

STAFF REPORT

LOCALIZED HEALTH IMPACTS REPORT

Addendum 1 for a Selected Project With a Location Change
Awarded Funding Through the Alternative and Renewable
Fuel and Vehicle Technology Program Under Solicitation
PON-13-607 – Hydrogen Refueling Infrastructure



CALIFORNIA
ENERGY COMMISSION

Edmund G. Brown Jr., Governor

October 2014

CEC-600-2014-007-AD

CALIFORNIA ENERGY COMMISSION

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ADDENDUM 1

The *Localized Health Impacts Report Addendum for Selected Projects Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-13-607 – Hydrogen Refueling Infrastructure* by the Alternative and Renewable Fuel and Vehicle Technology Program was originally posted June 19, 2014. ¹

The assessment approach of this addendum is as written in CEC-600-2014-007. This addendum to the localized health impacts report assesses and reports on the potential localized health impacts of a station location change for HyGen Industries, project “100% Renewable & Sustainable Carbon-Free Hydrogen Fueling Station Network.” The original proposed station location was 8544 East Chapman Avenue, Orange, CA 92869. This location will be replaced by the new location of 1914 East Chapman Avenue, Orange, CA 92867. (See Table 1.)

Table 1: Address Change for Hydrogen Refueling Station

| Original Site Location | New Address |
|--|--|
| 8544 East Chapman Avenue, Orange, CA 92869 | 1914 East Chapman Avenue, Orange, CA 92867 |

Source: Energy Commission staff analysis

The locations have the same nonattainment status for ozone, particulate matter (PM) 2.5, and PM 10. (See Table 2.)²

Table 2: Community Status and Project Overview

| Project | At-Risk Community | CEQA Completed | Air District Permit Status | Attainment Status for Ozone, PM (2.5), PM (10) |
|--|-------------------|----------------|----------------------------|--|
| 1914 East Chapman Avenue, Orange, CA 92867 | No | Complete | In Process | Nonattainment (PM [10]) |

Source: Energy Commission staff analysis

¹ Brecht, Patrick, 2014. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2014-007.

² “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.

The replacement location will result in new surroundings, as shown in Table 3. The surroundings are comparable with the original location.

Table 3: Surroundings for the New Site Locations

| New Address | Surroundings (within a 1-mile radius) |
|--|--|
| 1914 East Chapman Avenue, Orange, CA 92867 | 10 schools, 5 day-care facilities, and 4 health-care offices |

Source: Energy Commission staff analysis

The following overview includes a project description, outreach efforts, emissions information, location analysis and community impacts, and a summary. In addition, the demographic data for the planned project location are provided with the identification of any environmental indicators, as shown in Table 4.

HyGen Industries, LLC

Project Name: 100% Renewable & Sustainable Carbon-Free Hydrogen Fueling Station Network

The proposed replacement site is located 4.4 miles away from the original site and is more than 6 minutes from the nearest existing or planned station. The new location will serve the same fuel cell vehicle market and, as an additional benefit, is positioned in an area of high traffic flow adjacent to a state Highway 55 off-ramp.

Outreach

HyGen will work with local communities to maximize awareness of the new proposed hydrogen station and the option to purchase fuel cell electric vehicles (FCEVs) that can fuel at this station. This outreach will include communication of the multifaceted benefits of true zero-emission vehicle implementation. The project specifies that stakeholders will manage all outreach with local officials (for example, fire marshals) and the local community to ensure transparency throughout the installation and to ensure excellent understanding of the equipment/system safety.

Emissions

Staff considered emissions from this proposed project. Truck delivery of hydrogen can be a source of criteria pollutants; however, this station will install a 100 percent renewable hydrogen refueling station, thereby requiring no truck deliveries.

This proposed project is expected to have a net benefit by reducing emissions and leading to improved air quality. While overall air quality depends on several factors, staff expects that air quality will improve over time where this site is proposed because there are no expected harmful emissions from the station and there will be reduced emissions overall from driving FCEVs. Several schools, day-care facilities, and health-care facilities are near the proposed project. This project will result in cleaner air for the people in these facilities.

Location Analysis and Community Impacts

Based on the staff’s assessment of this proposed project, it is expected that the surrounding communities would not be disproportionately impacted by this project. The City of Orange has only one environmental justice (EJ) indicator. The above information indicates that there will be no net increase in criteria and toxic air pollutants as a result of this station.

Location analysis and community impacts are based on comparing the project location demographics to that of California. The city’s population of persons with Hispanic or Latino origin is slightly more than that of California.

Table 4 in this addendum provides the city-level data for the city project location to give additional insight on the community demographics where the project will be located.

**Table 4: Demographic Data Including EJ Indicators (percentage)
(Compared to California)**

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

| | Persons Below Poverty Level (2008-2012) | Black Person (2010) | American Indian and Alaska Native (2010) | Persons of Hispanic or Latino Origin (2010) | White Persons (2010) | Persons Under 5 Years of Age (2010) | Persons Over 65 Years of Age (2010) | Unemployment Rate (August 2014) |
|-------------------------------------|---|---------------------|--|---|----------------------|-------------------------------------|-------------------------------------|---------------------------------|
| California | 15.3 | 6.2 | 1.0 | 37.6 | 57.6 | 6.8 | 11.4 | 7.4 |
| HyGen Industries, LLC Orange, CA | 10.7 | 1.6 | 0.7 | 38.1 | 67.1 | 6.4 | 10.7 | 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://quickfacts.census.gov/qfd/states/06/0653980.html>.

Summary

The proposed project location is anticipated to impact the city of Orange positively in terms of cleaner air and anticipated greenhouse gas reductions. There will be a reduction of known harmful emissions when FCEVs refuel at this station as they will replace gasoline vehicles.