



**CALIFORNIA
ENERGY COMMISSION**



California Energy Commission

STAFF REPORT

Localized Health Impacts Report

**Projects Awarded Funding Under Solicitation
GFO-22-615 — Innovative Charging Solutions
for Medium- and Heavy-Duty Electric
Vehicles**

April 2024 | CEC-600-2024-039



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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 Grant Solicitation GFO-22-615. This grant initiative demonstrates innovative charging technologies and business models that highlight the unique needs of electric medium-duty, heavy-duty, and fleet vehicles. 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 five projects for Clean Transportation Program or similar grant funding awards under Solicitation GFO-22-615. Based on project site information provided by the awardees, two of the five 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)

Please use the following citation for this report:

McKinny, Jana. April 2024. *Localized Health Impacts Report: Projects Awarded Funding Under Solicitation GFO-22-615 — Innovative Charging Solutions for Medium- and Heavy-Duty Electric Vehicles*. California Energy Commission. Publication Number: CEC-600-2024-039.

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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 74 of the Budget Act of 2021 (Senate Bill 129, Skinner, Chapter 69, Statutes of 2021).

Under California Code of Regulations Title 13, Section 2343, this Localized Health Impacts Report describes the electric vehicle charger projects proposed for funding that may require certain kinds of permits or environmental review. These permits include 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 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 five projects for Clean Transportation Program or similar grant funding awards under Solicitation GFO-22-615, "Innovative Charging Solutions for Medium- and Heavy-Duty Electric Vehicles." This initiative seeks to demonstrate innovative charging technologies and business models that highlight the unique needs of electric medium-duty, heavy-duty, and fleet vehicles. Staff analyzed localized health impact information submitted by the project awardees. Based on project site information provided by the awardees, two of the five 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 utilizes 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.

The Budget Act of 2021 (Assembly Bill 128, Ting, Chapter 21, Statutes of 2021, as amended by Senate Bill 129, Skinner, Chapter 69, Statutes of 2021 and Senate Bill 170, Skinner, Chapter 240, Statutes of 2021) provides funding that is related to but separate from the CTP.

On May 8, 2023, the CEC released a competitive grant solicitation, “Innovative Charging Solutions for Medium- and Heavy-Duty Electric Vehicles” (GFO-22-615). GFO-22-615 offered grant funding for projects that demonstrate innovative charging technologies and/or business models that highlight the unique needs of medium-duty and heavy-duty (MDHD) vehicles and fleets. Projects funded through this solicitation fall into two categories:

- Innovative business model projects must install at least 25 MDHD chargers at no more than two sites.
- Innovative charging technology projects require the installation and deployment of 10 or more new chargers.

GFO-22-615 will support switching from gasoline vehicles to electric vehicles (EVs), which will reduce criteria air pollutants and greenhouse gas (GHG) emissions in California.

Projects Selected

On January 19, 2024, the CEC posted a notice of proposed awards (NOPA)¹ identifying the five projects awarded grant funding under GFO-22-615. This report assesses the locations of each of those projects. Table 1 lists the proposed project location(s) for each of the awardees and their corresponding environmental justice (EJ) indicators. EJ indicator definitions are in Chapter 3 of this report, and EJ indicator analysis is in Table 5. In some cases, the city listed in the postal address for a project may differ from the geographic entity assigned by the U.S.

1 Worster, Brad. January 2024. “Notice Of Proposed Awards.” California Energy Commission. Accessed February 21, 2024. [Cover letter](https://www.energy.ca.gov/sites/default/files/2024-01/GFO-22-615_NOPA_Cover_Letter_2024_01_19_ada.docx) available at https://www.energy.ca.gov/sites/default/files/2024-01/GFO-22-615_NOPA_Cover_Letter_2024_01_19_ada.docx, and [table of awardees](https://www.energy.ca.gov/sites/default/files/2024-01/GFO-22-615_NOPA_Results%20Table_2024_01_19_ada.xlsx) available at https://www.energy.ca.gov/sites/default/files/2024-01/GFO-22-615_NOPA_Results%20Table_2024_01_19_ada.xlsx.

