





California Energy Commission

STAFF REPORT

Localized Health Impacts Report

Projects Awarded Funding Under Solicitation GFO-23-602 — Charging and Refueling Infrastructure for Transport in CALifornia Provided Along Targeted Highway Segments (CRITICAL PATHS)

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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 on 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-23-602. This grant initiative seeks to design, construct, and operate publicly available medium- and heavy-duty zero-emission vehicle refueling and charging infrastructure along designated corridors. 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 three projects for Clean Transportation Program or similar grant funding awards under Solicitation GFO-23-602. Each of these projects has multiple locations. Based on project site information provided by the awardees, six of the seven 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 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 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 and hydrogen refueling station 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 three projects for Clean Transportation Program or similar grant funding awards under Solicitation GFO-23-602, "Charging and Refueling Infrastructure for Transport in CALifornia Provided Along Targeted Highway Segments." This initiative seeks to expand the supply of publicly available medium- and heavy-duty zero-emission vehicle refueling and charging infrastructure along designated clean freight corridors. Staff analyzed localized health impact information submitted by the project awardees. Based on project site information provided by the awardees, six of the seven 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.

Section 74 of the Budget Act of 2021 (Senate Bill 129, Skinner, Chapter 69, Statutes of 2021) provides funding that is related to but separate from the CTP.

On September 26, 2023, the CEC released a competitive grant solicitation, "Charging and Refueling Infrastructure for Transport in CALifornia Provided Along Targeted Highway Segments" (GFO-23-602). GFO-23-602 offered grant funding for projects to design, construct, and operate publicly available medium- and heavy-duty (MDHD) zero-emission vehicle (ZEV) refueling and charging infrastructure. The solicitation requires that all proposed projects must be located in California and must be on a priority clean freight corridor. GFO-23-602 will support switching to ZEVs which will reduce criteria air pollutants and greenhouse gas (GHG) emissions in California.

Projects Selected

On February 16, 2024, the CEC posted a notice of proposed awards (NOPA)² identifying the three projects awarded grant funding under GFO-23-602. This report assesses the locations of each of those projects. Table 1 lists the proposed project location(s) for 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 Table 4. In some cases, the city listed in the postal address for a project may differ from the geographic entity assigned by the U.S.

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¹ Six proposed priority corridors represent more than 60 percent of daily truck vehicle miles traveled: I-5 from the south border to north border (Oregon), I-15 from Los Angeles to southeast border (Nevada), Route 99 from Stockton to Bakersfield, I-10 from LA to southeast border (Arizona), I-40 from intersection with I-15 to southeast border (Arizona), I-80 from San Francisco to northeast border (Nevada). See "Attachment 12 SB671 DRAFT Corridors." Accessed March 7, 2024. Available at https://www.energy.ca.gov/sites/default/files/2023-09/12_GFO-23-602_Att_12_SB%20671_Draft_Corridors_ada.pdf.

² Worster, Brad. 2024. "Notice Of Proposed Awards." California Energy Commission. Accessed March 7, 2024. Cover letter available at https://www.energy.ca.gov/sites/default/files/2024-02/GFO-23-602_NOPA_Cover_Letter_2024_02_16_ada.docx, and table-of-awardees available at https://www.energy.ca.gov/sites/default/files/2024-02/GFO-23-602_NOPA_Results_Table_2024_02_16_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)	
Greenlane Infrastructure, LLC	Introducing Zero-Emission Movement to the Inland Empire	High Point Pkwy, Barstow, CA 92311	Age, Minority, Poverty, Unemployment	
Greenlane Infrastructure, LLC	Introducing Zero-Emission Movement to the Inland Empire	1630 and 1650 Fairway Ave, Colton, CA 92324	Minority, Poverty	
Prologis Mobility LLC	Prologis Mobility LLC Prologis Clean Freight Refueling Hubs		Minority, Poverty, Unemployment	
Prologis Mobility LLC	Prologis Clean Freight Refueling Hubs	2420 Yates Ave, Commerce, CA 90040	Minority, Poverty, Unemployment	
WattEV, Inc.	WattEV Connecting California's Corridors (3C) Project	8407 Edgewater Dr, Oakland, CA 94621	Poverty	
WattEV, Inc.	WattEV Connecting California's Corridors (3C) Project	4026 S Chestnut Ave, Fresno, CA 93725 (Fresno County)	Age, Minority, Poverty, Unemployment	
WattEV, Inc.	WattEV Connecting California's Corridors (3C) Project	2327 E. Mariposa Road, Stockton, CA 95205 (Kennedy CDP)	Age, Minority, Poverty, Unemployment	

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 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 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-23-602 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 CalEnviroScreen³ 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.

