STAFF REPORT

LOCALIZED HEALTH IMPACTS REPORT

Addendum for Selected Projects Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-11-602 – Alternative Fuels Infrastructure: Electric, Natural Gas, Propane, E85, and Diesel Substitutes Terminals

CALIFORNIA
ENERGY COMMISSION

Edmund G. Brown Jr., Governor

SEPTEMBER 2012

CEC-600-2012-004-AD

CALIFORNIA ENERGY COMMISSION

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ACKNOWLEDGEMENTS

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PREFACE

The *Localized Health Impacts (LHI) Report for Selected Projects Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-11-602 – Alternative Fuels Infrastructure: Electric, Natural Gas, Propane, E85, and Diesel Substitutes Terminals* (CEC-600-2012-004) was posted April 27, 2012, and the 30-day public comment period ended May 27, 2012. This report reflected the Round 1 Notice of Proposed Awards (NOPA) for PON-11-602. On August 16, 2012, the California Energy Commission posted the Round 2 NOPA resulting in additional projects proposed for funding under PON-11-602. This *Localized Health Impact Report Addendum* assesses and reports on the potential localized health impacts for the additional infrastructure projects recommended for funding.

The increased use of alternative and renewable fuels supports California's commitment to curb greenhouse gas emissions (GHG), reduce petroleum use, improve air quality, and stimulate the sustainable production and use of alternative fuels including 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. This addendum addresses projects for compressed natural gas, E85 (E85 is 85 percent ethanol and 15 percent gasoline), and electronic vehicle supply equipment.

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 PON-11-602 for an alternative fuels infrastructure and is considering approving and funding the projects described in this addendum. No potential exists for adverse health effects from the nominal increase in criteria emissions from the proposed projects.

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.

This addendum reviews the project proposals under consideration for funding that were submitted in response to the Alternative Fuel Infrastructure Grant Solicitation: Electric, Natural Gas, Propane, E-85 and Diesel Substitutes Terminal (PON-11-602) by the Alternative and Renewable Fuel and Vehicle Technology (ARFVT) Program.

This addendum analyzes the total 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 as determined by Energy Commission staff. This addendum identifies outreach to community groups and other affected stakeholders, as declared by the project proposers.

Keywords: Air pollution, air quality, air quality improvement program (AQIP), Air Resources Board (ARB), Assembly Bill (AB) 118, California Energy Commission, California Environmental Quality Act, compressed natural gas, criteria emissions, E-85, electric vehicle supply equipment, Environmental Justice Screening Method (EJSM), environmental justice, greenhouse gas emissions, localized health impact

Please use the following citation for this report addendum:
Law, Eric, Sarah Williams. 2012. *Localized Health Impacts Report Addendum 1.* California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2012-004-AD.

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EXECUTIVE SUMMARY

Under to the *California Code of Regulations Title 13, (CCR § 2343),* this *Localized Health Impacts (LHI) Report Addendum 1* describes the alternative fuel infrastructure projects proposed for Alternative and Renewable Fuels and Vehicle Technology Program (ARFVTP) 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.

The California Energy Commission is required to assess the localized health impacts of the projects proposed for ARFVTP funding under Alternative Fuels Infrastructure PON-11-602. This addendum focuses on the potential health impacts the projects may or may not have on a particular community, particularly those communities that are considered especially vulnerable to emissions increases.

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. 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 addendum include 64 proposals (at 66 sites throughout California): 3 are compressed natural gas fueling proposals (3 stations total), 1 E85 fueling proposal (24 stations total), and 60 EVSE proposals, of which 34 are direct current fast chargers demonstration, 13 are residential applications, 8 are for workplace, and 5 are for fleets. During normal operations, none of these projects generate criteria emissions, particulate matter (PM), or air toxics at any appreciable level. Based on this analysis, it is not anticipated that the implementation of the projects will have negative health impacts on surrounding communities. 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 addendum are:

Fuel Category: CNG Station, liquefied natural gas (LNG) or L/CNG Station

- FirstCNG, LLC, 20041 SW Birch Street, Newport Beach,
- Tulare County Compost & Biomass Inc., 24478 Road 140, Tulare
- Santa Ynez Band of Chumash Indians, 3101 East Highway 246, Santa Ynez

Fuel Category: E85

- RTC Fuels, LLC DBA Pearson Fuels, (21-station network throughout California)

Fuel Category: Electric Vehicle Supply Equipment (EVSE) (60 proposed projects)

Residential (Single unit housing or semidetached dwellings) Level 2 EVSE and Multiunit Dwelling Level 1 and 2 (806 charge points at 13 potential projects)

- Coulomb Technologies, San Diego
- AeroVironment, San Bernardino/Riverside Counties
- AeroVironment, Orange County
- AeroVironment, Sacramento County
- AeroVironment, North Bay Area Region
- AeroVironment, South Bay Area Region
- AeroVironment, MultiRegion
- AeroVironment, Ventura County
- AeroVironment, West Los Angeles County
- AeroVironment, San Diego County
- AeroVironment, San Joaquin/Stanislaus Counties
- AeroVironment, East Los Angeles County
- AeroVironment, Santa Barbara / San Luis Obispo/ Monterey Counties

Fuel Category: EVSE: Workplace Level 1 and 2 (118 charge points at 8 proposed projects)

- Schneider Electric USA – American Red Cross, 2731 N First St., San Jose
- Schneider Electric USA – San Mateo County, 3300 College Drive, San Bruno
  1700 W. Hillsdale Blvd., San Mateo
  4220 Farm Hill Blvd., Redwood
- Alternative Energy Systems Consulting, 7500 Gilman Drive, La Jolla

- Joe Carlson Studio, 1605 Mahalo Place, Compton
- Towbes Group, Santa Barbara County
- City of Yucaipa, Yucaipa, CA
- Los Angeles Department of Water and Power (LADWP), 111 N. Hope Street, Los Angeles
- OurEvolution Energy & Engineering, 8th and F Street, Arcata
  718 Third Street, Eureka

Fuel Category: EVSE: Fleet Level 1 and 2 (59 charge points at 5 proposed projects)

- Alternative Energy Systems Consulting, 9500 Gilman Drive, La Jolla
- AeroVironment, San Diego
- California Department of General Services (DGS), 1416 10th Street, Sacramento
- LADWP, 111 N. Hope Street, Los Angeles
- AeroVironment, San Diego

Fuel Category: EVSE: DC Fast Charger Demonstration (28 potential stations from 34 proposals)

- SCAQMD – Mission Hills, 10400 Sepulveda Blvd., Mission Hills
- SCAQMD– Norwalk, 12816 Studebaker Road, Norwalk
- SCAQMD – Pasadena, 320 W. Colorado Blvd., Pasadena
- SCAQMD – San Clement, 903 EL Camino Real, San Clemente
- SCAQMD – Glendora,655 S. Grand Avenue, Glendora
- SCAQMD –Santa Monica, 1644 Cloverfield Avenue, Santa Monica
- SCAQMD – Sherman Oaks, 14049 Ventura Blvd., Sherman Oaks
- SCAQMD – Upland, 1910 N. Campus Avenue, Upland,
- SCAQMD – West Covina, 2630 E. Workman Avenue, West Covina
- SCAQMD – Carson, 619 E. University Drive, Carson
- SCAQMD – Cerritos, 13321 South Street, Cerritos
- SCAQMD – Garden Grove, 13220 Harbor Blvd., Garden Grove
- SCAQMD – Irvine, 6601 Quail Hill Parkway, Irvine
- SCAQMD – Long Beach, 1930 N. Lakewood Blvd., Long Beach
- SCAQMD – Los Angeles, 2520 Glendale Blvd., Los Angeles
- SCAQMD – Los Angeles, 2600 S. Vermont Blvd., Los Angeles
- SCAQMD – Los Angeles, 3443 S. Sepulveda Blvd., Los Angeles
- Alternative Energy Systems Consulting, 9500 Gilman Drive, La Jolla
- Green Charge Networks, LLC –Pomona, 3111 West Temple Avenue, Pomona
- Green Charge Networks, LLC –Los Angeles, 3450 Overland Avenue, Los Angeles
- Green Charge Networks, LLC –Van Nuys, 7858 Van Nuys Blvd., Van Nuys
- Green Charge Networks, LLC – Irvine, 8693 Irvine Center Dr., Irvine