Census Bureau. In these cases, the Census location (county, place, or Census Designated Place) used for EJ indicator analysis is listed in parentheses in the table below.

Table 1: Project Details with EJ Indicators

Proposed Awardee	Project Title	Project Location	EJ Indicator(s)
Goodwill Industries of San Diego County	GOODWHEELS: Greening Middle Mile Delivery Operations, Community Opportunity, and Workforce Development	6679 Camino Maquiladora, San Diego, CA 92154	Minority
International Transportation Service	Hands-Free Charging for Battery Electric Cargo Handling Equipment — Updated	1281 Pier G Wy, Long Beach, CA 90802	Minority, Poverty
Penske Truck Leasing Co. L.P.	Innovation at Scale: Penske's Charger Network for MHDEV Rentals	635 Marina Blvd, San Leandro, CA 94577	Minority
Penske Truck Leasing Co. L.P.	Innovation at Scale: Penske's Charger Network for MHDEV Rentals	751 Sandoval Wy, Hayward, CA 94544	Minority
Skychargers, LLC	Trucking-as-a-Service — Port of San Diego Drayage EV DCFC Charging Hub	1400 Tidelands Ave, National City, CA 91950	Minority, Poverty, Unemployment
WattEV Inc	MCS Technology Project (MCS-TP)	2406 Pier A Wy, Long Beach, CA 90802	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 [original posting date for this report](https://www.energy.ca.gov/programs-and-topics/programs/clean-transportation-program/localized-health-impacts-reports) 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 FTD@energy.ca.gov.

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 mediaoffice@energy.ca.gov.

CHAPTER 2:

Project Descriptions

As part of the GFO-22-615 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 the outreach efforts 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 CalEnviroScreen² 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.

Goodwill Industries of San Diego County

Goodwill Industries of San Diego County’s (Goodwill SD’s) proposed project, “GOODWHEELS: Greening Middle Mile Delivery Operations, Community Opportunity, and Workforce Development,” will demonstrate a smart fleet charging depot. The depot will support Goodwill SD’s transition from 67 diesel fleet vehicles to an all-electric fleet within four years. The project will include 20 direct-current fast chargers (DCFCs), four of which will be vehicle-to-grid (V2G) DCFCs, and 14 Level 2 chargers for overnight use. An on-site renewable energy microgrid to increase depot reliability and resiliency will include 1.54 megawatts (MW) of solar panels and 250 kilowatt hours (kWh) of battery storage. By replacing Goodwill SD’s diesel fleet with electric vehicles, this project is expected to save 294,079 gallons of diesel fuel per year. Table 1 below provides the GHG emissions reductions per year and over the 6-year project lifetime.

Table 2: Goodwill SD Emissions Reductions (short tons)

	Nitrogen oxide (NO_x)	Particulate matter (PM)2.5	Hydrocarbon (HC)	Carbon Monoxide (CO)	Carbon Dioxide (CO₂)
Yearly	4.239	0.085	0.177	2.06	3,308
Project lifetime (6-years)	25.434	0.51	1.062	12.36	19,850

Source: Goodwill SD

The project team has conducted initial outreach efforts with the San Diego County Air Pollution Control District, the EV Learning Center, the Metropolitan Area Advisory Committee on Anti-Poverty of San Diego County, San Diego Community Power, and the Center for Sustainable

² This tool ranks U.S. Census tracts based on geographic, socioeconomic, public health and environmental hazard criteria. See “[CalEnviroScreen](https://oehha.ca.gov/calenviroscreen).” Office of Environmental Health Hazard Assessment. Accessed February 24, 2024. Available at <https://oehha.ca.gov/calenviroscreen>.