Greenlane Infrastructure, LLC

Greenlane Infrastructure, LLC's proposed project, "Introducing Zero-Emission Movement to the Inland Empire," will deploy 33 Alpitronic Hypercharger 200 kilowatt (kW) and 33 400 kW direct-current fast chargers (DCFCs) at two locations near the intersection of I-10 and I-215, and along I-5. Each site layout has been designed to ensure safe entry and exit points and will include spaces for bobtail overnight charging, tractor-trailer overnight charging, and pull-through charging spaces for MDHD vehicles. An increase in zero-emission truck traffic near the project site is expected, however, the project will reduce GHG emissions by 73,099 short tons over six years.

Table 2: Infrastructure Emission Reductions

	Carbon monoxide (lb)	Nitrogen oxides (NO _x) (lb)	Particulate matter (PM)10 (lb)	PM2.5 (lb)	Volatile organic compounds (lb)	Sulfur oxides (lb)	GHG (short tons)
1 Year	31,599	49,385	424	391	2,197	89	12,183
6 Years	189,594	296,309	2,544	2,344	13,184	535	73,099

Sources: Greenlane Infrastructure, AFLEET CFI Emissions tool

Outreach efforts include discussing project plans, environmental benefits, and workforce impact with community advocacy groups such as Breathe Southern California, Climate Resolve, and Coalition for Clean Air, and local county officials, including San Bernardino County Districts, the City of Barstow, and the City of Colton. Greenlane Infrastructure will draw on project partner Daimler Truck of North America's experience hosting electric fleet driver

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³ 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 February 7, 2024. Available at https://oehha.ca.gov/calenviroscreen.

training and student outreach events at Electric Island to inform the project's community engagement plan.

Prologis Mobility LLC

Prologis Mobility LLC's proposed project, "Prologis Clean Freight Refueling Hubs," will deploy 68 DCFCs with a combined power output capacity of over ten megawatts, five megawatt-hours of battery energy storage, and three hydrogen fueling dispensers. The project will support 450 to 900 MDHD electric vehicles daily, annually reducing 34,850 to 69,700 metric tons (MT) of carbon dioxide (CO_2) emissions. By fueling 100 hydrogen fuel cell electric trucks daily an additional reduction of 7,643 MT of CO_2 emissions is expected from the hydrogen refueling stations.

Outreach efforts include partnering with Breathe Southern California to hold community engagement presentations and discussion sessions to educate the public and solicit their feedback about site development. To provide input on developing, operating, and maintaining the proposed infrastructure Prologis Mobility will invite key local fleet staff members to join a Local Fleet Advisory Council. The project will provide electric vehicle supply equipment technician training from ChargerHelp for 50 local individuals. Once each station is open, Prologis Mobility will also offer tours to local community members and the public.

WattEV, Inc.

WattEV, Inc.'s proposed project, "WattEV Connecting California's Corridors (3C) Project," will install DCFCs at three locations adjacent to the SR-99, I-580, I-80, and I-880 priority charging corridors. The DCFCs will include 70 240 kW chargers using the combined charging system (CCS) connector and 14 1,200 kW chargers using the megawatt charging system (MCS) connector. The project sites will include appropriate turning radiuses, clear refueling markings, and extended sightlines to support pull-through charging for Class 8 tractor-trailers. Assuming a 17 percent charger utilization rate, this project is expected to reduce carbon dioxide equivalent (CO₂e) emissions by 54,820 MT annually.

Table 3: Emissions Reductions per Project Site

Site Location	MCS Chargers	CCS Chargers	NOx (lb/yr)	PM2.5 (lb/yr)	CO2e (MT/yr)
Fresno	3	15	17,590	139	11,747
Port of Oakland	5	25	29,317	232	19,579
Stockton	6	30	35,180	278	23,494
Total	14	70	82,087	649	54,820

Source: WattEv, Inc.

Outreach efforts include partnering with Valley Clean Air Now to share this project's social, environmental, and economic benefits with community-based organizations. Valley Clean Air Now will also conduct a stakeholder analysis and Electric Vehicle Infrastructure Training Program educational analysis, gather community feedback, and provide a final community report upon project completion. WattEV will also engage with Fresno City College to provide

community engagement and increase enrollment in the college's ZEV Service Technician Educational Pathway program.

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).⁴ *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 (PM_{10}). The environmental standard uses CARB air quality monitoring data on nonattainment⁵ status for these pollutants.

Using 2022 data,⁶ 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.

6 Ibid.

⁴ 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 March 7, 2024. Available at

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

⁵ 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 March 7, 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 estimates⁷ on race, ethnicity, age, and poverty, and the California Employment Development Department's monthly data⁸ on unemployment. Specifically, this LHI Report uses city-level⁹ and county-level¹⁰ unemployment data. Unemployment data are not seasonally adjusted.

Analysis Results

Staff finds that six of the seven communities where these projects are located meet the criteria for high-risk communities since they meet both the environmental and demographic standards. In Table 4, 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.

⁷ American Community Survey codes DP05 and S1701 were used to find data. See "Explore Census Data." U.S. Census Bureau. Accessed March 7, 2024. Available at https://data.census.gov/cedsci/.

