



# 2019 Q2 Report to California Air Resources Board

Public Version

August 12, 2019

## Table of Contents

1.	Introduction .....	3
2.	A Network of Electric Vehicle Charging Stations .....	4
2.1.	Introduction .....	4
2.2.	Electrify America’s DC Fast Charging Network .....	4
2.2.1.	Acquiring Station Sites in Station Target Zones .....	5
2.2.2.	Constructing a Network of DC Fast Charging Stations.....	5
2.2.3.	Ultra-fast Electric Vehicle Charger Technology .....	7
2.2.3.1.	Chargers and Equipment Ordered and Delivered.....	9
2.3.	Level 2 Workplace and Multiunit Dwelling Charging Stations.....	10
2.3.1.	Charger Technology .....	11
3.	Brand-Neutral Education and Awareness.....	12
3.1.	Brand-Neutral ZEV Education and Awareness Media Campaign.....	12
3.1.1.	JetStones.....	12
3.1.2.	Low-Income and Disadvantaged Community Outreach Investments .....	14
4.	Green City Initiative .....	17
4.1.	Introduction .....	17
4.2.	Car-Sharing and Ride-Hailing Services .....	17
4.3.	ZEV Shuttle / Bus.....	18
4.4.	Disadvantaged and Low-Income Impact.....	19
4.5.	Infrastructure .....	19
4.6.	Green City Marketing.....	20
4.7.	Problems, Concerns and Lessons Learned.....	20
5.	Vendor Survey.....	22

## 1. Introduction

Electrify America, LLC is investing \$2 billion in financially sustainable business opportunities that advance the use of Zero Emission Vehicle (ZEV) technology, \$800 million of which must be spent in California. From its inception early in 2017, Electrify America has moved rapidly to implement the \$2 billion ZEV Investment Commitment.

As detailed below, Electrify America's activities in Q2 2019 were focused on permitting and building ultra-fast electric vehicle charging stations at an unprecedented rate, while overseeing vendors as they deployed Level 2 charging stations at workplaces and multiunit dwellings (MUDs). The marketing team completed its third flight of brand-neutral education and awareness campaign activities, while the Green City Initiative continued to grow its car-share programs. Finally, Electrify America implemented initial activities laid out in the Cycle 2 California ZEV Investment Plan.

The end of Q2 marked the official end of Cycle 1. Electrify America plans to continue making a limited and well-defined set of Cycle 1 investments during the second half of 2019 in order to complete the investments specified in the Cycle 1 California ZEV Investment Plan, as supplemented.

Electrify America publishes this quarterly report to share the progress and impact of its Cycle 1 investments in California.

## 2. A Network of Electric Vehicle Charging Stations

### 2.1. Introduction

As laid out in the Cycle 1 California ZEV Investment Plan, Electrify America is developing a network of electric vehicle charging stations along highly traveled highway corridors and in six carefully selected metropolitan areas during Cycle 1 (see Figure 1). The planned network in California will consist of more than 600 DC fast charging dispensers at between 150 and 160 charging station sites built or under development. In addition, Electrify America is building charging stations at approximately 235 workplaces and multiunit dwellings in its six target markets. The network deploys cutting-edge technology to deliver customer-centric charging safely and conveniently, connecting California to the Electrify America national network in 42 other states.

**Figure 1 - California Charging Infrastructure Map**



To launch the network expeditiously, Electrify America initiated two distinct infrastructure strategies:

- First, the company utilized a robust procurement and real estate acquisition process to launch its statewide ultra-fast DC charging network.
- Second, it hired highly qualified and experienced “turnkey” vendors to deploy and maintain charging stations at workplaces and multiunit dwellings.

These strategies allowed Electrify America to move forward quickly in partnership with existing industry leaders. Electrify America anticipates that 35% of its business-driven investments within California will be in disadvantaged or low-income communities.<sup>1</sup>

### 2.2. Electrify America’s DC Fast Charging Network

Electrify America initiated development of DC fast charging along high-traffic highways and in six targeted metro areas in California. Target locations (known as “target zones”) for each station were identified using Electrify America’s proprietary station siting methodology, which projected locations where DC fast charging stations will be most needed by 2020.

