CALIFORNIA ENERGY COMMISSION

CALIFORNIA NATURAL RESOURCES AGENCY

California Energy Commission

STAFF REPORT

Localized Health Impacts Report

Projects Awarded Funding Under Solicitation GFO-23-604 — Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations (IMPROVE for H2)

April 2024 | CEC-600-2024-038

California Energy Commission

Jana McKinny
Primary Author

Miki Crowell
Mark Johnson
Commission Agreement Managers

Elizabeth John
Program Manager
COMMERCIAL AND INDUSTRIAL ZEV TECHNOLOGIES AND INFRASTRUCTURE BRANCH

Hannon Rasool
Director
FUELS AND TRANSPORTATION DIVISION

Drew Bohan
Executive Director

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-23-604. This grant initiative seeks to invest in hydrogen refueling station operations and maintenance activities that will result in long-lasting improvements to station reliability and the customer experience. 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 two projects for Clean Transportation Program or similar grant funding awards under Solicitation GFO-23-604. One of these projects has multiple locations. Based on project site information provided by the awardees, 11 of the 29 communities where these projects are located are considered high-risk communities. Staff does not anticipate a net increase in the pollution burden for these communities.

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

Please use the following citation for this report:

McKinny, Jana. March 2024. *Localized Health Impacts Report: Projects Awarded Funding Under Solicitation GFO-23-604— Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations (IMPROVE for H2).* California Energy Commission. Publication Number: CEC-600-2024-038.

TABLE OF CONTENTS

LIST OF TABLES

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.

Under California Code of Regulations Title 13, Section 2343, this Localized Health Impacts Report describes the 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 two projects for Clean Transportation Program or similar grant funding awards under Solicitation GFO-23-604, "Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations." This initiative seeks to invest in hydrogen refueling station operations and maintenance activities that will result in long-lasting improvements to station reliability and the customer experience. Staff analyzed localized health impact information submitted by the project awardees. Based on project site information provided by the awardees, 11 of the 29 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.

On November 3, 2023, the CEC released a competitive grant solicitation, "Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations (IMPROVE for H2)" (GFO-23-604). GFO-23-604 offered CTP grant funding for projects to invest in hydrogen refueling station operations and maintenance (O&M) activities that will result in long-lasting improvements to station reliability and the customer experience. Applicants commit to achieving 95 percent uptime at each eligible hydrogen refueling station included in their application if awarded under this solicitation. GFO-23-604 will support switching from gasoline vehicles to fuel cell electric vehicles (FCEV), which will reduce criteria air pollutants and greenhouse gas (GHG) emissions in California.

Projects Selected

On February 14, 2024, the CEC posted a notice of proposed awards (NOPA)[1] identifying the two projects awarded grant funding under GFO-23-604. 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 2. 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 the table below.

1 Johnson, Natalie. 2024. "Notice Of Proposed Awards." California Energy Commission. Accessed March 6, 2024. Cover letter available at https://www.energy.ca.gov/sites/default/files/2024-02/GFO-23-604_NOPA_Cover_Letter_2024-02-14_ada.docx, and table of awardees available at https://www.energy.ca.gov/sites/default/files/2024-02/GFO-23-604_NOPA_Result_Table_2024-02-14_ada.xlsx.

Table 1: Project Details with EJ Indicators

Proposed Awardee	Project Title	Project Location	EJ Indicator(s)
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	1200 Fair Oaks Ave, South Pasadena, CA 91030 (Pasadena)	Minority, Poverty
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	12105 Donner Pass Rd, Truckee, CA 96161	none
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	12600 Saratoga Ave, Saratoga, CA 95070	Age, Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	1296 Sunnyvale Saratoga Rd, Sunnyvale, CA 94087	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	14477 Merced Ave, Baldwin Park, CA 91706	Minority, Poverty
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	14478 Ventura Blvd, Sherman Oaks, CA 91423 (Los Angeles)	Minority, Poverty, Unemployment
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	150 South La Cumbre Rd, Santa Barbara, CA 93105	Age, Minority, Poverty
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	15544 San Fernando Mission Blvd, Mission Hills, CA 91345 (Los Angeles)	Minority, Poverty, Unemployment

