

# California Energy Commission

## STAFF REPORT

# LOCALIZED HEALTH IMPACTS REPORT

For A Project Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-14-606 – Centers for Alternative Fuels and Advanced Vehicle Technology in Central California



CALIFORNIA  
ENERGY COMMISSION  
Edmund G. Brown Jr., Governor

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## ABSTRACT

Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007) created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). This statute, amended by Assembly Bill 109 (Núñez, Chapter 313, Statutes of 2008), authorizes the California Energy Commission to “develop and deploy innovative technologies that transform California’s fuel and vehicle types to help attain the state’s climate change policies.” Assembly Bill 8 (Perea, Chapter 401, Statutes of 2013) reauthorizes the ARFVTP through January 1, 2024.

AB 118 also directs the California Air Resources Board (ARB) to develop guidelines to ensure air quality improvements. The *ARB Air Quality Improvement Program (AQIP) Guidelines*, approved in 2008, are published in the *California Code of Regulations, Title 13, Motor Vehicles, Chapter 8.1, AB 118 Air Quality Guidelines for the Alternative and Renewable Fuel and Vehicle Technology Program and the AQIP*. The *AQIP Guidelines* require the Energy Commission, as the funding agency, to analyze the localized health impacts of ARFVTP-funded projects that require a permit (13 CCR § 2343). As provided by 13 CCR § 2343, this *Localized Health Impacts Report* is required to be available for public comment for 30 days prior to the approval of projects.

This *Localized Health Impacts Report* analyzes the combined impacts in the communities, including exposure to air contaminants or localized air contaminants, or both, and including, but not limited to, communities of minority populations or low-income populations, as declared by the centers for alternative fuels and advanced vehicle technology proposer or as determined by Energy Commission staff. Appendix A, *Localized Health Impact Report Assessment Method*, describes the analysis used for this *Localized Health Impacts Report*.

**Keywords:** Air pollution, air quality, Air Quality Improvement Program (AQIP), California Air Resources Board (ARB), alternative fuel, Assembly Bill (AB) 118, California Environmental Quality Act (CEQA), criteria emissions, demographics, environmental justice (EJ) indicators, Environmental Justice Screening Method (EJSM), greenhouse gas emissions (GHG), localized health impact (LHI)

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## EXECUTIVE SUMMARY

Under the *California Code of Regulations Title 13, (CCR § 2343)*, this *Localized Health Impacts Report* describes the alternative fuel infrastructure projects proposed for Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) funding that may or may not require a conditional or discretionary permit or environmental review, such as conditional use permits, air quality permits, wastewater permits, hazardous waste disposal permits, and other land-use entitlements. This report does not include a project that requires only residential building permits, mechanical/electrical permits, or fire/workplace safety permits, as these are determined to have no likely impact on the environment.

The California Energy Commission is required to assess the localized health impacts of the projects proposed for ARFVTP funding. This *Localized Health Impacts Report* focuses on the potential impacts a project may or may not have on a particular community, particularly those communities that are considered especially vulnerable to emissions increases. For high-risk communities, this report assesses the impacts from criteria emissions/air toxics and the air quality attainment status.

Environmental justice communities, low-income communities, and minority communities are considered to be the most impacted by any project that could result in increased criteria and toxic air pollutants within an area because these communities typically have the most significant exposure to the emissions. Assessing projects and the communities surrounding them is important because of the health risks associated with these pollutants. Preventing health issues from air pollution in any community is important, but it is especially important to minimize any negative impacts in communities that are already considered to be at risk due to their continued exposure to these contaminants.

The project in this *Localized Health Impacts Report* is assessed for potential health impacts for the communities in which it will be located. Based on this analysis, it is not anticipated that implementation of this project will have negative impacts because there will not be a net increase in criteria and toxic emissions, specifically in those communities that are considered most vulnerable. Potentially, the project stands to provide improved quality of life through cleaner air.



# CHAPTER 1:

## Project Proposed for Funding

On January 15, 2015, the California Energy Commission released a competitive Grant Solicitation PON-14-606, titled “Centers for Alternative Fuels and Advanced Vehicle Technology in Central California,” under the Alternative and Renewable Fuel Vehicle Technology Program (ARFVTP). This grant solicitation was an offer to fund projects that either develop a new center for alternative fuels and advanced vehicle technologies or expand an existing center.

On March 18, 2015, the Energy Commission posted the Notice of Proposed Awards (NOPA) for PON-14-606; one project is proposed for funding. This *Localized Health Impact Report* assesses and reports on the potential localized health impacts of the project shown in Table 1. Appendix A describes the assessment method.

