

STAFF REPORT

LOCALIZED HEALTH IMPACTS REPORT

For Selected Projects Awarded Funding Through the
Alternative and Renewable Fuel and Vehicle Technology
Program Under Solicitation PON-12-606 – Hydrogen Fuel
Infrastructure



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ENERGY COMMISSION

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PREFACE

The increased use of alternative and renewable fuels supports California's commitment to curb greenhouse gas emissions, reduce petroleum use, improve air quality, and stimulate the sustainable production and use of alternative fuels within California. Alternative and renewable transportation fuels include electricity, natural gas, biomethane, propane, hydrogen, ethanol, renewable diesel, and biodiesel. State investment is needed to fill the gap and fund the differential cost of these emerging fuels and vehicle technologies.

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."

The statute 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).

The Energy Commission received proposals in response to Program Opportunity Notice PON – 12-606 for a hydrogen fuel infrastructure and is considering approving and funding the projects described in this *Localized Health Impacts (LHI) Report*. This report contains the project and site descriptions (including geographic locations), potential impacts and benefits, and outreach efforts as declared by the proposers in their documentation. In the course of normal operations, none of these facilities generate criteria emissions, particulate matter (PM), or air toxics at any appreciable level.

ABSTRACT

California Code of Regulations, Title 13, Motor Vehicles, Chapter 8.1, § 2343(c)(6), requires the California Energy Commission to consider the localized health impacts when selecting projects for funding. For each funding cycle, the Energy Commission is required to analyze localized health impacts for projects proposed for program funding that require a permit.

This *Localized Health Impacts Report* reviews the project proposals under consideration for funding that were submitted in response to the Hydrogen Fuel Infrastructure solicitation PON-12-606 by the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). This *Localized Health Impacts Report* contains project and site descriptions (including geographic locations) and potential impacts as contained in the proposals.

This *Localized Health Impacts Report* analyzes the combined locations of projects, 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, as declared by the project proposers or also as determined by Energy Commission staff. This report identifies outreach to community groups and other affected stakeholders, also as declared by the project proposers.

Keywords: Air pollution, air quality improvement program (AQIP), air quality, Air Resources Board (ARB), alternative fuel, Assembly Bill (AB) 118, California Environmental Quality Act (CEQA), criteria emissions, demographic, Energy Commission, environmental justice (EJ), Environmental Justice Screening Method (EJSM), greenhouse gas emissions, hydrogen, infrastructure localized health impact (LHI)

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EXECUTIVE SUMMARY

Under the *California Code of Regulations Title 13, (Motor Vehicle, Chapter)*, this *Localized Health Impacts Report* describes the alternative fuel infrastructure projects proposed for Alternative and Renewable Fuel and Vehicle Technology Program (ARVTP) funding that may or may not require a conditioned 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 projects requiring 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 ARVTP funding under the Hydrogen Fuel Infrastructure solicitation PON-12-606. This *Localized Health Impacts Report* focuses on the potential impacts the projects may or may not have on a particular community, particularly those communities that are considered especially vulnerable to emissions increases within their community. For projects located in high-risk communities, this report assesses the potential impacts from criteria emissions/air toxics, the air quality attainment status, and mitigation plans, if available. This *Localized Health Impacts Report* includes information about the proposer's outreach efforts, including public notices and community outreach.

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 these 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 projects assessed in this report include adding hydrogen infrastructure to existing fueling stations. During normal operations, none of these facilities generate criteria emissions, particulate matter (PM), or air toxics at any appreciable level. The projects in this *Localized Health Impacts Report* are assessed for potential health impacts for the communities in which they could be located. Based on this analysis, it is not anticipated that the implementation of the projects will have negative impacts on surrounding communities because there will not be a net increase in criteria and toxic emissions, specifically in those communities that are considered most vulnerable. Potentially, the projects stand to provide improved quality of life through cleaner air.

CHAPTER 1:

Projects Proposed for Funding

This chapter summarizes the projects proposed for Energy Commission funding. The projects in this *LHI Report* are:

Hydrogen Infrastructure:

- Air Liquide Industrial US - 3731 E La Palma, Anaheim.
- Hydrogen Frontier, Inc. - 12600 East End Ave., Chino.
- Air Products and Chemicals, Inc.
 - 25122 Marguerite Parkway, Mission Viejo.
 - 5314 Topanga Canyon Rd., Woodland Hills.
- Linde, LLC
 - 830 Leong Drive, Mountain View.
 - 21530 Stevens Creek Blvd., Cupertino.
 - 390 Foster City Blvd., Foster City.