Proposed Awardee	Project Title	Project Location	EJ Indicator(s)
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	18480 Brookhurst St, Fountain Valley, CA 92708	Age, Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	2050 Harbor Blvd, Costa Mesa, CA 92627	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	20731 Lake Forest Dr, Lake Forest, CA 92630	none
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	2101 N 1st St, San Jose, CA 95131	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	21530 Stevens Creek Blvd, Cupertino, CA 95014	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	24505 W Dorris Ave, Coalinga, CA 93210	Minority, Poverty, Unemployment
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	248 S Airport Blvd, South San Francisco, CA 94080	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	26813 La Paz Rd, Aliso Viejo, CA 92656 (Laguna Hills)	Age

Proposed Awardee	Project Title	Project Location	EJ Indicator(s)
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	2855 Winchester Blvd, Campbell, CA 95008	Unemployment
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	2995 Bristol St, Costa Mesa, CA 92626	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	3060 Carmel Valley Rd, San Diego, CA 92130	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	3102 Thousand Oaks Blvd, Thousand Oaks, CA 91362	Age
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	313 W Orangethorpe Ave, Placentia, CA 92870	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	337 E Hamilton Ave, Campbell, CA 95008	Unemployment
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	3401 Long Beach Blvd, Long Beach, CA 90807	Minority, Poverty
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	350 Grand Ave, Oakland, CA 94610	Poverty

Proposed Awardee	Project Title	Project Location	EJ Indicator(s)
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	3780 Cahuenga Blvd, Studio City, CA 91604 (Los Angeles)	Minority, Poverty, Unemployment
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	391 W A St, Hayward, CA 94541	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	3939 Snell Ave, San Jose, CA 95136	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	4280 Foothill Blvd, Oakland, CA 94601	Poverty
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	475 N Allen Ave, Pasadena, CA 91106	Minority, Poverty
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	47700 Warm Springs Blvd, Fremont, CA 94539	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	5494 Mission Center Rd, San Diego, CA 92108	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	550 Foothill Blvd, La Cañada Flintridge, CA 91011	Age, Minority

Proposed Awardee	Project Title	Project Location	EJ Indicator(s)
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	570 Redwood Hwy, Mill Valley, CA 94941 (Strawberry CDP — Marin County)	Age
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	5700 Hollywood Blvd, Los Angeles, CA 90028	Minority, Poverty, Unemployment
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	605 Contra Costa Blvd, Concord, CA 94523 (Pleasant Hill)	none
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	615 S Tustin St, Orange, CA 92866	Minority
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	800 N Hollywood Way, Burbank, CA 91505	Unemployment
FirstElement Fuel, Inc.	Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations	8126 Lincoln Blvd, Los Angeles, CA 90045	Minority, Poverty, Unemployment
Iwatani Corporation of America	Kaizen Iwatani	26572 Junipero Serra Rd, San Juan Capistrano, CA 92675	Age, Minority

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 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-23-604 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 CalEnviroScreen[2] 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.

FirstElement Fuel, Inc.

FirstElement Fuel, Inc.'s (FEF's) proposed project, "Improvements in Maintenance Processes for Reliable Operations that are Verifiable and Effective for Hydrogen Refueling Stations," will improve the maintenance protocols, equipment, design, and engineering of hardware and processes necessary to increase the reliability of 38 hydrogen refueling stations. During the four-year project, FEF will add eight staff members, including a reliability engineer, four dispatchers, a technical writer, and two technicians. The project will implement a new mobile point-of-sale customer service application and provide funds to maintain an in-house inventory of critical repair components and equipment. All hydrogen dispensed at the True Zero stations has a carbon intensity score of zero. FEF estimates a one percent increase in station uptime equates to an additional 1,672 kilograms of hydrogen dispensed and 71,000 pounds of carbon dioxide reduction.