<sup>1</sup> Electrify America uses definitions for low-income and disadvantaged communities established by the State of California, which are published and mapped by CARB on its “Disadvantaged and Low-income Communities Investments” webpage: <https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm>

### 2.2.1. Acquiring Station Sites in Station Target Zones

Before Electrify America can build a DC fast charging station in any of its carefully selected target zones, it must acquire access to a site to host the station.

In each target zone, Electrify America considers multiple real estate leads, based on their unique attributes, such as availability of three-phase power, site lighting, and access to customer amenities. Throughout the site acquisition process, Electrify America works closely with 16 electric utilities in California to determine efficient locations from a grid perspective with the lowest service connection costs for Electrify America. And to acquire high-quality sites, Electrify America has entered into master agreements with 28 large-scale real estate owners that provide access to sites nationwide,<sup>2</sup> as well as site host agreements with owners of desirable individual properties across California.

In Q2 2019, Electrify America completed its Cycle 1 site acquisition efforts and also made substantial progress in procuring real estate for Cycle 2 ZEV charging station investments, including signing its first six site host agreements.

Electrify America strives to ensure that 35% of its business driven investments are in low-income or disadvantaged California communities. In Q2, Electrify America was able to ensure that more than 35% of all lease-executed DCFC station sites in California were in low-income or disadvantaged communities (See Figure 4).

### 2.2.2. Constructing a Network of DC Fast Charging Stations

Electrify America has contracted with Black & Veatch for all DC fast charging station permitting, design and installation work in California. This engineering and construction firm, which maintains a regional office in California for all California sites, has managed the installation of more DC fast chargers than any other engineering and construction company in the United States.

Black & Veatch is utilizing a deep and experienced pool of subcontractors throughout California. Furthermore, in order to expand the pool of subcontractors and experienced workers, in 2018 Electrify America worked with Black & Veatch to invite new, qualified local companies to participate in project bids. This outreach has enabled new electrical contracting firms, including those who employ unionized electricians, to subcontract on a significant number of ultra-fast electric vehicle (EV) charging stations.

In Q2, Electrify America and Black & Veatch made progress designing, permitting, and constructing DC fast charging stations. However, Electrify America continued to encounter challenges and issues, particularly with regard to permitting timeframes. During the quarter, the average time to complete the permitting process for DC fast charging station sites in California grew from 65 to 69 business days – nearly 65% longer than the national average. Permitting processes are also requiring station site

---

<sup>2</sup> Electrify America's announced real estate partners including Simon Property Group, Walmart, Target Corporation, Brixmor Property Group, Kimco Realty Corporation, Sheetz, Inc., Casey's General Stores, Inc., DDR Corporation, Global Partners LP's Alltown, Kroger, the Save Mart Companies, Federal Realty Investment Trust, Fulcrum Property, ShopCore Properties, ValueRock Realty Partners, The Macerich Company, Washington Prime Group, and Pan-Cal Corporation.

redesigns much more frequently in California than in the rest of the nation (Figure 2), which both increases cost and leads to delay.

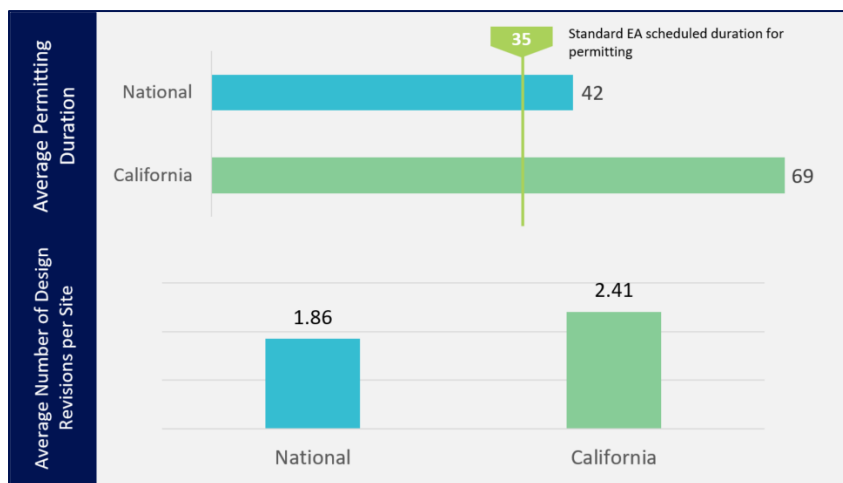
Electrify America has encountered California jurisdictions either unfamiliar with or unwilling to follow California statute, AB 1236, which requires California cities and counties to expedite EV station permitting, to constrain review to health and safety matters, and to bypass traditional zoning reviews.

