

# California Energy Commission STAFF REPORT

## LOCALIZED HEALTH IMPACTS REPORT

Addendum 9 for Projects 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  
Edmund G. Brown Jr., Governor

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# CALIFORNIA ENERGY COMMISSION

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# ADDENDUM 9

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).<sup>1</sup> This addendum uses the same approach to assess the localized health impacts for projects with location changes and added locations. The South Coast Air Quality Management District proposes to change locations for three sites and add a site. Each site will include one electric vehicle (EV) single-port, direct current fast charger (DCFC). The County of San Diego proposes to add one location, which includes two dual-port DCFCs. The original and new locations are described in Table 1, along with environmental justice indicators and new surroundings.

**Table 1: Original and New Site Locations for the South Coast Air Quality Management District (SCAQMD) and Added Site Location for the County of San Diego With Environmental Justice (EJ) Indicators<sup>2</sup> and New Surroundings**

| Grantee/Original Site Locations                               | New or Added Site Locations                         | EJ Indicators for New Locations           | Surroundings for New Locations (Within 1-Mile Radius)   |
|---|---|---|---|
| <b>SCAQMD</b><br>900 University Avenue<br>Riverside, CA 92521 | 4900 West Sunset Boulevard<br>Los Angeles, CA 90027 | Poverty,<br>Minority, and<br>Unemployment | Densely populated area with more than 10 schools, more than 10 day care centers, and more than 10 medical offices/hospitals |
| <b>SCAQMD</b><br>48400 Seminole Drive<br>Cabazon, CA 92230    | 3280 East Foothill Boulevard<br>Pasadena, CA 91107  | Minority                                  | Densely populated area with more than 10 schools, more than 10 day care centers, and more than 10 medical offices/hospitals |

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.

2 The EJ indicators follow: (i.) minority subset represents more than 30 percent of a given city’s population (2010), (ii.) city’s poverty exceeds California’s poverty level of 15.9 percent (2009-2013), (iii.) city’s unemployment rate exceeds California’s unemployment rate of 5.7 percent as of November 2015, and (iv.) city’s percentage of persons younger than 5 years of age or older than 65 years of age is 20 percent higher than then California’s average. For the entire state, the percentage of persons under the age of 5 years is 6.8 percent, and the percentage of persons over the age of 65 years is 11.4 percent.

| Grantee/Original Site Locations                                  | New or Added Site Locations   | EJ Indicators for New Locations           | Surroundings for New Locations (Within 1-Mile Radius)   |
|--|---|---|---|
| SCAQMD<br>277 North Avenida Caballeros<br>Palm Springs, CA 92262 | 3416 East La Palma<br>Anaheim, CA 92806                                   | Poverty and<br>Minority                   | 6 schools, 2 day care centers, and 7 medical offices/hospitals  |
| SCAQMD<br>N/A  | 5601 De Soto Avenue<br>Woodland Hills, CA 91367<br>(Los Angeles City)     | Poverty,<br>Minority, and<br>Unemployment | Densely populated area with more than 10 schools, 7 day care centers, and more than 10 medical offices/hospitals (charging station would be located on the grounds of a medical center) |
| Grantee  | Added Site Location   | EJ Indicators for Added Location          | Surroundings for Added Location (Within 1-Mile Radius)  |
| County of San Diego  | Kettner Parking Structure<br>735 West Cedar Street<br>San Diego, CA 92101 | None                                      | Densely populated area with more than 10 schools, 4 day care centers, and more than 10 medical offices/hospitals  |

Source: Energy Commission staff analysis

## Air Quality and EJ Indicators

All five locations are in nonattainment zones for ozone, particulate matter (PM<sup>3</sup>) 2.5 and PM 10. Los Angeles has three EJ indicators, Anaheim has two, Pasadena has one, and San Diego has no EJ indicators. If a project site is in a nonattainment zone and has more than one EJ indicator, as shown in Table 2, it is considered a high-risk community, according to the Environmental Justice Screening Method<sup>4</sup>. Therefore, three of the four locations for SCAQMD are considered in high-risk communities, while the County of San Diego's site is not in a high-risk community.

<sup>3</sup> "Particulate matter" is unburned fuel particles that form smoke or soot and stick to lung tissue when inhaled. The numbers stand for microns in diameter.

<sup>4</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.

**Table 2: EJ Indicators Compared With California**

Yellow highlighted percentages indicate EJ indicators

|               | 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 (November 2015) |
|---------------|-----------------------------------|----------------------|---|--------------------------------------|---|-------------------------------------|-------------------------------------|------------------------------|
| California    | 15.9%                             | 6.2%                 | 1.0%  | 13.0%                                | 37.6%                                       | 6.8%                                | 11.4%                               | 5.7%                         |
| EJ Indicators | >15.9%                            | >30%                 | >30%  | >30%                                 | >30%  | >8.16%                              | >13.8%                              | >5.7%                        |
| Anaheim       | 16.1%                             | 2.8%                 | 0.8%  | 14.8%                                | 52.8%                                       | 7.7%                                | 9.3%                                | 5.3%                         |
| Los Angeles   | 22.0%                             | 9.6%                 | 0.7%  | 11.3%                                | 48.5%                                       | 6.6%                                | 10.5%                               | 6.0%                         |
| Pasadena      | 13.2%                             | 10.7%                | 0.6%  | 14.3%                                | 33.7%                                       | 6.0%                                | 13.5%                               | 5.1%                         |
| San Diego     | 15.6%                             | 6.7%                 | 0.6%  | 15.9%                                | 28.8%                                       | 6.2%                                | 10.7%                               | 4.6%                         |

Sources: Unemployment information from the State of California, Employee Development Department Labor Market Information Div.: <http://www.labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html#Tool>. Demographics from: U.S. Department of Commerce, U.S. Census Bureau, <http://quickfacts.census.gov/qfd/states/06/0616378.html> and [http://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml)

## Equivalent Gasoline Gallons Displaced

The estimated equivalent gallons of gasoline displaced is based on 23.9 miles per gallon of gasoline due to electric vehicle miles traveled (VMT). The additional SCAQMD DCFC will result in 94,728 estimated electric VMT per year, and the estimated total equivalent gasoline gallons displaced per year will be 3,964. The two additional DCFCs for San Diego County will result in 1,894,552 estimated electric VMT per year and an estimated total equivalent gasoline gallons displaced per year of 79,270.

## Location Analysis and Community Impacts

Based on staff’s assessment of the proposed new and added site locations for SCAQMD and the added location for San Diego County, staff expects that the surrounding communities will not be disproportionately impacted by implementing the proposed projects. 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 a growing number of EVs. As more plug-in EVs enter the market and displace gasoline, tailpipe pollutants will decrease. The anticipated impact to the communities where the charges will be located is likely positive in terms of cleaner air.