Energy. Future outreach and engagement will focus on workforce development supported by Goodwill's Transportation Center. Workforce development training topics will include:

- Transportation policy and regional air quality management impacts.
- Electric MDHD fleet maintenance.
- Charging and fleet management software and monitoring.
- Microgrid management and controls.
- Vehicle-to-grid demonstration projects.
- Utility demand-response training programs related to fleet charging, battery storage, and utility time of use.

International Transportation Service

International Transportation Service's (ITS's) proposed project, titled "Hands-Free Charging for Battery Electric Cargo Handling Equipment," will demonstrate how hands-free charging technology can enable the transition to battery-electric cargo handling equipment for marine terminal operators. The project will install 15 hands-free EV chargers to power battery-electric yard tractors at the Port of Long Beach ITS terminal. Charging technology included in the 12-month demonstration will include inductive, conductive, and dynamic chargers to charge battery-electric yard tractors while in operation. Since charging infrastructure and electric utility power supply are already in place, minimal construction work is expected. ITS does not anticipate any significant generation of criteria or toxic air pollution as a result of this project. ITS expects a 621.3 metric ton (MT) reduction in carbon dioxide (CO₂) emissions over the demonstration period and 6,213 MT over the lifetime of the equipment.

Outreach efforts include sharing project information through webinars, workshops, publications, and a project website. ITS will collaborate with the University of California Riverside to share project data and findings with industry practitioners through peer-reviewed journal publications. In conjunction with ITS, the Los Angeles Cleantech Incubator will conduct stakeholder engagement activities with terminal operators, financial institutions, public agencies, operators, and community-based organizations representing disadvantaged communities, unions, residents, and other affected groups to support the development of the charging infrastructure.

Penske Truck Leasing Co. L.P.

Penske Truck Leasing Co. L.P.'s (Penske's) proposed project, "Innovation at Scale: Penske's Charger Network for MHD EV Rentals," will install 22 multi-port DCFCs at two locations in Alameda County to support 104 rental and lease MDHD EVs. Based on the current composition of California's energy grid, the project is expected to generate 4,240.28 MT carbon dioxide equivalent (CO_{2e}) per year of indirect emissions from charging MDHD EVs, offset by a reduction of emissions of 24,507 MT CO_{2e} per year from switching from internal combustion to EV rental vehicles.

Outreach methods will include engaging with residents, neighborhood associations, and environmental groups. San Leandro 2050, a resident-led nonprofit committed to curbing

carbon emissions and improving the quality of life in San Leandro, will conduct virtual and in-person community and quarterly stakeholder meetings to disseminate training, education, workforce preparedness, and project benefit information. Penske will distribute educational materials to end users on efficiently operating and charging MDHD EVs, expected range, and charging costs while reducing concerns around the range and unexpected charging costs.

Skychargers, LLC

Skychargers, LLC’s proposed project, “Trucking-as-a-Service — Port of San Diego Drayage EV DCFC Charging Hub,” will install 15 dual-port 160 kilowatt (kW) chargers and 12 dual-port 360 kW chargers capable of simultaneously charging 54 class-8 trucks at the Port of San Diego. A 4.8 MW canopy-mounted solar system paired with a 1 MW/4MWh -hour battery energy storage system will ensure a resilient system for overnight truck charging. By supporting the use of electric trucks, the project is expected to reduce emissions by 324,424 MT of CO₂ during the six-year project lifecycle (Table 3).

Table 3: SkyChargers Emissions Reductions

	NO_x (lb)	PM2.5 (lb)	Reactive Organic Gas (lb)	CO₂ (MT)
Project lifetime (6-years)	503,593	6,760	9,864	324,424

Source: Skychargers

Outreach efforts will be developed and facilitated by SoyLopez Consulting and include four educational community workshops on zero-emission vehicles and related job opportunities for local organizations, community leaders, and residents living near the project. Additional Community Outreach Meetings will showcase local green job opportunities. SkyChargers will contribute \$20,000 to train and certify 20 local licensed electricians in charger installation through the Electric Vehicle Infrastructure Training Program. SkyChargers will also commit \$25,000 in stipends to local artists, including high school students, to paint murals along the fence surrounding the project.