- Green Charge Networks, LLC – Seal Beach, 5075 Westminster Blvd., Seal Beach
- Green Charge Networks, LLC – Rosemead, 3366 North San Gabriel Blvd., Rosemead
- Green Charge Networks, LLC – San Diego, 2805 Garnet Avenue, San Diego
- Green Charge Networks, LLC – San Diego, 4080 Convoy St., San Diego
- Green Charge Networks, LLC – Moreno Valley, 23021 Sunnymead Blvd., Moreno Valley
- Green Charge Networks, LLC – Fullerton, 1001 West Orangethorpe Avenue, Fullerton
- Green Charge Networks, LLC – Del Mar, 13801 Mango Dr., Del Mar
- Green Charge Networks, LLC – Carlsbad, 901 Palomar Airport Rd., Carlsbad
- Green Charge Networks, LLC – Santa Ana, 2217 East 17th Street, Santa Ana
- Green Charge Networks, LLC – Los Angeles, 5536 East Washington Blvd., Los Angeles
- Green Charge Networks, LLC – Thousand Oaks, 609 Rancho Conejo Blvd., Thousand Oaks
- Green Charge Networks, LLC – Norwalk, 11461 Firestone Blvd., Norwalk

CHAPTER 2:

Assessment Approach 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 February 8, 2012. The application due date was March 14, 2012. Grant Solicitation Program Opportunity Notice (PON) 11-602 sought to fund projects that encourage the establishment of an alternative transportation fuels infrastructure to accommodate the deployment of a growing number of alternative fuel vehicles, reduce the use of petroleum fuels and greenhouse gas (GHG) emissions to help the state achieve its public policy goals, provide competition in the transportation fuels market, and improve the economic vitality in California.

The projects assessed in this addendum include 64 proposals (in 66 sites): 3 are compressed natural gas (CNG) fueling proposals (3 stations total), 1 E85 fueling proposal (21 stations total), and 60 electric proposals, of which 34 are DC fast chargers (DCFC), 13 are residential applications, 8 are for workplaces, and 5 are for fleets. During normal operations, none of these facilities generate criteria emissions, particulate matter (PM), or air toxics at any appreciable level. For some project sites, there may be a minor increase in truck traffic to accommodate the transport of compressed natural gas, or E85 fuel.

The projects from PON-11-602 Round 1 were assessed in the original LHI Report (CEC-600-2012-004). This addendum is an assessment of PON-11-602 Round 2.

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

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

This addendum is not intended to be a detailed environmental health 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 that would provide a more detailed analysis of the potential for adverse environmental effects of the proposed projects.

This addendum collects available information about the potential air quality impacts of the proposed projects and provides a collective, narrative analysis of the potential for LHI from those projects. The AQIP Guidelines mandate that the Energy Commission tracks the projects' progress through the CEQA process and ensures 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.[1] 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 years of age, 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

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1 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.

identifies high-risk areas as those in nonattainment basins for ozone, particle pollution, or particulate matter (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.

This addendum contains assessments for these communities since their populations are presumed to be most susceptible to health risks due to their exposure to criteria and toxic air pollutants on a more continual basis as compared with other geographic regions.

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 intend to assess projects requiring only ministerial-level permits.

Emissions

Staff collected information about predicted emissions from the project proposals. The emissions considered for this assessment include those from CNG projects, and E85 stations. The EV charging stations will not have health impacts for either the general population or sensitive populations. Rather, the projects are expected to alleviate air pollutant exposure in the region as EVs replace dirtier gasoline and diesel vehicles and become a significant portion of the vehicle population.

Community Status and Outreach Efforts

The following community status and overview of the proposed projects is based on the ARB *Proposed Screening Method,* which integrates data to identify low-income communities that are highly impacted by air pollution.[2] 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 a source for this assessment. In some cases the air district websites or the districts themselves were consulted.

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

High Risk Communities

The following summarizes the findings of the assessments. For high-risk cities/communities, more detail is provided in the following chapters. Staff identifies high-risk communities using the following factors: (1) those located in nonattainment air basins for ozone, PM 2.5, and/or PM 10, (2) those located in communities with high poverty, minority, and/or unemployment rates, and (3) those located in communities with a high percentage of sensitive populations. Those in high-risk communities would be located in nonattainment air basins and have one or more of the other two factors.

Proposed CNG Projects

All 3 proposed CNG projects will be located in nonattainment zones for ozone, PM 2.5, and PM 10[3]. All of the proposed projects will also be located in high-risk communities. The proposed projects are in the process of completing the CEQA process and acquiring the necessary air district permits.

The recipients will conduct outreach to increase public awareness of the value of using CNG as a fuel. The air districts for the site locations have experience in issuing permits for proposers' sites and will ensure that the companies and public organizations comply with all federal, state, and air district standards to guarantee the safety and health of all surrounding communities.

Proposed E85 Projects

Pearson Fuels proposes to build and operate a network of 21 publicly accessible E85 retail sites planned for areas with high concentration of flexible-fuel vehicles designed to run on gasoline or a blend of up to 85 percent ethanol (E85). The proposed infrastructure would be an upgrade to existing gasoline stations and enable customers to obtain carbon offset conventional gas purchases. The network of centrally managed stations would create efficiencies in fuel distribution.

The 24 potential E85 sites for the 21 stations will be located in nonattainment zones for ozone, PM 2.5, and PM 10. As shown in the following table, 19 of the 24 potential station sites will also be located in high-risk communities. The proposed project is completing the CEQA process and acquiring the necessary air district permits.

The recipient for the network of E85 stations will conduct outreach to increase public awareness of the value of E85. The air districts for the site locations have experience in issuing permits for

[3] PM 2.5 is fine particles less than 2.5 micrometers which are hard to detect and come from motor vehicles, power plants and fires. PM 10 is coarse particles 2.5-10 micrometers which come from crushing or grinding things, and dust stirred up on the roads. PM in general 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.

stations and will ensure that Pearson Fuels complies with all federal, state, and air district standards to guarantee the safety and health of all surrounding communities.

Table 1: Community Status for Proposed E85 Projects

Proposal Number	Company/ Project	High-Risk Community
11	**RTC Fuels, LLC DBA Pearson Fuels/** 24 potential Pearson Fuels E85 Station sites for 21 stations	Yes for Station Site #s1,2,4,5,8,9,10,11,12,13,15,16, 17,18,19,20,21,22,23

Source: Energy Commission staff analysis

Proposed EVSE Projects

All 60 potential EVSE projects will be located in nonattainment zones for ozone, PM 2.5, and PM 10. As shown in the following table, 55 of the 60 potential projects will also be located in high-risk communities. The projects are completing the CEQA process and acquiring the necessary air district permits.

Combined with the community's high exposure to air pollutants and related health risks, the area could be disproportionately affected if the projects were to result in an emissions increase. There are currently no major negative health impacts identified from the proposed project, and the Energy Commission anticipates no net adverse impact in air pollutants or health conditions related to the EVSE activities.

