

California Energy Commission STAFF REPORT

LOCALIZED HEALTH IMPACTS REPORT

Addendum 4 for a Selected Project With Location Changes
Awarded Funding Through the Alternative and Renewable Fuel
and Vehicle Technology Program Under Solicitation PON-13-606
– Electric Vehicle Charging Infrastructure



CALIFORNIA
ENERGY COMMISSION
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ADDENDUM 4

The *Localized Health Impacts (LHI) Report for Selected Projects Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-13-606* was posted April 11, 2014 (CEC-600-2014-002).¹ The assessment approach used in this addendum is as written in CEC-600-2014-002.

This addendum reports on and assesses the potential localized health impacts of site location changes for the US Green Vehicle Council project titled “Fast Charging on I-5 and 99 Corridors.” The original and the new site locations for direct current fast charger (DCFC) installations are listed in Table 1.

Table 1: Original and New Site Locations for the DCFCs

Original Site Location	New Site Location
750 Motel Dr., Merced, California 95340	151 South Parsons Ave., Merced, California 95341
7191 Kathryn West Ave., Fresno, California 93722	330 East Fir Ave., Fresno, California 93720
1100 North Cherry St., Tulare, California 93274	1010 East Prosperity Ave., Tulare, California 93274
5620 Del Sol Dr., Wheeler Ridge, California 93203	5555 Laval Rd., Wheeler Ridge, California 93203

Source: Energy Commission staff analysis

The four replacement site locations have the surroundings shown in Table 2, which are comparable with the original site locations.

Table 2: Surroundings for the New Site Locations

New Address	Surroundings (within a 1-mile radius)
151 South Parsons Ave., Merced, California 95341	2 schools, 1 day-care center, and no health-care offices and/or hospitals
330 East Fir Ave., Fresno, California 93720	8 schools, 4 day-care centers, and 8 health-care offices and/or hospitals
1010 East Prosperity Ave., Tulare, California 93274	8 schools, 5 day-care centers, and 6 health-care offices and/or hospitals
5555 Laval Rd., Wheeler Ridge, California 93203	No schools, day-care centers, or health-care offices and/or hospitals

Source: Energy Commission staff analysis

¹ Brecht, Patrick, Jennifer Allen, Lindsee Tanimoto. 2014. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC - 600 - 2014 - 002.

Demographic Data

Staff collected information on ethnicity, age, and unemployment for the cities where the DCFCs will be located. The information identifies those communities with higher minority populations, and highly sensitive groups based on age, and unemployment. For this assessment, staff identifies sensitive populations as individuals younger than 5 years of age and older than 65 years of age. Table 3 shows the demographic data for the proposed DCFCs installation sites. The new site locations are in the same cities as the original. The unemployment figures have changed since the original *LHI*, however, the overall results are still the same. Each of the four site locations has four EJ indicators and is considered a high-risk community.

Table 3: EJ Indicators Compared With California

Yellow highlighted areas indicate numbers (percentages) that meet the definition of EJ indicators. Demographics are based on the city.

	Below Poverty Level (2009 – 2013)	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 (February 2015)
California	15.3%	6.2%	1.0%	13.0%	37.6%	6.8%	11.4%	6.7%
		>30%	>30%	>30%	>30%	>8.16%	>13.8%	
Fresno	28.9%	8.3%	1.7%	12.6%	46.9%	8.9%	9.3%	12.6%
Merced	30.0%	6.3%	1.5%	11.8%	49.6%	9.4%	8.8%	12.7%
Tulare	21.4%	3.9%	1.2%	2.2%	57.5%	9.4%	9.0%	11.4%
Wheeler² Ridge (Arvin)	32.7%	1.0%	1.0%	0.8%	92.7%	11.5%	5.1%	12.8%

Sources: Unemployment information from the State of California, Employee Development Department Labor Market Information Div.: http://www.labormarketinfo.edd.ca.gov/CES/Labor_Force_Unemployment_Data_for_Cities_and_Census_Areas.html. Demographics from U.S. Department of Commerce, U.S. Census Bureau, <http://quickfacts.census.gov/qfd/states/06/0616378.html>

² Wheeler Ridge is an unincorporated community. Addresses east of Interstate 5 indicate the city of Arvin. Addresses west of Interstate 5 would indicate the city of Lebec. This project location is designated as the city of Arvin.

Equivalent Gasoline Gallons Displaced

Staff collected information about the estimated gallons of gasoline displaced by the installation of the DCFCs that result from electric vehicle miles traveled. Table 4 shows the estimated total displacement. The proposed new site replacements have the identical gasoline gallons displaced as the original sites.

Table 4: Estimated Gasoline Gallons Displaced With 10 Direct Current Fast Chargers (DCFC)

Vehicle Capacity (total number of vehicles that can charge at the same time)	Estimated Total Electric Vehicle Miles Per Year ³ (2015 vehicle population)	Estimated Total Gasoline Gallons Displaced ⁴ Per Year
10	325,707	13,628

Source: Energy Commission staff analysis

Location Analysis and Community Impacts

Based on staff's assessment of the proposed new site locations, it is expected that none of the surrounding communities would be disproportionately impacted by the implementation of the project. While overall air quality depends on several factors, the Energy Commission expects that air quality will improve over time where the chargers are proposed as they support growing numbers of electric vehicles.

Summary

The four sites will increase the use of plug-in electric vehicles (PEVs). As more PEVs enter the market and begin to displace gasoline and diesel vehicles, tailpipe pollutants will decrease. The anticipated impacts to the cities where these projects would be located are positive in terms of cleaner air and anticipated greenhouse gas reductions. Of the four cities listed, the anticipated benefit from these projects for the people who live in these cities is highly likely, if not certain, to be positive.

³ Default is 365 days per year for Destination, Corridor, and Public Access Workplace in Category I, unless specific restrictions were identified. Default is 251 days per year in Category II. Default is 365 days per year in Category III.

⁴ 23.9 miles per gallon for equivalent gasoline vehicle displaced