CHAPTER 2: Approach, Definitions, and Projects Proposed for Funding

The California Energy Commission, through the Alternative and Renewable Fuels and Vehicle Technology Program (ARFVTP), released a competitive Grant Solicitation and Application Package on November 19, 2012. The application due date was January 24, 2013. Grant Solicitation PON-12-606 sought to fund projects to expand the network of publicly accessible hydrogen fueling stations to serve the current population of fuel cell vehicles (FCVs) and to accommodate the planned large-scale rollout of FCVs commencing in 2015.

The projects assessed in this report include installing and upgrading hydrogen dispensing equipment at existing fueling stations. During normal operations, none of these facilities generate criteria emissions, particulate matter (PM), or air toxics at any appreciable level.¹ Hydrogen dispensing will not generate emissions beyond those generated already at the fueling station. In some projects hydrogen will be delivered by truck, but this is not expected to expand truck traffic significantly.

The Energy Commission is required to analyze and publish this *LHI Report* for public review and comment for a 30-day period. Based on the Energy Commission's interpretation of the *Air Quality Improvement Program (AQIP) Guidelines*, this *LHI Report* provides information about the communities surrounding the potential project sites and assesses the potential impacts to public health in those communities as a result of the project. 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.

¹ "Particulate matter" is unburned fuel particles that form smoke or soot and stick to lung tissue when inhaled.

(B) Projects must be selected and approved for funding in a publicly noticed meeting.”

This *LHI Report* is neither intended to be a detailed environmental health or impact analysis of projects potentially to be funded by the program, nor is this assessment intended to be a substitute for the comprehensive environmental review conducted by regulatory agencies during the California Environmental Quality Act (CEQA) process. The application of CEQA would provide a more detailed analysis of the potential for adverse environmental effects of the proposed projects.

This report collects available information about the potential air quality impacts of the proposed projects and provides a collective, narrative analysis of the potential for localized health impacts from those projects. The *AQIP Guidelines* mandate that the Energy Commission track the projects’ progress through the CEQA process and ensure a commitment exists from the proposers to complete all mitigation measures required by the permitting agency before they receive the first funding allocation.

Staff reviewed results from 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.² 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/Pavley, Chapter 488, Statutes of 2006), the California Global Warming Solutions Act of 2006.

The EJSM identifies the various levels of risk in regions throughout California, and high-risk communities are considered especially vulnerable to even the smallest impacts. The EJSM integrates data on exposure to air pollution, cancer risk, ozone concentration and frequency of high ozone days, race/ethnicity, poverty level, home ownership, median household value, educational attainment, and sensitive populations (populations under 5, or over 65 years of age).

The ARB applied the method to the San Francisco Bay Area, San Joaquin Valley, and California’s desert region. However, the results consider only income among the list of social vulnerability indicators. For communities not yet assessed in the EJSM, the Energy Commission identifies high-risk areas as those in nonattainment basins for ozone, particle pollution (PM 2.5 and PM 10), along with populations that have high poverty and minority rates as well as a high percentage of sensitive populations.

² 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.

This *LHI Report* contains detailed assessments for all projects proposed for funding. This is most important for those located in low-income communities that are highly impacted by air pollution.

Permits

For this assessment, 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. For air permits, local air districts conduct a New Source Review (NSR) to determine the emission impacts. 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.

Demographic Data

Staff collected information on ethnicity, age, and income for the city/community where the potential project, if funded, would be located. The information identifies those communities with higher minority populations, lower incomes, and highly sensitive groups based on age. For this assessment, staff identifies sensitive populations as individuals younger than 5 years of age and older than 65 years of age. The demographic data for the proposed project sites is provided in Appendix B.

Emissions

Staff collected information about predicted emissions from the project proposals. The emissions considered for this assessment include those from hydrogen fueling infrastructure and delivery.

Community Status of Proposed Projects

The following community status descriptions for the proposed projects are based on the ARB *Proposed Screening Method* which integrates data to identify low-income communities that are highly impacted by air pollution.³ The California State Implementation Plans (<http://www.arb.ca.gov/planning/sip/sip.htm>) are used as a source for public notices for attainment plans. The *Green Book Nonattainment Areas for Criteria Pollutants* (<http://www.epa.gov/oaqps001/greenbk>) is also used as an information source for this assessment.

Air Liquide Industrial US

Project Name

California FCV Initiative-Hydrogen Infrastructure Market Development Program

³ California Air Resources Board (ARB), *Proposed Screening Method for Low-Income Communities Highly Impacted by Air Pollution*, 2010 (Sacramento, California).