The recipients will conduct outreach to increase public awareness of the value of electricity as a fuel. The air districts for the site locations have experience in issuing permits for proposers' sites and will ensure that the companies and public organizations comply with all federal, state, and air district standards to guarantee the safety and health of all surrounding communities.

Table 2: Community Status for Proposed EVSE Projects

Proposal Number	Company/ Project	High-Risk Community
Residential (Single unit housing or semidetached dwellings) Level 2 EVSE and Multiunit Dwellings Level 1 and 2 EVSE		
160	**Coulomb Technologies/** San Diego	Yes
40	**AeroVironment/** Cal Electric: Residential EVSE Deployment Program - San Bernardino/Riverside Counties	Yes
43	**AeroVironment/** Cal Electric: Residential EVSE Deployment Program - Orange County	Yes
54	**AeroVironment/** Cal Electric: Residential EVSE Deployment Program - Sacramento County	

Proposal Number	Company/ Project	High-Risk Community
		Yes
55	**AeroVironment/** Cal Electric: Residential EVSE Deployment Program -Bay Area North Region	Yes[3]
56	**AeroVironment/** Cal Electric: Residential EVSE Deployment Program - Bay Area South Region	Yes[3]
57	**AeroVironment/** Cal Electric: Residential EVSE Deployment Program - Multi-Region	Yes[3]
58	**AeroVironment/** Cal Electric: Residential EVSE Deployment Program - Ventura County	Yes
64	**AeroVironment/** Cal Electric: Residential EVSE Deployment Program - Los Angeles West	Yes
65	**AeroVironment/** Cal Electric:Residential EVSE Deployment Program - San Diego County	Yes
66	**AeroVironment/** Cal Electric: Residential EVSE Deplotment Program - San Joaquin/Stanislaus County	Yes
68	**AeroVironment/** Cal Electric: Residential EVSE Deplotment Program - Los Angeles East	Yes
71	**AeroVironment/** Cal Electric: Residential EVSE Deplotment Program - Santa Barbara San Luis Obispo/ Monterey Counties	Yes
Workplace Level 1 and 2 EVSE		
163	**Schneider Electric USA/** American Red Cross - Adopt-a-Charger EVSE	Yes
162	**Schneider Electric USA/**San Mateo County Community College District EV Charging Project	No
184	**Alternative Energy Systems Consulting**/ Forty-One Workplace Charging Outlets at UC San Diego	Yes
7	**Joe Carlson Studio**/ EVSE Charging Stations in Commercial Building Public Parking Area	Yes
32	**Towbes Group**/ Workplace Charging in Santa Barbara	Yes
27	**City of Yucaipa**/ City of Yucaipa Alernative and Renewable Fuels and Vehicle Technology Program	No
33	**LADWP/**Charge Your Commute! LADWP Workplace Chargers	Yes
41	**OurEvolution Energy & Engineering**/ North Coast Plug-in Electric Vehicle Infrastructure Project (NCPEVIP)	Yes
Fleet Level 1 and 2 EVSE		
185	**Alternative Energy Systems Consulting/**Ten Level II Fleet Charging Outlets at UC San Diego	Yes
44	**AeroVironment/**Car2Go Fleet EVSE Program - Apartment Venues	Yes
182	**DGS/**Upgrade Electric Vehicle Charging Infrastructure at the Sacramento State Garage	Yes

Proposal Number	Company/ Project	High-Risk Community
244	**LADWP/** LADWP Fleet Chargers - Plug In!	Yes
53	**AeroVironment/** Car2Go Fleet EVSE Program – YMCAs	Yes
DC Fast Charger Demonstration		
105	**SCAQMD /**South Coast Air Basin DC Fast Charging Network-Station #25	Yes
112	**SCAQMD /**South Coast Air Basin DC Fast Charging Network- Station #32	Yes
115	**SCAQMD /**South Coast Air Basin DC Fast Charging Network- Station #35	Yes
122	**SCAQMD /**South Coast Air Basin DC Fast Charging Network- Station #42	No
123	**SCAQMD /**South Coast Air Basin DC Fast Charging Network- Station #43	Yes
125	**SCAQMD /**South Coast Air Basin DC Fast Charging Network-Station#45	Yes
126	**SCAQMD /**South Coast Air Basin DC Fast Charging Network- Station #46	Yes
129	**SCAQMD /**South Coast Air Basin DC Fast Charging Network- Station #49	Yes
130	**SCAQMD** /South Coast Air Basin DC Fast Charging Network- Station #50	Yes
137	**SCAQMD** /South Coast Air Basin DC Fast Charging Network- Station #7	Yes
138	**SCAQMD /**South Coast Air Basin DC Fast Charging Network-Station #8	Yes
144	**SCAQMD** /South Coast Air Basin DC Fast Charging Network-Station #14	Yes
146	**SCAQMD /**South Coast Air Basin DC Fast Charging Network-Station #16	No
147	**SCAQMD /**South Coast Air Basin DC Fast Charging Network-Station #17	Yes
148	**SCAQMD /**South Coast Air Basin DC Fast Charging Network- Station #18	Yes
149	**SCAQMD** /South Coast Air Basin DC Fast Charging Network-Station #19	Yes
150	**SCAQMD/ /**South Coast Air Basin DC Fast Charging Network- Station #20	Yes
183	**Alternative Energy Systems Consulting/** Three DC Fast Chargers at UC San Diego	Yes
21	**Green Charge Networks, LLC/**Smart Grid Enabled DC Fast	Yes

Proposal Number	Company/ Project	High-Risk Community
	Charging with Energy Storage- Pomona	
22	**Green Charge Networks, LLC/**Smart Grid Enabled DC Fast Charging with Energy Storage- Los Angeles	Yes
23	**Green Charge Networks, LLC, /**Smart Grid Enabled DC Fast Charging with Energy Storage- Van Nuys	Yes
24	**Green Charge Networks, LLC/**Smart Grid Enabled DC Fast Charging with Energy Storage- Irvine	No
25	**Green Charge Networks, LLC/** Smart Grid Enabled DC Fast Charging with Energy Storage- Seal Beach	Yes
26	**Green Charge Networks, LLC/** Smart Grid Enabled DC Fast Charging with Energy Storage- Rosemead	Yes
34	**Green Charge Networks, LLC/** Smart Grid Enabled DC Fast Charging with Energy Storage- San Diego	Yes
36	**Green Charge Networks, LLC/** Smart Grid Enabled DC Fast Charging with Energy Storage- San Diego	Yes
37	**Green Charge Networks, LLC/** Smart Grid Enabled DC Fast Charging with Energy Storage- Moreno Valley	Yes
39	**Green Charge Networks, LLC/** Smart Grid Enabled DC Fast Charging with Energy Storage- Fullerton	Yes
45	**Green Charge Networks, LLC/** Smart Grid Enabled DC Fast Charging with Energy Storage- Del Mar	Yes
47	**Green Charge Networks, LLC/** Smart Grid Enabled DC Fast Charging with Energy Storage- Carlsbad	Yes
59	**Green Charge Networks, LLC/** Smart Grid Enabled DC Fast Charging with Energy Storage- Santa Ana	Yes
61	**Green Charge Networks, LLC/** Smart Grid Enabled DC Fast Charging with Energy Storage- Los Angeles	Yes
62	**Green Charge Networks, LLC/** Smart Grid Enabled DC Fast Charging with Energy Storage- Thousand Oaks	Yes
69	**Green Charge Networks, LLC/** Smart Grid Enabled DC Fast Charging with Energy Storage- Norwalk	Yes

Source: Energy Commission staff analysis

A Summary of the Community Status for All Proposed Projects

All of the proposed natural gas, E85, and EVSE projects will be located in nonattainment zones for ozone, PM 2.5, and PM 10. Of the three natural gas projects, one E85 project (21 stations), and 60 potential electric infrastructure projects, at least 74 are in high-risk communities (There were 3 proposals that did not supply sufficient location detail to identify whether or not they were in high-risk communities.), which the staff identifies as those located in nonattainment air basins for ozone, PM 2.5 and/or PM 10, and having one or more factors that include high poverty, minority, and/or unemployment rates, and those located in communities with a high percentage of sensitive populations. That means that at least 52 of the potential electric

infrastructure project sites, 19 potential station sites for E85, and all 3 potential natural gas projects will be in high-risk communities. However, based on the staff's assessment of the information in the proposal, none would be disproportionately impacted.