⁸ Overview page with data from most recent and previous months: "<u>Unemployment Rate and Labor Force</u>." Employment Development Department. Accessed March 7, 2024. Available at https://labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html.

⁹ Most recent data only: "Monthly Labor Force Data for Cities and Census Designated Places (CDP)." Employment Development Department. Accessed March 15, 2024. Available at https://labormarketinfo.edd.ca.gov/file/lfmonth/allsubs.xls.

¹⁰ Most recent data only: "Monthly Labor Force Data for Counties." Employment Development Department. Accessed March 15, 2024. Available at https://labormarketinfo.edd.ca.gov/file/lfmonth/countyur-400c.pdf.

Table 4: EJ Indicators by Project Location City Demographic

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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 (January 2024)
California	1.0%	15.1%	5.6%	39.7%	0.4%	5.7%	14.9%	12.1%	5.7%
EJ Indicator Threshold	30.0%	30.0%	30.0%	30.0%	30.0%	6.8%	17.9%	12.1%	5.7%
Barstow†	2.3%	1.6%	15.3%	51.6%*	0.5%	8.2%*	11.6%	22.5%*	6.4%*
Colton†	1.1%	2.7%	9.1%	72.8%*	0.8%	5.9%	11.6%	15.4%*	5.4%
Commerce†	4.5%	1.9%	0.6%	95.1%*	0.0%	3.9%	17.8%	13.5%*	6.3%*
Fresno County†	1.3%	10.7%	4.5%	54.2%*	0.2%	7.2%*	12.5%	19.5%*	8.8%*
Kennedy CDP†	0.0%	2.8%	7.6%	86.7%*	0.0%	10.1%*	9.1%	24.4%*	14.8%*
Long Beach†	1.3%	12.7%	12.0%	44.1%*	0.6%	5.4%	12.5%	15.1%*	5.8%*
Oakland	1.2%	15.9%	21.8%	26.6%	0.5%	5.7%	14.1%	13.2%*	5.6%

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

Summary

If funded, the proposed projects would result in an expanded supply of publicly available MDHD ZEV refueling or charging infrastructure along priority designated clean freight corridors. This expansion will achieve emissions reductions by encouraging businesses to switch from gas-powered vehicles to electric or fuel-cell electric vehicles.

Based on EJSM standards, CEC staff has identified six of the seven 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

Definition Term **Bobtail** A semi-truck is in "bobtail" mode when it does not have a trailer attached. 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. Carbon dioxide equivalent A measure used to compare the emissions from various (CO_2e) 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. Class 8 truck Class 8 vehicles have a gross vehicle weight rating (GVWR) exceeding 33,000 pounds. The class includes tractor trailer tractors, single-unit dump trucks with a GVWR over 33,000 pounds, and non-commercial chassis fire trucks typically with three or more axles. Community-based An organization that is intended to serve a particular

it serves.

geographic area and is based mainly in the community which

organization (CBO)

Term Definition

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 (O₃), 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 environmental pollution or hazards, due to geographic, socioeconomic, public health, and environmental factors.

Electric vehicle 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 An approach that combines environmental and demographic

Screening Method (EJSM) indicators to inform agency outreach and engagement

practices regarding environmental justice.

Fuel cell electric vehicle A vehicle that is powered partly or completely by fuel cells

sometimes in combination with a small battery or

supercapacitor, to power its onboard electric motor. Fuel cells in vehicles generate electricity generally using oxygen from

the air and compressed hydrogen.

Grant Funding Opportunity Where the California Energy Commission offers applicants an

(GFO)

(FCEV)

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 (CO₂),

methane (CH₄), nitrous oxide (N₂O), halogenated

fluorocarbons (HCFCs), ozone (O₃), perfluorinated carbons

(PFCs), and hydrofluorocarbons (HFCs).

Term **Definition** A storage or filling station for hydrogen fuel where hydrogen Hydrogen refueling station is dispensed by weight. Localized health impacts Potential health impacts to communities. (LHI) Medium-duty and heavy-Classes 4–6 medium-duty trucks generally weigh between duty (MDHD) 14,000 and 26,000 pounds. Classes 7 and 8 heavy-duty trucks weigh more than 26,000 pounds. Metric ton A unit of weight equal to 1,000 kilograms or 2,205 pounds. Nitrogen oxides (NO_x) A general term including nitric oxide (NO), nitrogen dioxide (NO₂), and other oxides of nitrogen. Nitrogen oxides are typically created during combustion processes and are major contributors to smog formation. Notice of proposed awards A document identifying projects that are proposed to receive funding under a California Energy Commission funding (NOPA) 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." An Imperial unit of mass equal to 2,000 pounds. Short ton A group of pungent, colorless gases formed primarily by the Sulfur oxides (SO_x) combustion of sulfur-containing fossil fuels, especially coal and oil. Considered major air pollutants, sulfur oxides may impact human health and damage vegetation.

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very low concentrations.

An air pollutant, identified in California Air Resources Board regulations, which may cause negative health effects even at

Toxic air contaminant

Term Definition

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.

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