Electrify America has engaged with the Newsom Administration to encourage continued state-level engagement and oversight of AB 1236 compliance. Through publication of the Electric Vehicle Charging Station Permitting Guidebook, staff-level engagement with planning and permitting officials, and state-level tracking of AB 1236 compliance, the state government has the ability to spread best practices and clearly establish expeditious permitting of EV infrastructure as a statewide priority.

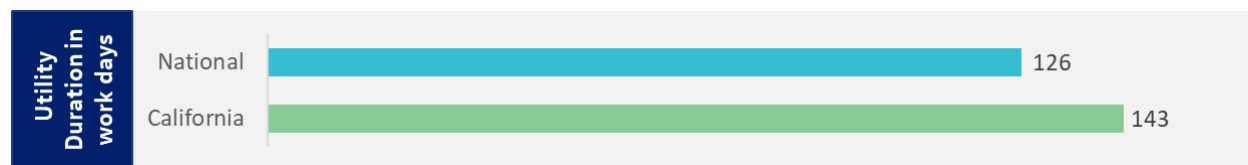
At this time, the cost to build Electrify America’s ultra-fast charging stations average more than 30% higher in California than in the rest of the nation. While many factors contribute to station costs, the additional burdens imposed by permitting – including costs to address station design and other aesthetic requests of local jurisdictions – appear to be the primary cause of these additional costs, along with higher labor costs. This higher cost per station necessarily means that California will receive fewer stations per dollar invested by Electrify America.

In Q2, Electrify America also continued to make progress connecting its stations to the electric grid. Similar to permitting, Electrify America has encountered unique challenges with utility new service interconnection processes across the state (see Figure 3). The quantity of locations and magnitude of power required at Electrify America’s ultra-fast charging station sites requires significant effort from utilities to validate power availability, design utility service, create easements, and schedule construction crews.

**Figure 2 – California and National Permitting Durations and Site Revisions**



**Figure 3 - California and National Utility Connection Timelines**





In several utility service areas, Electrify America is building at dozens of station sites. In addition to this high number of locations, Electrify America's ultra-fast charging station locations frequently require more than a megawatt of power to be supported by utilities in the parking area of a retail development. In some, but not all, cases, this requires upgrades to the utility's distribution system. To support rapid deployment, in some areas Electrify America has taken on civil work to support upgrades to a utility's distribution system, termed "betterment work," to supplement the utility's crews and support Electrify America's deployment objectives.

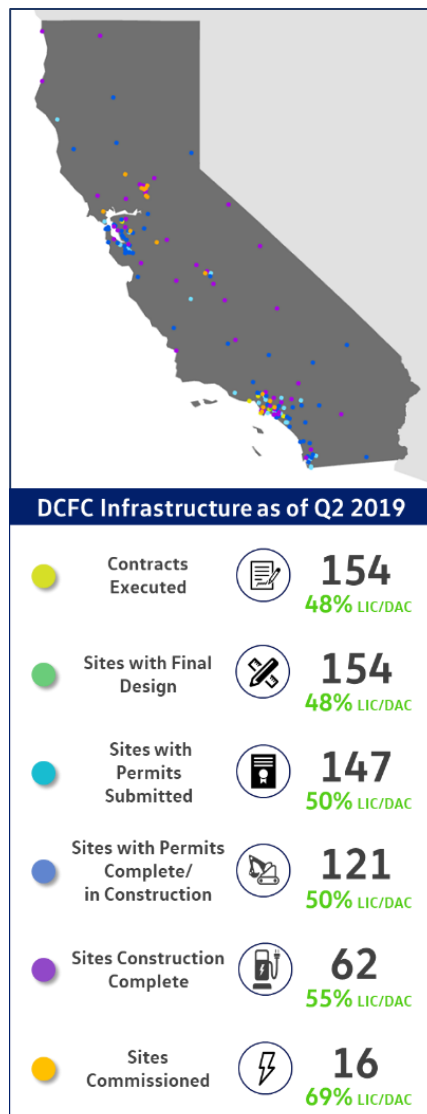
As of today, Electrify America has requested but not received the final engineering design of the interconnection from utility companies at more than 25 station sites. For an additional four station sites, Electrify America is awaiting finalization of the utility interconnection contract. Finally, at 14 station sites, Electrify America has completed station construction, but the station has not been connected to the power grid by the local utility company.