WattEV, Inc.

WattEV Inc.’s proposed project, “Megawatt Charging System Technology Project (MCS-TP),” will develop, manufacture, install, and test alternating current to direct current converters for EV charging. The project will demonstrate three modular charging island prototypes; each island includes a liquid-cooled solid-state transformer, a megawatt charging system (1.26 MW), and three combined charging systems (420 kW each). Minimal emissions are expected during project installation and a net reduction of 5,951 tons of GHG emission is expected per year during charger operation.

Table 4: WattEV Emissions Changes (tons per year)

	Reactive organic gases (ROG)	NO_x	PM10	PM2.5	GHG
Grid-related EV Emissions	4.80	29.22	7.45	7.04	4,075
Avoided Diesel Vehicle Emissions	-19.40	-771.08	-9.61	-9.20	-10,026
Net Emissions	-14.60	-741.86	-2.17	-2.16	-5,951

Source: WattEV

Outreach efforts will include a project website, marketing documents, and a network mobile application to share fleet-focused project information and educate the community about the project benefits and technology. Onsite staff training will be provided to assist with troubleshooting and end-user charging solutions. A dedicated call line with staff trained in MDHD EV support will also be established to assist end users.

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).³ *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_{2.5}), or particulate matter 10 microns in diameter or smaller (PM₁₀). The environmental standard uses CARB air quality monitoring data on nonattainment⁴ status for these pollutants.

Using 2022 data,⁵ all projects are in communities that meet the environmental standard since they are within a nonattainment zone for ozone, PM_{2.5}, or PM₁₀. 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.

3 Pastor Jr., Manuel (University of Southern California), Rachel Morello-Frosch (University of California, Berkeley), and James Sadd (Occidental College). 2010. [Air Pollution and Environmental Justice: Integrating Indicators of Cumulative Impact and Socio-Economic Vulnerability Into Regulatory Decision-Making](#). California Air Resources Board. Accessed February 27, 2024. Available at <https://ww2.arb.ca.gov/sites/default/files/classic/research/apr/past/04-308.pdf>

4 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 “[Maps of State and Federal Area Designations](#).” California Air Resources Board. Accessed February 27, 2024. Available at <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>.

5 Ibid.

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 five-year estimates⁶ on race, ethnicity, age, and poverty, and the California Employment Development Department's monthly data⁷ on unemployment. Specifically, this LHI Report uses city-level⁸ and county-level⁹ unemployment data. Unemployment data are not seasonally adjusted.

Analysis Results

Staff finds that two of the five communities where these projects are located meet the criteria for high-risk communities since they meet both the environmental and demographic standards. In Table 5, a **bold** number followed by an asterisk (*) indicates categories that exceed a given EJ indicator threshold. A city/county name in **bold**, followed by a dagger (†), indicates a high-risk community.

Table 5: EJ Indicators by Project Location City Demographic

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)	Unemployment (December 2023)
California	1.0%	15.1%	5.6%	39.7%	0.4%	5.7%	14.9%	12.1%	5.1%
EJ Indicator Threshold	30.0%	30.0%	30.0%	30.0%	30.0%	6.8%	17.9%	12.1%	5.1%
Hayward	1.2%	29.6%	9.0%	39.7%*	2.4%	5.5%	13.2%	9.6%	4.8%

6 American Community Survey codes DP05 and S1701 were used to find data. See "[Explore Census Data](#)." U.S. Census Bureau. Accessed February 27, 2024. Available at <https://data.census.gov/cedsci/>.

7 Overview page with data from most recent and previous months: "[Unemployment Rate and Labor Force](#)." Employment Development Department. Accessed February 27, 2024. Available at <https://labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html>.