CHAPTER 3:

Location Analysis and Community Impacts

Based on the Energy Commission staff's assessment of the proposed projects, it is expected that none of the surrounding communities would be disproportionately impacted by the implementation of the projects. For this addendum, 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 is a given city's unemployment rate exceeds the state of California's unemployment rate (for the entire state – 10.9 percent as of January 2012).
- An EJ indicator is also noted for sites 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 over 5 years of age or under 65 years of age for the entire state. (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.)

Of the 66 listed potential sites, 38 sites have minority EJ indicators. The poverty EJ indicator exists in 23 locations, and 21 sites have unemployment EJ indicators. The age EJ indicator exists in 32 sites.

The 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 addendum covers the sites with EJ indicators.

CHAPTER 4:

Summary

If funded, the proposed 64 projects will result in 1011 fueling stations or charge points throughout California, for a combination of CNG, E85, and EVSE projects. Appendix A lists the sites in which these may be located. The sites will increase the use of alternative fuel vehicles, and as more alternative fuel vehicles enter the market and begin to displace gasoline and diesel vehicles, tailpipe pollutants will decrease significantly.

The anticipated impacts to the sites where these projects could be located are positive in terms of cleaner air and anticipated GHG reductions. Appendix B contains the unit conversions used to calculate the GHG reductions.

Of the 64 projects listed in Appendix A, 9 have no EJ indicators, 27 have one EJ indicator, 12 have two indicators, 9 have three indicators, and 9 have four indicators. The Energy Commission staff used cities or counties to identify site locations because some applicants did not provide specific site detail. The anticipated benefit from these projects for the people who live nearby is highly likely, if not certain, to be a positive effect on air quality. There are currently no major negative health impacts identified from the proposed projects, and the Energy Commission anticipates no net adverse impact in air pollutants or health conditions related to these projects.

More demographics for the sites is contained in Appendix C. Appendix C contains information on persons below the poverty level, black persons, American Indian and Alaska Native, persons of Hispanic or Latino origin, white persons, persons under 5 years of age and over 65 years of age, and unemployment rates for the various sites.

The following table shows the amount of fuel displacement and anticipated GHG reductions. The projects are grouped according to fuel type: natural gas, E85, and EVSE.

Table 4: Annual Displacement of Gasoline Gallon Equivalent (GGE), and GHG Reductions for the Proposed Projects

Fuel	Total Displacement	GHG Reductions (estimated) [4]
CNG	266,000 GGE/year	20-30 % reduction
E85	3,897,663 GGE/year	30-50 % reduction
EVSE	647,295 GGE/year	60 % reduction

Source: Energy Commission staff analysis

The details in terms of displaced GGE are shown in Appendices D (natural gas), E (E85 stations), and F (EVSE). The displacement GGE demonstrates that the increased use of alternative fuel vehicles will benefit the communities and the people who live in them with cleaner air.

4GHG Reductions are taken from F*ull Fuel Cycle Assessment: Well-To-Wheels Energy Inputs, Emissions, and Water Impacts, State Plan to Increase the Use of Non-Petroleum Transportation Fuels Assembly Bill 1007 (Pavley) Alternative Transportation Fuel Plan Proceeding,* CEC-600-2007-004-REV. In all cases, the most conservative percentage was used.

CHAPTER 5:

Acronyms

Air Quality Improvement Program (AQIP)
Air Quality Management District (AQMD)
Air Resources Board (ARB)
Alternative and Renewable Fuels and Vehicle Technology Program (ARFVTP)
California Code of Regulations (CCR)
California Environmental Quality Act (CEQA)
Compressed natural gas (CNG)
Direct current fast chargers (DCFC)
Electric vehicle supply equipment (EVSE)
Environmental impact report (EIR)
Environmental justice (EJ)
E85 is a blend of ~85% ethanol and 15% gasoline (E85)
Gasoline gallon equivalent (GGE)
Greenhouse gas (GHG)
Localized health impact (LHI)
New Source Review (NSR)
Particulate matter (PM)
South Coast Air Quality Management District (SCAQMD)
United States Environmental Protection Agency (U.S. EPA)

APPENDIX A:

Sites and Their EJ Indicators

Table A-1: Sites With EJ Indicators

	City	Minority	Poverty Level	Unemployment Rate	Age	Proposal Number(s)
1	Arcata		X			41
2	Atascadero					11
3	Carlsbad				X	47
4	Carson	X		X	X	137
5	Cerritos				X	138
6	Chula Vista	X		X		11
7	Compton	X	X	X	X	7
8	Del Mar				X	45
9	Downey	X				11
10	El Cajon		X	X		11
11	Encinitas					11
12	Eureka		X	X		41
13	Fountain Valley				X	11
14	Fullerton	X				39
15	Garden Grove	X				144, 11
16	Glendora	X			X	123, 11
17	Goleta	X				32
18	Hayward	X				11
19	Huntington Beach				X	11
20	Irvine					24, 146
21	La Jolla				X	184, 185
22	Long Beach	X	X	X		147
23	Los Angeles	X	X	X		61, 22, 244, 33, 150, 148, 149, 68, 64
24	Lost Hills	X	X		X	11
25	Mission Hills	X			X	105
26	Monterey				X	71
27	Moreno Valley	X	X	X	X	37
28	Mountain View					11
29	Newport Beach				X	6, 11
30	Norwalk	X		X		69, 112, 11
31	Orange County	X			X	43
32	Pasadena	X				115
33	Paso Robles	X				11
34	Patterson	X		X	X	11
35	Pomona	X	X	X		21
36	Redwood City	X				162
37	Riverside	X	X	X		40
38	Rosemead	X	X			26
39	Sacramento		X	X		182, 11, 54
40	Sacramento County	X	X	X	X	54
41	San Bernardino	X	X	X	X	11, 40

	City	Minority	Poverty Level	Unemployment Rate	Age	Proposal Number(s)
42	San Bruno					162
43	San Clemente					122
44	San Diego		X			34, 44, 53, 183, 36, 11, 184, 185, 160, 65
45	San Francisco					11
46	San Joachin County	X	X	X	X	66
47	San Jose	X				163
48	San Luis Obispo		X		X	71
49	San Mateo				X	162
50	Santa Ana	X	X	X	X	59, 11
51	Santa Barbara	X	X		X	32, 71
52	Santa Fe Springs	X				11
53	Santa Monica				X	125
54	Santa Ynez				X	29, 11
55	Seal Beach				X	25
56	Sherman Oaks	X	X			126
57	Stanislaus County	X	X	X	X	66
58	Thousand Oaks				X	62
59	Tulare	X	X	X	X	11, 52
60	Upland	X				129
61	Van Nuys	X		X	X	23
62	Ventura County	X			X	58
63	Watsonville	X	X	X	X	11
64	West Covina	X				130
65	Yorba Linda					11
66	Yucaipa					27
	Totals	38	23	21	32	