**Table 1: Proposed San Joaquin Valley Clean Transportation Center Project With Environmental Justice (EJ) Indicators**

<b>Applicant</b>	<b>Project Name</b>	<b>Project Address</b>	<b>EJ Indicators</b>
<b>CALSTART, Incorporated</b>	<b>“The San Joaquin Valley Clean Transportation Center”</b>	<b>Site 1: 4747 North First Street, Suite 140, Fresno, California 93726</b>	<b>Poverty, Minority, Age, and Unemployment</b>
		<b>Site 2: 9240 South Riverbend Avenue, Parlier, California 93648</b>	<b>Poverty, Minority, Age, and Unemployment</b>

Source: California Energy Commission staff analysis

# **CALSTART Incorporated**

Project Name: The San Joaquin Valley Clean Transportation Center

## *Site 1*

The main office of the San Joaquin Valley Clean Transportation Center (SJVCTC) will be located in an existing office space at 4747 North First Street, Suite 140, Fresno, California, 93726, on the site of the San Joaquin Valley Clean Energy Organization (SJVCEO). SJVCEO is a nonprofit organization in Fresno chartered with leading the eight-county region that comprises the San Joaquin Valley.

The SJVCEO vision is to significantly increase the valley's use of and reliance on renewable energy and energy efficiency technologies used in transportation. The goal is to significantly reduce emissions from transportation in the San Joaquin Valley to meet California's climate change goals. The SJVCTC will work to increase the acceptance and deployment of light-, medium- and heavy-duty alternative fuel vehicles and to reduce any barriers that hinder the production of low-carbon fuels. The transit and trucking sectors are included. The site is within one mile of 11 schools, 12 day care facilities, and 4 health care facilities.

## *Site 2*

Site 2, the satellite office of the San Joaquin Valley Clean Transportation Center, will be located at 9240 South Riverbend Avenue in Parlier, California, 93648, on the grounds of the University of California (UC) Kearney Agricultural Research and Extension Center (KARE), an environmental management research operation that will expand into transportation. The center hosts thousands of visitors, meetings, workshops, field days, and seminars annually. The site is within one mile of three schools, zero day care facilities, and one health care facility.

## CHAPTER 2: Approach

The *Localized Health Impact Report (LHI Report)* Assessment Method in Appendix A assesses communities potentially impacted by air pollution and possibly benefitted by the launch of the San Joaquin Valley Clean Transportation Center. The California Air Resources Board's (ARB) *Proposed Screening Method for Low-Income Communities Highly Impacted by Air Pollution for Assembly Bill (AB) 32 Assessments* is also used to integrate data to identify low-income communities that are highly impacted by air pollution.<sup>1</sup> Other resources used in this assessment are the *California Infrastructure State Implementation Plans*,<sup>2</sup> which contains publicly noticed air quality attainment plans, and the *Green Book Nonattainment Areas for Criteria Pollutants*.<sup>3</sup>

For this *LHI Report*, the Energy Commission interprets “permits” to connote discretionary and conditional use permits because they require a review of potential impacts to a community and the environment before issuance. Since ministerial-level permits, such as building permits, do not assess public health-related pollutants, the Energy Commission staff does not assess projects requiring only ministerial-level permits in this report.

Fresno and Parlier are both in nonattainment zones for ozone, PM<sup>4</sup> 2.5, and PM 10. Table 1 shows the EJ indicators for the two site locations, that is, minority populations, low incomes, and highly sensitive groups based on age (individuals younger than 5 years of age and older than 65 years of age). Table 2 shows the demographics. Fresno and Parlier are both classified high-risk communities, according to the Environmental Justice Screening Method (EJSM).

Staff collected information about predicted emissions from the project that include those from developing and/or expanding a center for alternative fuels and advanced vehicle technologies. The proposed San Joaquin Valley Clean Transportation Center will emit negligible quantities of criteria and toxic emissions, such as ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, PM 10, and PM 2.5 in daily operations. Operation of the San Joaquin Valley Clean Transportation Center will not involve any transport or fuel, feedstock, or other material to the project site; no fuel will be produced on site.

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1 California Air Resources Board, *Proposed Screening Method for Low-Income Communities Highly Impacted by Air Pollution*, 2010 (Sacramento, California).

2 <http://www.arb.ca.gov/planning/sip/sip.htm>.

3 <http://www.epa.gov/oaqps001/greenbk>.

4 “Particulate matter” is unburned fuel particles that form smoke or soot and stick to lung tissue when inhaled, and a chief component of exhaust emissions from heavy-duty diesel engines.