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

9 Most recent data only: "[Monthly Labor Force Data for Counties](#)." Employment Development Department. Accessed February 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)	Unemployment (December 2023)
Long Beach†	1.3%	12.7%	12.0%	44.1%*	0.6%	5.4%	12.5%	15.1%*	4.8%
National City†	0.5%	17.1%	4.4%	64.9%*	0.6%	5.5%	14.9%	14.1%*	5.4%*
San Diego	0.6%	17.4%	5.9%	30.1%*	0.4%	5.4%	13.8%	11.4%	4.2%
San Leandro	1.2%	34.9%*	10.4%	28.3%	1.3%	4.0%	17.6%	8.4%	4.4%

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

Summary

If funded, the proposed projects would demonstrate innovative charging technologies and business models that highlight the unique needs of electric medium-duty, heavy-duty, and fleet vehicles. This demonstration will achieve emissions reductions by building a portfolio of charging solutions and business models encouraging MDHD vehicle owners to transition to zero-emission vehicles.

Based on EJSM standards, CEC staff has identified two out of five 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 GHGs that contribute to climate change.

GLOSSARY

Term	Definition
California Code of Regulations (CCR)	The official compilation and publication of the regulations 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 Quality Act (CEQA)	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.
Carbon dioxide equivalent (CO ₂ e)	A measure used to compare the emissions from various greenhouse gases based upon the associated global warming potential.
Carbon monoxide (CO)	A colorless, odorless, highly poisonous gas formed by the incomplete combustion of certain fuels, including gasoline.
Census Designated Places	A statistical entity defined by the U.S. 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.
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}).
Direct-current fast charger (DCFC)	High-speed charger for electric vehicles. 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

Term	Definition
	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 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.
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.
Grant Funding Opportunity (GFO)	Where the California Energy Commission offers applicants an opportunity to receive grant funding for projects meeting certain requirements.
Greenhouse Gas (GHG)	Any gas that absorbs infra-red radiation in the atmosphere. Greenhouse gases include water vapor, carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (N ₂ O), halogenated fluorocarbons (HCFCs), ozone (O ₃), perfluorinated carbons (PFCs), and hydrofluorocarbons (HFCs).
Hydrocarbon (HC)	Compounds containing various combinations of hydrogen and carbon atoms. They may be emitted into the air by natural sources (e.g., trees) and as a result of fossil and vegetative fuel combustion, fuel volatilization and solvent use. Hydrocarbons are a major contributor to smog.
Internal combustion engine (ICE)	An engine in which fuel is burned inside the engine. A car's gasoline engine or rotary engine is an example of an internal combustion engine. It differs from engines having an external furnace, such as a steam engine.
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.
Localized health impacts (LHI)	Potential health impacts to communities.

Term	Definition
Medium-duty and heavy-duty (MDHD)	Classes 4–6 medium-duty trucks generally weigh between 14,000 and 26,000 pounds. Classes 7 and 8 heavy-duty trucks weigh between 26,001 and 33,000 pounds.
Metric ton (MT)	A unit of weight equal to 1,000 kilograms or 2,205 pounds.
<i>N</i> -Methyl-2-pyrrolidone (NMP)	A solvent with many applications, including electronics manufacturing. The U.S. Environmental Protection Agency finds that it may have harmful health effects.
Nitrogen oxides (NO _x)	A general term including nitric oxide (NO), nitrogen dioxide (NO ₂), and other oxides of nitrogen. Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation.
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 _{2.5}	Particulate matter with particles 2.5 microns in diameter or smaller. Also called "fine particulate matter."
PM ₁₀	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.
Short ton (tn)	An Imperial unit of mass equal to 2,000 pounds.
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, and/or may themselves be toxic. Some examples include gasoline, alcohol, and the solvents used in paints.

Term**Definition**

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