Source: Energy Commission staff analysis

APPENDIX B:

Unit Conversions

	Alternate Fuel Unit in Gasoline Gallon Equivalents (GGE)[5]	**Alternate Fuel Unit in Diesel Gallon Equivalents (DGE)**	**Examples** Source: Energy Commission staff analysis
Compressed Natural Gas (CNG) Therm	0.832	0.729	10 CNG Therms = 8.32 GGEs
E85 Gallon 85% Ethanol, 15% gasoline	0.731	0.641	10 E85 Gallons = 7.31 GGEs
Electricity kilowatt-hours	0.031	0.027	100 kwh of Electricity = 3.1 GGE

5 California Energy Commission, Transportation Energy Division, Fossil Fuels Office, *Gasoline Gallon Equivalents for Alternative Fuels for Transportation Vehicles*, 2012. (Sacramento, California) http://www.energyalmanac.ca.gov/transportation/gge.html

APPENDIX C:

Demographic Data

Table C-1: Demographic Data for Sites With EJ Indicators[6] (percent)

	2010 Data	Persons Below Poverty Level	Black per-sons	American Indian and Alaska Native	Persons of Hispanic or Latino Origin	White per-sons	Persons under 5 years of age	Persons over 65 years of age	Un-employ-ment rate
1	Arcata Pop: 17,231	28.5%	2.0%	2.3%	11.6%	81.8%	3.6%	8.2%	9.9%
2	Atascadero Pop: 28,310	8.8%	2.1%	1.0%	15.6%	76.8%	5.9%	13.0%	7.1%
3	Carlsbad Pop: 105,328	7.2%	1.3%	0.5%	13.3%	82.8%	6.0%	14.0%	6.3%
4	Carson Pop: 91,714	8.0%	23.8%	0.6%	38.6%	23.8%	5.7%	13.8%	11.2%
5	Cerritos Pop: 49,041	6.1%	6.9%	0.3%	12.0%	23.1%	3.9%	17.7%	6.0%
6	Chula Vista Pop: 243,916	9.6%	4.6%	0.8%	58.2%	20.4%	7.2%	10.0%	10.9%
7	Compton Pop: 96,455	22.8%	32.9%	0.7%	65.0%	25.9%	9.2%	7.5%	18.8%
8	Del Mar Pop: 4,161	3.7%	0.2%	0.2%	4.2%	94.0%	2.8%	20.9%	4.9%
9	Downey Pop: 111,772	10.0%	3.9%	0.7%	70.7%	17.7%	7.0%	10.4%	9.7%
10	El Cajon Pop: 99,478	21.3%	6.3%	0.8%	28.2%	56.8%	7.6%	11.0%	12.7%
11	Encinitas Pop: 59,518	8.0%	0.6%	0.5%	13.7%	78.8%	5.4%	12.8%	6.6%
12	Eureka Pop: 27,191	21.1%	1.9%	3.7%	11.6%	73.9%	6.1%	11.8%	11.2%
13	Fountain Valley Pop: 55,313	6.2%	0.9%	0.4%	13.1%	49.2%	4.6%	17.6%	6.7%
14	Fullerton Pop: 135,161	11.3%	2.3%	0.6%	34.4%	53.9%	5.9%	11.7%	8.9%
15	Garden Grove Pop: 170,883	12.9%	1.3%	0.6%	36.9%	22.6%	6.7%	10.8%	10.0%
16	Glendora Pop: 50,073	6.5%	1.9%	0.7%	30.7%	57.0%	5.0%	14.1%	6.3%
17	Goleta Pop: 29,888	9.1%	1.6%	0.9%	32.9%	53.6%	5.5%	13.5%	4.4%

6http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=133 and http://www.bls.gov/eag/eag.ca.htm and http://quickfacts.census.gov

	2010 Data	Persons Below Poverty Level	Black per-sons	American Indian and Alaska Native	Persons of Hispanic or Latino Origin	White per-sons	Persons under 5 years of age	Persons over 65 years of age	Un-employ-ment rate
18	Hayward Pop: 144,186	12.5%	11.9%	1.0%	40.7%	18.8%	7.5%	10.2%	10.6%
19	Huntington Beach Pop: 189,992	4.0%	1.0%	0.5%	17.1%	76.7%	5.1%	14.2%	7.4%
20	Irvine Pop: 212,375	10.2%	1.8%	0.2%	9.2%	50.5%	5.7%	8.7%	6.0%
21	La Jolla Pop: 42,603	9.2%	1.9%	0.7%	10.3%	88.9	4.5%	18.1%	10.2%
22	Long Beach Pop: 462,257	19.1%	13.5%	0.7%	40.8%	29.4%	7.0%	9.3%	13.2%
23	Los Angeles Pop: 3,792,621	19.5%	9.6%	0.7%	48.5%	28.7%	6.6%	10.5%	13.3%
24	Lost Hills Pop: 2,412	37.7%	0.2%	0.0%	97.6%	5.5%	14.3%	2.5%	5.6%
25	Mission Hills Pop: 3,576	3.7%	2.1%	3.5%	31.8%	75.2%	6.1%	14.7%	6.2%
26	Monterey Pop:28,246	10.6%	2.8%	0.5%	13.7%	71.1%	5.1%	15.5%	9.8%
27	Moreno Valley Pop: 193,365	16.2%	18.0%	0.9%	54.4%	18.9%	8.4%	6.3%	14.6%
28	Mountain View: 74,066	7.1%	2.2%	0.5%	21.7%	56.0%	7.1%	10.6%	7.7%
29	Newport Beach Pop: 85,186	6.3%	0.7%	0.3%	7.2%	82.3%	3.8%	19.0%	5.0%
30	Norwalk Pop: 105,549	11.1%	4.4%	1.1%	70.1%	12.3%	7.0%	9.9%	12.7%
31	Orange County Pop: 3,055,745	10.1%	2.1%	1.1%	34.1%	43.5%	6.3%	11.9%	7.9%
32	Pasadena Pop: 137,122	13.5%	10.7%	0.6%	33.7%	55.8%	6.0%	13.5%	8.5%
33	Paso Robles Pop: 29,793	10.0%	2.1%	1.0%	34.5%	59.1%	7.8%	13.4%	10.1%
34	Patterson Pop: 20,413	11.5%	6.3%	1.1%	58.6%	26.2%	8.7%	6.3%	23.1%
35	Pomona Pop: 149,058	17.2%	7.3%	1.2%	70.5%	12.5%	8.1%	7.6%	13.4%
36	Redwood City Pop: 76,815	9.6%	2.4%	0.7%	38.8%	60.2%	7.5%	10.6%	4.5%
37	Riverside Pop: 303,871	14.9%	7.0%	1.1%	49.0%	34.0%	7.2%	8.6%	12.8%
38	Rosemead Pop: 53,764	14.2%	0.5%	0.7%	33.8%	21.1%	5.4%	13.0%	9.8%