Outreach efforts include partnering with the California Fuel Cell Partnership to develop a targeted outreach plan and the League of California Cities to develop an informational network for first-adopter cities. FEF will distribute information packets at local schools to provide educational material to communities and surrounding neighborhoods.

Iwatani Corporation of America

Iwatani Corporation of America's (ICA's) proposed project, "Kaizen Iwatani," will implement hardware, software, and process changes to improve station reliability, performance, O&M, data collection, and customer experience. The project will install or replace AC units, overcooling reduction equipment, and a new dispenser at one location in San Juan Capistrano. ICA will develop a new Station Online Status System mobile app, O&M management software, thermodynamic models, and customer communication tools. This project will also undertake process improvements to manage spare parts and improve customer communication. No

2 This tool ranks U.S. Census tracts based on geographic, socioeconomic, public health and environmental hazard criteria. See "CalEnviroScreen." Office of Environmental Health Hazard Assessment. Accessed March 5, 2024. Available at https://oehha.ca.gov/calenviroscreen.

criteria or toxic air emissions are expected to be generated as part of this project. Hydrogen dispensed from the refueling station has an average renewable content of 40 percent and a carbon intensity score of zero. Over the 4-year project term, this project is expected to increase station uptime; the corresponding increase in dispensed hydrogen will result in a reduction of 53,698 tons of carbon dioxide.

No community outreach efforts are planned as part of this project.

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 (PM_{10}). The environmental standard uses CARB air quality monitoring data on the nonattainment[4] status of 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 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.

---

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 March 5, 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 March 5, 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 estimates[6] on race, ethnicity, age, and poverty, and the California Employment Development Department's monthly data[7] on unemployment. Specifically, this LHI Report uses city-level[8] and county-level[9] unemployment data. Unemployment data are not seasonally adjusted.

Analysis Results

Staff finds that 11 of the 29 communities where these projects are located meet the criteria for high-risk communities since they meet both the environmental and demographic standards. In Table 2, 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.

6 American Community Survey codes DP05 and S1701 were used to find data. See "Explore Census Data." U.S. Census Bureau. Accessed March 5, 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 March 5, 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 March 5, 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 March 5, 2024. Available at https://labormarketinfo.edd.ca.gov/file/lfmonth/countyur-400c.pdf.

Table 2: 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)	Unemploy-ment (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%**
Baldwin Park†	3.1%	22.2%	1.0%	**72.8%***	0.0%	5.3%	13.5%	**13.8%***	5.1%
Burbank	0.6%	12.0%	3.1%	24.2%	0.0%	4.6%	15.7%	10.7%	**6.9%***
Campbell	0.5%	26.7%	1.6%	17.6%	0.0%	6.2%	14.5%	5.6%	**5.4%***
Coalinga†	2.3%	2.1%	3.9%	**63.1%***	0.3%	4.6%	10.9%	**18.7%***	**10.2%***
Costa Mesa	1.1%	9.0%	1.4%	**36.2%***	0.4%	5.3%	13.0%	9.5%	3.7%
Cupertino	0.3%	**70.2%***	1.2%	3.1%	0.4%	4.6%	13.6%	5.3%	3.8%
Fountain Valley†	0.4%	**37.4%***	0.7%	17.1%	0.9%	4.1%	**19.9%***	7.0%	3.6%
Fremont	0.5%	**61.8%***	3.2%	12.0%	0.7%	5.8%	13.0%	5.3%	4.2%
Hayward	1.2%	29.6%	9.0%	**39.7%***	2.4%	5.5%	13.2%	9.6%	4.8%
La Cañada Flintridge†	0.0%	**30.6%***	1.1%	9.8%	0.1%	4.5%	**18.9%***	3.3%	3.5%
Laguna Hills	0.3%	16.7%	1.0%	19.9%	0.1%	3.6%	**19.8%***	8.3%	3.5%
Lake Forest	0.8%	19.5%	2.2%	23.5%	0.5%	6.4%	14.1%	7.3%	3.6%
Long Beach†	1.3%	12.7%	12.0%	**44.1%***	0.6%	5.4%	12.5%	**15.1%***	4.8%
Los Angeles†	1.0%	11.8%	8.6%	**48.1%***	0.1%	5.3%	13.4%	**16.6%***	**5.2%***
Oakland	1.2%	15.9%	21.8%	26.6%	0.5%	5.7%	14.1%	**13.2%***	5.1%
Orange	0.9%	13.3%	1.5%	**39.1%***	0.4%	5.6%	14.5%	9.2%	3.8%
Pasadena†	0.5%	17.8%	8.0%	**35.3%***	0.1%	5.1%	16.8%	**13.4%***	4.4%
Placentia	0.4%	17.5%	2.7%	**35.6%***	0.1%	5.4%	14.5%	8.2%	4.0%

