

California Energy Commission

STAFF REPORT

LOCALIZED HEALTH IMPACTS REPORT

Addendum 7 for a Project With Location Changes Awarded
Funding Through the Alternative and Renewable Fuel and
Vehicle Technology Program Under Solicitation PON-09-608
– Hydrogen Fuel Infrastructure



CALIFORNIA
ENERGY COMMISSION

Edmund G. Brown Jr., Governor

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ADDENDUM 7

The *Localized Health Impacts (LHI) Report for Selected Projects Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-09-608-Hydrogen Fueling Infrastructure* was posted May 6, 2011 (CEC-600-2011-002REV1)¹. This addendum applies the same approach to assess the potential localized health impacts for a project with location changes. Both newly proposed locations have been relocated once before. The Redondo Beach location was assessed in Addendum 6 (CEC-600-2011-002-AD6)² and the Irvine location in Addendum 4 (CEC-2011-002-AD4).³ The newly proposed stations have comparable characteristics, equipment, installation work, and capacity as the original proposed station locations.

Table 1 lists the original and newly proposed addresses, environmental justice⁴ indicators, and new surroundings.

Table 1: Original and Proposed New Site Locations for Air Products With Environmental Justice Indicators and New Surroundings

| Original Site Location | New Site Location | EJ Indicators for New Location | Surroundings for New Location (within 1-mile radius) |
|--|--|--------------------------------|--|
| 1200 Beryl Street Redondo Beach, CA 90277 | 28103 Hawthorne Boulevard Rancho Palos Verdes, CA 90275 | Age | 1 school, 1 day care center, and 1 medical office/hospital |
| 5410 Walnut Avenue Irvine, CA 92604 | 24551 Lyons Avenue Santa Clarita, CA 91321 | None | no schools, 3 day care centers, and no medical offices/hospitals |

Source: Energy Commission staff analysis

1 Magaña, Pilar, 2011. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2011-002REV1.

2 Brecht, Patrick, 2014. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2011-002-AD6.

3 Cazal, Phil, 2014. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2011-002-AD4.

4 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 5.5 percent as of February 2016, 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.

Air Quality and EJ Indicators

Rancho Palos Verdes and Santa Clarita are located in nonattainment zones for ozone, particulate matter (PM⁵) 2.5 and PM 10. Rancho Palos Verdes has only one EJ indicator (age); however, the Asian populace at 29 percent is just shy of the 30 percent minority threshold. Santa Clarita has no EJ indicators. Once again, the Hispanic and/or Latino populace at 29.5 percent is just shy of the minority threshold but less than the overall state average, which is 37.6 percent. 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 Method⁶. Therefore, Rancho Palos Verdes and Santa Clarita are not considered high-risk communities.

Table 2: EJ Indicators Compared With California

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

| | Persons Below Poverty Level (2009-2013) | Black persons (2010) | American Indian and Alaska Native (2010) | Persons of Hispanic or Latino Origin (2010) | Asian (2010) | Persons Under 5 Years of Age (2010) | Persons Over 65 Years of age (2010) | Unemployment (February 2016) |
|---------------------|---|----------------------|--|---|--------------|-------------------------------------|-------------------------------------|------------------------------|
| California | 15.9% | 6.2% | 1.0% | 37.6% | 13.0% | 6.8% | 11.4% | 5.5% |
| EJ Indicators | >15.9% | >30.0% | >30.0% | >30.0% | >30.0% | >8.16% | >13.8% | >5.5% |
| Rancho Palos Verdes | 4.4% | 2.4% | 0.2% | 8.5% | 29.0% | 3.7% | 23.2% | 2.6% |
| Santa Clarita | 9.3% | 3.2% | 0.6% | 29.5% | 8.5% | 6.3% | 9.6% | 5.0% |

Sources: Unemployment information from the State of California, Employee Development Department (EDD) Labor Market Information Division: http://www.labormarketinfo.edd.ca.gov/CES/Labor_Force_Unemployment_Data_for_Cities_and_Census_Areas.html and Demographics information from the U.S. Department of Commerce, U.S. Census Bureau: <http://www.census.gov/quickfacts/table/PST045215/0648256.0622678.0660018>

⁵ "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.

⁶ 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.

Location Analysis and Community Impacts

Based on staff's assessment of the proposed new site locations in Rancho Palos Verdes and Santa Clarita, it is anticipated that the surrounding communities will not be disproportionately impacted by the implementation of the projects. As with the original locations, operational details are comparable. The truck delivery frequency will be similar to the original site estimates. Staff expects that air quality at and near the proposed sites will improve over time because there will be no emissions from the refueling of fuel cell electric vehicles (FCEVs), outside of the occasional truck delivery of hydrogen. It is anticipated that there will be reduced greenhouse gas emissions as a result of the FCEVs refueling at the stations. The approval and subsequent construction of the station will support a growing number of FCEVs. As more FCEVs enter the market and displace gasoline, tailpipe pollutants will decrease. The anticipated impact to the community where the refueling station will be located is likely positive in terms of cleaner air.