	2010 Data	Persons Below Poverty Level	Black per-sons	American Indian and Alaska Native	Persons of Hispanic or Latino Origin	White per-sons	Persons under 5 years of age	Persons over 65 years of age	Un-employ-ment rate
39	**Sacramento Pop: 466,488**	**17.3%**	**14.6%**	**1.1%**	**26.9%**	**34.5%**	**7.5%**	**10.6%**	**13.1%**
40	**Sacramento County Pop:**	**13.9%**	**10.9%**	**1.6%**	**22.0%**	**65.7%**	**7.0%**	**11.5%**	**11.1%**
41	**San Bernardino Pop: 209,924**	**27.4%**	**15.0%**	**1.3%**	**60.0%**	**19.0%**	**9.3%**	**7.9%**	**16.5%**
42	**San Bruno Pop: 41,114**	**7.2%**	**2.3%**	**0.6%**	**29.2%**	**49.5%**	**6.0%**	**12.7%**	**4.8%**
43	**San Clemente Pop: 63,522**	**7.2%**	**0.6%**	**0.6%**	**16.8%**	**86.0%**	**6.5%**	**13.2%**	**6.4%**
44	**San Diego Pop: 1,307,402**	**14.1%**	**6.7%**	**0.6%**	**28.8%**	**45.1%**	**6.2%**	**10.7%**	**9.3%**
45	**San Francisco Pop: 805,235**	**11.9%**	**6.1%**	**0.5%**	**15.1%**	**41.9%**	**4.4%**	**13.6%**	**8.0%**
46	**San Joachin County Pop:696,214**	**16.0%**	**8.2%**	**2.0%**	**39.4%**	**35.4%**	**7.8%**	**10.6%**	**14.9%**
47	**San Jose Pop: 945,942**	**10.8%**	**3.2%**	**0.9%**	**33.2%**	**28.7%**	**7.3%**	**10.1%**	**9.8%**
48	**San Luis Obispo Pop:45,525**	**31.3%**	**1.2%**	**0.6%**	**14.7%**	**84.5%**	**3.3%**	**12.0%**	**8.5%**
49	**San Mateo Pop: 97,207**	**5.9%**	**2.4%**	**0.5%**	**26.6%**	**46.5%**	**6.8%**	**14.4%**	**5.8%**
50	**Santa Ana Pop: 324,528**	**17.9%**	**1.5%**	**1.0%**	**78.2%**	**9.2%**	**8.9%**	**6.8%**	**12.7%**
51	**Santa Barbara Pop: 88,410**	**14.1%**	**1.6%**	**1.0%**	**38.0%**	**54.8%**	**5.5%**	**14.2%**	**6.3%**
52	**Santa Fe Springs Pop: 16,223**	**8.9%**	**2.3%**	**1.4%**	**81.0%**	**11.9%**	**6.0%**	**13.3%**	**10.1%**
53	**Santa Monica Pop: 89,736**	**11.1%**	**3.9%**	**0.4%**	**13.1%**	**70.1%**	**4.1%**	**15.0%**	**10.0%**
54	**Santa Ynez Pop: 4,418**	**3.6%**	**0.3%**	**5.3%**	**14.5%**	**78.5%**	**4.3%**	**19.8%**	**2.3%**
55	**Seal Beach Pop: 24,168**	**6.9%**	**1.2%**	**0.3%**	**9.6%**	**83.4%**	**3.2%**	**38.3%**	**5.8%**
56	**Sherman Oaks Pop: 52,677**	**20.0%**	**9.6%**	**0.7%**	**48.5%**	**28.7%**	**7.0%**	**11.0%**	**9.0%**

	2010 Data	Persons Below Poverty Level	Black per-sons	American Indian and Alaska Native	Persons of Hispanic or Latino Origin	White per-sons	Persons under 5 years of age	Persons over 65 years of age	Un-employ-ment rate
57	**Stanislaus County Pop:518,522**	**16.4%**	**3.3%**	**1.9%**	**42.6%**	**46.0%**	**7.7%**	**10.9%**	**15.8%**
58	**Thousand Oaks Pop: 126,683**	**5.1%**	**1.3%**	**0.4%**	**16.8%**	**80.3%**	**5.2%**	**14.7%**	**7.1%**
59	**Tulare Pop: 59,278**	**19.1%**	**3.9%**	**1.2%**	**57.5%**	**34.7%**	**9.4%**	**9.0%**	**14.5%**
60	**Upland Pop: 73,732**	**8.9%**	**7.3%**	**0.7%**	**38.0%**	**44.2%**	**6.2%**	**12.1%**	**9.8%**
61	**Van Nuys Pop: 66,241**	**11.3%**	**4.7%**	**0.7%**	**34.4%**	**48.4%**	**5.9%**	**15.7%**	**13.4%**
62	**Ventura County Pop: 831,771**	**9.2%**	**2.2%**	**1.8%**	**40.9%**	**85.3%**	**6.6%**	**12.0%**	**9.4%**
63	**Watsonville Pop: 51,199**	**18.7%**	**0.7%**	**1.2%**	**81.4%**	**13.7%**	**9.5%**	**8.3%**	**25.8%**
64	**West Covina Pop: 106,098**	**8.7%**	**4.5%**	**1.0%**	**53.2%**	**42.8%**	**6.0%**	**12.1%**	**9.8%**
65	**Yorba Linda Pop: 64,234**	**2.3%**	**1.3%**	**0.4%**	**14.4%**	**65.7%**	**4.8%**	**11.8%**	**6.3%**
66	**Yucaipa Pop: 51,367**	**10.4%**	**1.6%**	**0.9%**	**27.1%**	**79.5%**	**6.6%**	**13.3%**	**10.2%**
	California Population 37,691,912 (2011)	**13.7% (2006-2010)**	**6.2% (2010)**	**1.0% (2010)**	**37.6% (2010)**	**57.6% (2010)**	**6.8% (2010)**	**11.4% (2010)**	**10.9% (2010)**

Source: California Energy Commission staff analysis

APPENDIX D:

Anticipated GGE Displacement for the Proposed Natural Gas Projects

Table F-1: Proposer, Project Location, EJ Indicators, and Anticipated Gasoline Gallon Equivalent (GGE) Displacement

Proposal #	Proposer/project location	EJ Indicators	Anticipated Gasoline Gallon Equivalent (GGE) Displacement
6	**FirstCNG, LLC**/ 20041 SW Birch Street, Newport Beach, CA 92660	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-age)	Not Available at this time
29	**Santa Ynez Band of Chumash Indians**/ 3101 East Highway 246, Santa Ynez, CA 93406	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-age)	200,000 GGE/year
52	**Tulare County Compost & Biomass Inc./** 24478 Road 140, Tulare, CA 93274	This project would be in a low-income community that is highly impacted by air pollution. (4 EJ indicators-minority, poverty level, unemployment, age)	66,000 GGE/year

Source: California Energy Commission staff analysis

APPENDIX E:

Anticipated GGE Displacement for the Proposed E85 Project

Table E-1: Proposer, Project Location, EJ Indicators, and Anticipated GGE Displacement

Proposal #	Proposer/project location	EJ Indicators	Anticipated GGE Displacement
11	**Pearson Fuels**/ Station#1 391 West A St., Hayward, CA 95441	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-minority)	185,603 GGE/year
11	**Pearson Fuels**/ Station#2 934 S. Grand Ave., Glendora, CA 91740	This project would not be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-minority, age)	185,603 GGE/year
11	**Pearson Fuels/** Station#3 6305 Morro Rd., Atascadero, CA 93446	The city has no EJ indicators	185,603 GGE/year
11	**Pearson Fuels/** Station#4 2401 Golden Hill Rd., Paso Robles, CA 93446	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-minority)	185,603 GGE/year
11	**Pearson Fuels/** Station#5 14804 Powers St., Lost Hills, CA 93249	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, poverty level, unemployment)	185,603 GGE/year
11	**Pearson Fuels/** Station#6 830 Leong Dr., Mountain View, CA 94043	The city has no EJ indicators	185,603 GGE/year
11	**Pearson Fuels/** Station#7 376 Castro St., San Francisco, CA 94114	The city has no EJ indicators	185,603 GGE/year
11	**Pearson Fuels/** Station#8 175 Main St., Watsonville, CA 95076	This project would be in a low-income community that is highly impacted by air pollution. (4 EJ indicators-minority, poverty level, unemployment, age)	185,603 GGE/year
11	**Pearson Fuels/** Station#9 5045 Madison Ave., Sacramento, CA 95841	This project would be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-poverty level, unemployment)	185,603 GGE/year
11	**Pearson Fuels/** Station#10 16990 Beach Blvd., Huntington Beach, CA 92647	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-age)	185,603 GGE/year
11	**Pearson Fuels/** Station#11 3774 Main St., San Diego, CA 92113	This project would be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-poverty level)	185,603 GGE/year