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 (December 2023)
Pleasant Hill	0.3%	16.8%	4.4%	13.9%	0.7%	5.0%	17.4%	6.4%	4.4%
San Diego	0.6%	17.4%	5.9%	**30.1%***	0.4%	5.4%	13.8%	11.4%	4.2%
San Jose†	0.8%	**38.1%***	2.9%	**30.8%***	0.5%	5.4%	13.7%	7.9%	4.1%
San Juan Capistrano†	0.6%	3.9%	0.6%	**38.4%***	0.0%	4.8%	**18.4%***	9.1%	3.3%
Santa Barbara†	0.8%	3.7%	1.4%	**36.1%***	0.1%	4.9%	**19.9%***	**13.0%***	3.2%
Saratoga†	0.3%	**55.5%***	0.1%	2.4%	0.0%	2.1%	**24.9%***	3.1%	4.0%
South San Francisco	0.6%	**43.4%***	1.9%	29.1%	0.8%	4.5%	17.3%	6.8%	3.4%
Strawberry CDP (Marin County)	0.0%	8.3%	1.8%	12.0%	0.4%	6.6%	**23.3%***	10.7%	3.7%
Sunnyvale	0.5%	**49.6%***	1.2%	16.7%	0.1%	6.7%	12.5%	5.3%	3.3%
Thousand Oaks	0.5%	9.2%	2.0%	19.7%	0.1%	5.0%	**19.9%***	7.9%	3.9%
Truckee	0.0%	1.4%	0.1%	14.8%	0.3%	6.7%	16.5%	9.0%	4.5%

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

Summary

If funded, the proposed projects would support the advancement of hydrogen refueling station O&M activities, improving the customer experience. This investment in O&M activities will result in long-lasting improvements to station reliability and uptime. Reliably meeting customers' ongoing fueling needs will encourage residents to switch from gas-powered vehicles to FCEVs.

Based on EJSM standards, CEC staff has identified 11 of the 29 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 intensity score (CI)	A measure of how clean electricity is measured in grams of hydrocarbons, or greenhouse gas emitted to produce a unit of electricity.
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 $PM_{2.5}$).
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.
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.

Term	Definition
Environmental Justice Screening Method (EJSM)	An approach that combines environmental and demographic indicators to inform agency outreach and engagement practices regarding environmental justice.
Fuel cell electric vehicle (FCEV)	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 (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_2O), halogenated fluorocarbons (HCFCs), ozone (O_3), perfluorinated carbons (PFCs), and hydrofluorocarbons (HFCs).
Hydrogen refueling station	A storage or filling station for hydrogen fuel where hydrogen is dispensed by weight.
Localized health impacts (LHI)	Potential health impacts to communities.
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."
Toxic air contaminant	An air pollutant, identified in California Air Resources Board regulations, which may cause negative health effects even at very low concentrations.

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