Air Liquide proposes to install hydrogen dispensing equipment at an existing 76 retail gas station located at 3731 E. La Palma St. Anaheim, California, 92806. The immediate area is zoned for industrial and commercial use. There is one hospital, and there are no schools within a mile of this location.

The hydrogen fuel will be transported in standard, U.S. Department of Transportation (U.S. DOT) approved trucks fitted with all appropriate California emissions compliance.

The impact due to potential increase in traffic should be negligible as any traffic increases will be from zero-emission vehicles. No on-site emissions will result from this project.

Outreach Efforts

Air Liquide will provide various outreach efforts to educate the local community and first responders on any extraordinary circumstances involving the hydrogen fueling station. These efforts include:

- Hosting town hall-style meetings with local interested parties (such as environmental groups, business groups, and community groups) for general information inquiries.
- Providing hands-on training with first responders (fire, first aid, emergency management), including site tours and coordinated drills.
- Site tours to interested community organizations on an as-requested basis.

Hydrogen Frontier, Inc.

Project Name

Hyundai Hydrogen Generation and Fueling Facility

Hydrogen Frontier proposes to install a Hyundai Hydrogen Generation & Fueling Facility at the Hyundai North America R&D Facility located at 12600 East End Avenue in Chino. The site is zoned for industrial and commercial use. There are two schools and one health care provider within one mile.

The project has been evaluated using Appendix A of the August 2007 *Full Fuel Cycle Assessment: Well-to-Wheels Energy Inputs, Emissions, and Water Impacts*, CEC-600-2007-004-REV (referred to as FFCA) and the December 2007 *State Alternative Fuels Plan*, CEC-600-2007-011-CMF.

All of the hydrogen dispensed from this site will be produced using an electrolysis process designed by ITM-Power and will use renewable energy to meet 100 percent of its energy demand. This design will look to eliminate the need for hydrogen tankers to be brought in monthly and will eliminate the current emissions of these delivery tube trailers and the forklifts being used by the Hyundai facility.

Appendix A of FFCA, pages A-4, Hydrogen, 70 percent renewable electrolysis, indicates a baseline value of 161 g/mi of greenhouse gas in the 2012 projections and 141 g/mi in 2017 respectively, with an average of 151 g/mi. These numbers are projected using the data for a 70 percent renewable source, whereas this station will be 100 percent renewable. This station should outperform the estimates.

As can be seen by the data shown above, the proposed station will have little to no environmental impact and will actually benefit the Chino area where it will be located. It should also benefit the corridor areas in which the vehicles travel east and west on Highway 60 and Interstate 10.

Outreach Efforts

The station will become an educational point for consumers and the neighboring communities. Hydrogen Frontier, Inc., plans educational outreach to the community as well as nearby colleges. Hydrogen Frontier and Hyundai will also hold a grand opening event that will be coordinated with the city of Chino, U.S. Department of Energy, California Air Resources Board, the South Coast Air Quality Management District, and others. Hyundai fuel cell vehicles will be test-driven at the grand opening, and training will be provided on station operations. Hyundai and Hydrogen Frontier, Inc., plan to have informational brochures located on brochure holders at the dispensers. Hydrogen Frontier, Inc., will also have Web links on the front page of its website as the station comes on-line.

Air Products and Chemicals, Inc.

Project Name

Hydrogen Refueling Station Network Development (Mission Viejo and Woodland Hills)

Air Products and Chemicals, Inc., proposes to install two hydrogen fueling stations at retail gasoline facilities at 25122 Marguerite Parkway, Mission Viejo and 5314 Topanga Canyon Rd., Woodland Hills. The stations will be supplied with hydrogen, using a method for transporting low-cost hydrogen from point of production to point of use.

The project will generate direct and indirect emissions from the production and distribution of hydrogen and from power consumption at the hydrogen fueling station. The hydrogen will be generated at the Air Products Wilmington, California, hydrogen production plant, which includes coproduction of steam and electricity. In serving the Southern California hydrogen market demand, incremental hydrogen production will be produced at Wilmington and result in an incremental increase in total emissions (carbon dioxide [CO₂], nitrogen oxide [NO_x], sulfur oxide [SO_x], reactive organic gas [ROG], carbon monoxide (CO), PM₁₀, and ammonia [NH₃]):

0.0012 lbs NO_x/kg H₂
0.0005 lbs SO_x/kg H₂
0.0006 lbs ROG/kg H₂
0.0033 lbs CO/kg H₂

0.0017 lbs PM/kg H2

The environmental impact from transporting hydrogen will be minimized from the close proximity of hydrogen fueling station locations to the Wilmington supply source. NOx emissions average 3.8 grams per mile, and ROG emissions average 0.13 grams per mile. For the first two years of station operation, one truck will deliver hydrogen to the fueling stations every three days.