Proposal #	Proposer/project location	EJ Indicators	Anticipated GGE Displacement
11	**Pearson Fuels/** Station#12 501 Inland Center Dr., San Bernardino, CA 92408	This project would be in a low-income community that is highly impacted by air pollution. (4 EJ indicators-minority, poverty level, unemployment, age)	185,603 GGE/year
11	**Pearson Fuels/** Station#13 401 North Grand Ave., Santa Ana, CA 92701	This project would be in a low-income community that is highly impacted by air pollution. (4 EJ indicators-minority, poverty level, unemployment, age)	185,603 GGE/year
11	**Pearson Fuels/** Station#14 18121 Imperial Hwy., Yorba Linda, CA 92886	The city has no EJ indicators	185,603 GGE/year
11	**Pearson Fuels/** Station#15 11770 Washington Blvd., Santa Fe Springs, CA 90670	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-minority)	185,603 GGE/year
11	**Pearson Fuels/** Station#16 10916 Rosecrans Ave., Norwalk, CA 90650	This project would not be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-minority, unemployment)	185,603 GGE/year
11	**Pearson Fuels/** Station#17 9851 Imperial Hwy., Downey, CA 90242	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-minority)	185,603 GGE/year
11	**Pearson Fuels/** Station#18 1498 Melrose Ave., Chula Vista, CA 91911	This project would not be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-minority, unemployment)	185,603 GGE/year
11	**Pearson Fuels/** Station#19 7737 Balboa Ave., San Diego, CA 92111	This project would be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-poverty level)	185,603 GGE/year
11	**Pearson Fuels/** Station#20 15051 Rogers Rd., Patterson, CA 94538	This project would not be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, unemployment, age)	185,603 GGE/year
11	**Pearson Fuels/** Station#21 1090 W. Main St., El Cajon, CA 92020	This project would be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-poverty level, unemployment)	185,603 GGE/year
11	**Pearson Fuels/** Station#22 12931 Garden Grove Blvd., Garden Grove, CA 92843	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-minority)	185,603 GGE/year
11	**Pearson Fuels/** Station#23 17520 Brookhurst St., Fountain Valley, CA 92708	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-age)	185,603 GGE/year
	Pearson Fuels/	The city has no EJ indicators	185,603 GGE/year

Proposal #	Proposer/project location	EJ Indicators	Anticipated GGE Displacement
11	Station#24 350 Encinitas Blvd., Encinitas, CA 92024		

Source: California Energy Commission staff analysis

APPENDIX F:

Anticipated GGE Displacement for the Proposed EVSE Projects

Table D-1: Proposer, Project Location, EJ Indicators, and Anticipated GGE Displacement

Proposal[7] #	Proposer/project location	EJ Indicators	Anticipated GGE Displacement per Proposal
Residential (Single unit housing or semi-detached dwellings) Level 2 EVSE and Multi-unit Dwellings Level 1 and 2 EVSE			
160	**Coulomb Technologies/**multiple locations in San Diego	This project would be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-poverty level)	22,605 GGE/year
40	**AeroVironment/** San Bernadino	This project would be in a low-income community that is highly impacted by air pollution. (4 EJ indicators-minority, poverty level, unemployment, age)	16,500 GGE/year
40	**AeroVironment/** Riverside Counties	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, poverty level, unemployment)	16,500 GGE/year
43	**AeroVironment**/ Orange County, California	This project would be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-minority, age)	33,000 GGE/year
54	**AeroVironment/** Sacramento County, California	This project would be in a low-income community that is highly impacted by air pollution. (4 EJ indicators-minority, poverty level, unemployment, age)	33,000 GGE/year
55	**AeroVironment/** Bay Area North Region	Proposal did not provide enough information to identify EJ Indicators	33,000 GGE/year
56	**AeroVironmnet/** Bay Area South Region	Proposal did not provide enough information to identify EJ Indicators	33,000 GGE/year
57	**AeroVironment/** Multi-Region	Proposal did not provide enough information to identify EJ Indicators	33,000 GGE/year
58	**AeroVironment/** Ventura County, California	This project would be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-minority, age)	33,000 GGE/year

6Proposals with locations in multiple cities or counties are listed separately for each city or county.

Proposal[7] #	Proposer/project location	EJ Indicators	Anticipated GGE Displacement per Proposal
64	**Aerovironment/** Los Angeles West	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, poverty level, unemployment)	33,000 GGE/year
65	**AeroVironment/** San Diego, CA	This project would be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-poverty level)	33,000 GGE/year
66	**AeroVironment/** San Joaquin County, CA	This project would be in a low-income community that is highly impacted by air pollution. (4 EJ indicators-minority, poverty level, unemployment, age)	16,500 GGE/year
66	**AeroVironment/** Stanislaus County, CA	This project would be in a low-income community that is highly impacted by air pollution. (4 EJ indicators-minority, poverty level, unemployment, age)	16,500 GGE/year
68	**AeroVironment/** Los Angeles, CA	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, poverty level, unemployment)	33,000 GGE/year
71	**AeroVironment/** Santa Barbara County, CA	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, poverty level, age)	11,000 GGE/year
71	**AeroVironment/** San Luis Obispo County, CA	This project would be in a low-income community that is highly impacted by air pollution. (2 EJ poverty level, age)	11,000 GGE/year
71	**AeroVironment/** Monterey County, CA	This project would be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-age)	11,000 GGE/year
Workplace Level 1 and 2 EVSE			
163	**Schneider Electric USA**/ ARC Silicon Valley 2731 N First St San Jose CA 95134	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-minority)	990 GGE/year
162	**Schneider Electric USA/** 1700 W. Hillsdale Blvd., San Mateo, CA 94402	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-age)	495 GGE/year
162	**Schneider Electric USA/** 3300 College Drive, San Bruno, CA 94066	The city has no EJ indicators	660 GGR/year

Proposal[7] #	Proposer/project location	EJ Indicators	Anticipated GGE Displacement per Proposal
162	**Schneider Electric USA/** 4220 Farm Hill Blvd., Redwood City, CA 94061	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-minority)	495 GGE/year
184	**Alternative Energy Systems Consulting/** 7500 Gilman Drive, La Jolla, CA 92093	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-age)	6,765 GGE/year
7	**Joe Carlson Studio/** 1605 Mahalo Place Compton, CA 90220	This project would be in a low-income community that is highly impacted by air pollution. (4 EJ indicators-minority, poverty level, unemployment rate, age)	165 GGE/year
32	**Towbes Group/** Goleta, CA 93117	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-minority)	990GGE/year
27	**City of Yucaipa/** Yucaipa Police Department and Community Center, Yucaipa CA 92399	The city has no EJ indicators	1,320 GGE/year
33	**LADWP/** 111 N. Hope Street, Los Angeles CA 90012	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, poverty level, unemployment)	5,280 GGE/year
41	**OurEvolution Energy & Engineering/** 718 Third Street in Old Town, Eureka, CA 95501	This project would be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-poverty level, unemployment)	165 GGE/year
41	**OurEvolution Energy & Engineering/** 8th and F Street, Arcata CA 95521	This project would be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-poverty level)	165 GGE/year
Fleet Level 1 and 2 EVSE			
185	**Alternative Energy Systems Consulting/** 9500 Gilman Drive, La Jolla, CA 92093	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-age)	1,650 GGE/year
44	**AeroVironment/** San Diego, California	This project would be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-poverty level)	33,000 GGE/year

