxides of nitrogen. Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation.
NPower	A nonprofit providing tuition-free technology training and certifications to active service members, veterans, their spouses and young adult job seekers.
Notice of proposed awards (NOPA)	A document identifying projects that are proposed to receive funding under a California Energy Commission funding opportunity, such as a Grant Funding Opportunity.
Particulate matter (PM)	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 particles resulting from combustion.
PM <sub>2.5</sub>	Particulate matter with particles 2.5 microns in diameter or smaller. Also called "fine particulate matter."
PM <sub>10</sub>	Particulate matter with particles 10 microns in diameter or smaller. Also called "coarse particulate matter."
Reactive organic gas (ROG)	Closely related to the term "volatile organic compound" (VOC). ROGs are a group of chemical gases that may contribute to the formation of smog.

Term	Definition
Ruggedized	Built to withstand one or more conditions typically found in harsh environments like excessively temperatures, moisture and high/low pressure, mechanical vibration or shock, electrical discharge at high voltage/ current and particle matter such as dust.
Toxic air contaminant	An air pollutant, identified in California Air Resources Board regulations, which may cause negative health effects even at very low concentrations.
Volatile organic compound (VOC)	Closely related to the term "reactive organic gas" (ROG). VOCs are carbon-containing compounds that evaporate into the air (with a few exceptions), and often have an odor. VOCs contribute to the formation of smog or may themselves be toxic or both. Some examples include gasoline, alcohol, and the solvents used in paints.
West Oakland Environmental Indicators Project	A resident led, community-based environmental justice organization dedicated to achieving healthy homes, healthy jobs, and healthy neighborhoods for all who live, work, learn, and play in West Oakland, California.
Zero-emission vehicle (ZEV)	A vehicle that produces no emissions from the onboard source of power. Common examples are battery-electric vehicles and fuel-cell electric vehicles.

Sources: California Air Resources Board, CEC Energy Glossary, University of Michigan School of Public Health, and U.S. Environmental Protection Agency