On a full-life cycle basis, hydrogen supply and use in the FCVs will reduce emissions to 133 g CO2/mile travelled or 68 percent lower than the Low Carbon Fuel Standards 2012 gasoline baseline⁴. During their travel, there will be zero emissions from the FCVs. Overall, in comparison to gasoline, this project will improve air quality levels in the operating area.

Outreach Efforts

Air Products will communicate its outreach efforts to residents in the immediate area.

Linde LLC

Project Name

Linde Silicon Valley Hydrogen Fueling Stations

Linde proposes three hydrogen fueling stations to be located at gas stations at 830 Leong Drive, Mountain View; 21530 Stevens Creek Blvd., Cupertino; and 390 Foster City Blvd., Foster City. Linde will supply liquid hydrogen produced in California to the site via tanker truck and store it in a liquid hydrogen tank located adjacent to the equipment containers. Truck deliveries of hydrogen will be relatively infrequent during the project life. Based on original equipment manufacturer projections for car deployment, the table below provides an estimate of truck delivery frequency. For the deliveries, Linde will use a 2012 model truck that complies with the most stringent emissions requirements.

Table 1: Truck Delivery Frequency

| Truck Delivery Frequency | Year 1 | Year 2 | Year 3 |
|---------------------------------|--------------------|-------------------|-------------------|
| Cupertino Site | Once every 3 weeks | Once every 5 days | Once every 3 days |
| Mountain View Site | Once every 3 weeks | Once every 5 days | Once every 3 days |
| Foster City Site | Once every 4 weeks | Once every 7 days | Once every 4 days |

Source: Linde Proposal under PON-12-606

⁴ <http://www.arb.ca.gov/fuels/lcfs/lcfs.htm>

Linde does not foresee this project adding criteria pollutants and toxic air contaminants to the localized air shed or affecting ambient air quality levels to an extent that would adversely affect the local community's health. There are no on-site production and related emissions, and the stored hydrogen is environmentally benign. Linde's compression system operates on specially designed and patented lubrication and cooling systems designed to operate in a safe and self-contained fashion and overseen regularly by Linde.

Outreach Efforts

Linde will provide informational tours of the sites as requested by interested parties. Linde will make hydrogen educational materials available at the sites. Linde has a strong history of being active in the communities in which it operates and will welcome opportunities to speak with local community groups, schools, first responders, and others. Linde will also present the fueling station concept to local fire marshals and organize press releases for the station openings.

Linde will work to heighten consumer awareness and acceptance of hydrogen fuels. Targeted outreach will be conducted through grassroots groups (neighborhoods, car clubs, and so forth), social media (blogs, Facebook™, Twitter™), and mainstream media (print/TV/radio), as budget allows. Periodic press conferences and media events will be held to keep the public informed, focusing on key facts about hydrogen.

Chapter 3: Location Analysis and Community Impacts

Based on the staff's assessment of the proposed projects, it is expected that three of the surrounding communities would be disproportionately impacted by the implementation of the projects. For this *LHI Report*, environmental justice (EJ) indicators are evaluated as follows.

- A *minority EJ* is indicated if a minority subset represents more than 30 percent of a given city's population.
- A *poverty level EJ* is indicated if a city's poverty level exceeds the state of California's poverty level (for the entire state – 13.7 percent).
- An *unemployment EJ* is indicated if a given city's unemployment rate exceeds California's unemployment rate (10.9 percent as of January 2012).
- An EJ indicator is also noted for cities where the percentage of persons younger than 5 years of age or older than 65 years of age is 20 percent higher than the average of the percentage of persons under 5 years of age or over 65 years of age for the entire state. (For California, 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.)

Of the seven proposed sites, three sites have minority EJ indicators. The poverty EJ indicator exists in two locations for the planned sites, and one site has unemployment EJ indicators. The age EJ indicator exists in no proposed sites. The proposed projects are expected to have a net benefit by reducing emissions and leading to improved air quality. While overall air quality depends on a number of factors, the Energy Commission expects that air quality will improve over time where the sites are proposed. Appendix A of this *LHI Report* covers the cities with EJ indicators which are described as minority EJ, poverty level EJ, unemployment EJ, and age EJs.