Proposal[7] #	Proposer/project location	EJ Indicators	Anticipated GGE Displacement per Proposal
182	**DGS/** 1416 10th Street, Sacramento, CA 95814	This project would be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-poverty level, unemployment)	1,485 GGE/year
244	**LADWP/** 111 N. Hope Street, Los Angeles CA 90012	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, poverty level, unemployment)	N/A
53	**AeroVironment/** San Diego, CA	This project would be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-poverty level)	33,000 GGE/year
DC Fast Charger Demonstration			
105	**SCAQMD/**Ralphs, 10400 Sepulveda Boulevard, Mission Hills, CA 91345	This project would not be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-minority, age)	8,250 GGE/year
112	**SCAQMD/** Albertsons, 12816 Studebaker Road, Norwalk, CA 90650	This project would not be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-minority, unemployment)	8,250 GGE/year
115	**SCAQMD/** Ralphs, 320 West Colorado, Pasadena, CA 91105	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-minority)	8,250 GGE/year
122	**SCAQMD/** Ralphs, 903 El Camino Real, San Clemente, CA 92672	The city has no EJ indicators	8,250 GGE/year
123	**SCAQMD/** 655 S. Grand Avenue, Glendora, CA 91740	This project would not be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-minority, age)	8,250 GGE/year
125	**SCAQMD/** Ralphs, 1644 Cloverfield Avenue, Santa Monica, CA 90404	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-age)	8,250 GGE/year
126	**SCAQMD/** Ralphs 14049 Ventura Blvd, Sherman Oaks, CA 91423	This project would be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-minority, poverty level)	8,250 GGE/year
129	**SCAQMD/** Albertsons, 1910	This project would not be in a low-income community that is highly	8,250 GGE/year

Proposal[7] #	Proposer/project location	EJ Indicators	Anticipated GGE Displacement per Proposal
	North Campus Avenue, Upland, CA 91784	impacted by air pollution. (1 EJ indicator-minority)	
130	**SCAQMD/** Albertsons, 2630 East Workman Avenue, West Covina, CA 91791	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-minority)	8,250 GGE/year
137	**SCAQMD/** Ralphs, 619 East University Drive, Carson, CA 90746	This project would not be in a low-income community that is highly impacted by air pollution. (3 EJ indicator-minority, unemployment, age)	8,250 GGE/year
138	**SCAQMD/** Ralphs, 13321 South Street, Cerritos, CA 90703	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-age)	8,250 GGE/year
144	**SCAQMD/** Albertsons, 13220 Harbor Boulevard, Garden Grove, CA 92843	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-minority)	8,250 GGE/year
146	**SCAQMD/** Albertsons, 6601 Quail Hill Parkway, Irvine, CA 92620	The city has no EJ indicators	8,250 GGE/year
147	**SCAQMD/** Ralphs, 1930 N. Lakewood Blvd, Long Beach, CA 90815	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, poverty level, unemployment)	8,250 GGE/year
148	**SCAQMD/** Ralphs, 2520 Glendale Boulevard, Los Angeles, CA 90039	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, poverty level, unemployment)	8,250 GGE/year
149	**SCAQMD/** Ralphs, 2600 South Vermont Avenue, Los Angeles, CA 90007	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, poverty level, unemployment)	8,250 GGE/year
150	**SCAQMD/** 3433 S. Sepulveda Blvd., Los Angeles, CA 90034	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators- minority, poverty level, unemployment)	8,250 GGE/year
183	**Alternative Energy Systems Consulting/** 3 sites located within 10 miles of UCSD	This project would be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-poverty level)	495 GGE/year

Proposal[7] #	Proposer/project location	EJ Indicators	Anticipated GGE Displacement per Proposal
21	**Green Charge Networks, LLC/** 3111 West Temple Avenue, Pomona, CA 91768	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators- minority, poverty level, unemployment)	165 GGE/year
22	**Green Charge Networks, LLC/** 3450 Overland Avenue, Los Angeles, CA 90034	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators- minority, poverty level, unemployment)	165 GGE/year
23	**Green Charge Networks, LLC/** 7858 Van Nuys Blvd., Van Nuys, CA 91402	This project would not be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, unemployment, age)	165 GGE/year
24	**Green Charge Networks, LLC/** 8693 Irvine Center Dr., Irvine, CA 92618	The city has no EJ indicators	165 GGE/year
25	**Green Charge Networks, LLC/** 5075 Westminster Blvd., Seal Beach, CA 92683	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-age)	165 GGE/year
26	**Green Charge Networks, LLC/** 3366 North San Gabriel Blvd., Rosemead, CA 91770	This project would be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-minority, poverty level)	165 GGE/year
34	**Green Charge Network/** 2805 Garnet Ave., San Diego, CA 92109	This project would be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-poverty level)	165 GGE/year
36	**Green Charge Networks, LLC/** 4080 Convoy St., San Diego, CA 92111	This project would be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-poverty level)	165 GGE/year
37	**Green Charge Networks, LLC /** 23021 Sunnymead Blvd., Moreno, CA 92553	This project would be in a low-income community that is highly impacted by air pollution. (4 EJ indicators-minority, poverty level, unemployment, age)	165 GGE/year
39	**Green Charge Networks, LLC /** 1001 West Orangethorpe Ave., Fullerton, CA 92833	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-minority)	165 GGE/year

45	**Green Charge Networks, LLC /** 13801 Mango Dr., Del Mar, CA 92014	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-age)	165 GGE/year
47	**Green Charge Networks, LLC /** 901 Palomar Airport Rd., Carlsbad, CA 92011	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicators-age)	165 GGE/year
59	**Green Charge Networks, LLC /** 2217 East 17th St., Santa Ana, CA 92705	This project would be in a low-income community that is highly impacted by air pollution. (4 EJ indicators-minority, poverty level, unemployment, age)	165 GGE/year
61	**Green Charge Networks, LLC /** 5536 East Washington Blvd., Los Angeles, CA 90016	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, poverty level, unemployment)	165 GGE/year
59	**Green Charge Networks, LLC /** 2217 East 17th St., Santa Ana, CA 92705	This project would be in a low-income community that is highly impacted by air pollution. (4 EJ indicators-minority, poverty level, unemployment, age)	165 GGE/year
61	**Green Charge Networks, LLC /** 5536 East Washington Blvd., Los Angeles, CA 90016	This project would be in a low-income community that is highly impacted by air pollution. (3 EJ indicators-minority, poverty level, unemployment)	165 GGE/year
62	**Green Charge Networks, LLC /** 609 Rancho Conejo Blvd., Thousand Oaks, CA 91320	This project would not be in a low-income community that is highly impacted by air pollution. (1 EJ indicator-age)	165 GGE/year
69	**Green Charge Networks, LLC /** 11461 Firestone Blvd., Norwalk, CA 90650	This project would be in a low-income community that is highly impacted by air pollution. (2 EJ indicators-minority, age)	165 GGE/year

Source: California Energy Commission staff analysis