## **CHAPTER 3: Summary**

The San Joaquin Valley Clean Transportation Center will increase the use of alternative fuel vehicles through education, demonstration, testing, evaluation, and outreach. As more alternative fuel vehicles enter the market and begin to displace gasoline and diesel vehicles, tailpipe pollutants will decrease. Fresno and Parlier are high-risk communities, as identified in Appendix A. The anticipated benefit from this proposed project for the people in these communities, and for Central California, is highly likely, if not certain, to be positive since the project will yield better air quality and increased greenhouse gas reductions through the future use of alternative fuels and vehicles.

## **CHAPTER 4:**

### **Acronyms**

Air Quality Improvement Program (AQIP)

Air Resources Board (ARB)

Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP)

Assembly Bill (AB)

California Code of Regulations (CCR)

California Environmental Quality Act (CEQA)

Environmental justice (EJ)

Environmental Justice Screening Method (EJSM)

Kearney Agricultural Research and Extension Center (KARE)

Localized health impact (LHI)

Notice of Proposed Awards (NOPA)

Particulate matter (PM)

Program Opportunity Notice (PON)

San Joaquin Valley Clean Energy Organization (SJVCEO)

**Table 2: Environmental Justice (EJ) Indicators Compared With California**

Yellow highlighted areas indicate numbers (percentages) that meet the definition for EJ indicators.

	Number of EJ Indicators	Below Poverty Level (2008-2012)	Black Persons (2010)	American Indian and/or Alaska Native (2010)	Asian and/or Pacific Islander (2010)	Persons of Hispanic or Latino Origin (2010)	Persons Under 5 Years of Age (2010)	Persons Over 65 Years of Age (2010)	Unemployment Rate (February 2014)
<b>California</b>		15.3%	6.2%	1.0%	13.0%	37.6%	6.8%	11.4%	6.7%
			>30%	>30%	>30%	>30%			
Fresno (Site 1)	4	28.9%	8.3%	1.7%	12.6%	46.9%	8.9%	9.3%	12.6%
Parlier (Site 2)	4	35.5%	0.6%	1.2%	0.5%	97.5%	11.7%	5.5%	13.5%

Sources: Unemployment information from the State of California, Employee Development Department (EDD) Labor Market Information Division:

<http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=133> and [Age / ethnicity demographics, U.S. Department of Census: http://quickfacts.census.gov](http://www.census.gov/hhes/ethnicitydemographics/)

# APPENDIX A:

## Localized Health Impact Report Assessment Method

Based on the California Energy Commission's interpretation of the *California ARB AQIP Guidelines*, this *LHI Report* assesses the potential impacts to communities as a result of the projects proposed by the ARFVTP. This report is prepared under the *California ARB AQIP Guidelines, California Code of Regulations, Title 13, Motor Vehicles, Chapter 8.1 (CCR § 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.”

This *LHI Report* is not intended to be a detailed environmental health impact analysis of proposed projects nor is it intended to substitute for the environmental review conducted during the California Environmental Quality Act (CEQA) review process. This *LHI Report* includes staff application of the Environmental Justice Screening Method (EJSM) to identify projects located in areas with social vulnerability indicators and the greatest exposure to air pollution and associated health risks.<sup>5</sup>

The EJSM was developed to identify low-income communities highly affected by air pollution for assessing the impacts of climate change regulations, specifically Assembly Bill 32 (Núñez, Chapter 488, Statutes of 2006), the California Global Warming Solutions Act of 2006. The EJSM integrates data on (i.) exposure to air pollution, (ii.) cancer risk, (iii.) ozone concentration, (iv.) frequency of high ozone days, (v.) race/ethnicity, (vi.) poverty level, (vii.) home ownership, (viii.) median household value, (ix.) educational attainment, and (x.) sensitive populations (populations under 5 years of age or over 65 years of age).

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

To determine high risk communities, environmental justice (EJ) indicators for location of the center sites are compared to data from the U.S. Department of Census or other public agency. Staff identifies high-risk communities by using a two-part standard. For a community to be considered high risk, for this assessment, it must meet both Parts 1 and 2 of this standard.

*Part 1:*

- Communities located in nonattainment air basins for ozone, PM 10 or PM 2.5

*Part 2:*

- Communities having one or more of the following EJ indicators: (1) minority, (2) poverty, (3) unemployment; and/or (4) high percentage of population under 5 years of age and over 65 years of age. The EJ indicators follow:
  - A minority subset represents more than 30 percent of a given city's population. [MINORITY]
  - A city's poverty level exceeds California's poverty level. [POVERTY]
  - A city's unemployment rate exceeds California's unemployment rate. [UNEMPLOYMENT]
  - The percentage of people living in that city are younger than 5 years of age or older than 65 years of age is 20 percent higher than the average percentage of persons under 5 years of age or over 65 years of age for all of California. [SENSITIVE POPULATIONS – AGE]