Staff identifies high-risk communities using the following factors: (1) those located in non-attainment air basins for ozone, PM 10 and PM 2.5; (2) those with high poverty, minority population, and/or unemployment rates; and (3) those with a high percentage of sensitive populations (under 5 years of age and over 65 years of age). Those designated as high-risk communities would be located in nonattainment air basins and have one or more of the other two factors.

CHAPTER 4: Summary

The proposed projects will result in seven sites for hydrogen fueling. Appendix A lists the cities and their EJ indications in which the sites will be located. The sites will increase the widespread use of hydrogen fuel cell vehicles. As more hydrogen fuel cell vehicles enter the market and begin to displace gasoline and diesel vehicles, tailpipe pollutants will decrease significantly. The facilities stand to nominally increase traffic for the projects that involve hydrogen delivery by truck. Yet, a net benefit is realized from less petroleum use and more alternative fuel use as a result of these projects.

The anticipated impacts to the cities where these projects will be located are positive in terms of cleaner air and anticipated greenhouse gas reductions.

Of the seven cities listed in Appendix A (with projects proposed for seven different sites), four have no EJ indicators, one has one EJ indicator, one has two indicators, and one has three indicators. The anticipated benefit from these projects for the people who live in these cities is highly likely, if not certain, to be positive. More demographics for the cities is contained in Appendix B.

Table 2: Proposed Sites With EJ Indicators

| | 7 Different Sites | Percent |
|---------------------|--------------------------|----------------|
| No EJ Indicators | 4 | 57.1% |
| One EJ Indicator | 1 | 14.3% |
| Two EJ Indicators | 1 | 14.3% |
| Three EJ Indicators | 1 | 14.3% |
| Four EJ Indicators | 0 | 0% |
| | | 100.0 Total |

Source: Energy Commission staff analysis

CHAPTER 5:

Acronyms

Air Quality Improvement Program (AQIP)

Air Resources Board (ARB)

Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP)

California Energy Commission (Energy Commission)

California Environmental Quality Act (CEQA)

Carbon Monoxide (CO)

Environmental justice (EJ)

Environmental justice screening method (EJSM)

Fuel cell vehicle (FCV)

Localized health impact (LHI)

Nitrogen oxide (NO_x)

New Source Review (NSR)

Particulate matter (PM)

Program Opportunity Notice (PON)

Reactive organic gas (ROG)

Sulfur oxide (SO_x)

United States Department of Transportation (U.S. DOT)

United States Environmental Protection Agency (U.S. EPA)

APPENDIX A: Cities With EJ Indicators

Table A-1: Cities With EJ Indicators

| Proposal Number | City | Minority | Poverty Level | Unemployment Rate | Age |
|-----------------|----------------|----------|---------------|-------------------|-----|
| 3 | Anaheim | X | X | | |
| 4 | Chino | X | | | |
| 5 | Mission Viejo | | | | |
| 6 | Woodland Hills | X | X | X | |
| 7 | Mountain View | | | | |
| 8 | Cupertino | | | | |
| 9 | San Mateo | | | | |

Source: Energy Commission staff analysis

APPENDIX B: Demographic Data

Table B-1: Demographic Data for Cities With EJ Indicators (percent)

| 2010 Data | Persons Below Poverty Level | Black persons | American Indian and Alaska Native | Persons of Hispanic or Latino Origin | White persons | Persons under 5 years of age | Persons over 65 years of age | Unemployment rate |
|------------------------------|-----------------------------|---------------|-----------------------------------|--------------------------------------|---------------|------------------------------|------------------------------|-------------------|
| Anaheim | 14.3 | 2.8 | 0.8 | 52.8 | 27.5 | 7.7 | 9.3 | 8.7 |
| Chino | 7.4 | 6.2 | 1.0 | 53.8 | 27.8 | 6.7 | 7.3 | 9.6 |
| Mission Viejo | 4.9 | 1.3 | 0.4 | 17.0 | 68.9 | 4.9 | 14.5 | 4.9 |
| Woodland Hills (Los Angeles) | 20.2 | 9.6 | 0.7 | 48.5 | 28.7 | 6.6 | 10.5 | 11.3 |
| Mountain View | 7.7 | 2.2 | 0.5 | 21.7 | 46.0 | 7.1 | 10.6 | 5.5 |
| Cupertino | 4.1 | 0.6 | 0.2 | 3.6 | 29.3 | 5.4 | 12.5 | 4.8 |
| San Mateo | 5.9 | 2.4 | 0.5 | 26.6 | 46.5 | 6.8 | 14.4 | 4.8 |

Source:

<http://quickfacts.census.gov>; <http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=133> and <http://www.bls.gov/eag/eag.ca.htm>