Despite these challenges, Electrify America and California utilities have worked together to make significant progress on improving processes to better fit the unique needs of DC fast charging providers across the state.

In its Q1 2019 Report, Electrify America reported that challenges with permitting and utility interconnections had prompted Electrify America to set a new goal of initiating construction on 100-120 station sites by the end of Q2 and completing these Cycle 1 investments in 2019. Electrify America also shared that it has cancelled or placed on long-term hold planned stations in jurisdictions with onerous requirements and lengthy permitting timelines, in order to focus resources on the stations that can feasibly be built. These changes were successful. In Q2, Electrify America had 121 station sites open or permitted and in the construction phase, exceeding the established targets. Stations at 16 sites were open to the public by the end of the quarter.

As shown in Figure 4, more than 35% of Electrify America's station sites under development are in disadvantaged and low-income communities.

**Figure 4 - California Sites and Construction Status**



### 2.2.3. Ultra-fast Electric Vehicle Charger Technology

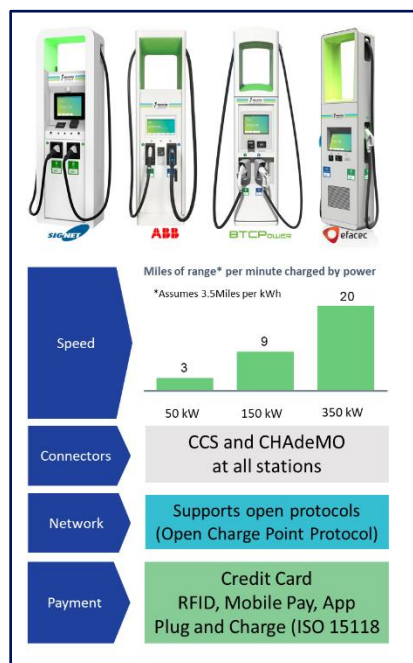
Electrify America's customer-centric stations use the most advanced technology ever deployed for convenient, fast charging (see Figure 5). Early in 2018, Electrify America's charging systems became the first 350 kW chargers with state-of-the-art liquid-cooled cables certified to UL standards, and in late

2018, *Popular Science* named Electrify America's charging system an award winner for its 2018 "Best of What's New" in the Automotive category.<sup>3</sup>

Highway stations are equipped with chargers capable of delivering maximum power levels from 150 kW to 350 kW, which are capable of stepping down to lower power levels for vehicles equipped for lower powered DC fast charging. At maximum continuous power, 350 kW chargers are able to deliver approximately 20 miles of range per minute to a vehicle, vastly improving the customer experience and conveniently delivering a high level of power.<sup>4</sup>

Metro charging stations feature configurations of either three or six DC fast chargers, reducing queuing times and providing redundancy in high-utilization urban areas. The majority of metro stations in California feature 150 kW chargers.

**Figure 5 - Transformational DC Fast Charging Technology**



Electrify America DC fast charging sites support both the CCS Combo and CHAdeMO connectors, ensuring that all sites are universally compatible with today's electric vehicles. To maximize the ability of customers to use charging stations regardless of which charging network they have joined, Electrify America's networked public stations accept credit and debit card payment, creating an easy customer experience that is the primary goal of most interoperability efforts.

To further improve the customer experience, in Q2 Electrify America launched a mobile app, available for both Android and iPhone, which allows users to manage the entire charging session on their mobile phone. EV drivers can now locate a charger, pay for and start a charge, as well as track their charging session right from their smartphones, making charging with Electrify America even more convenient.

Electrify America also lowered pricing in Q2 and announced power level pricing, a structure developed to support EVs capable of ultra-fast charging. Charging is priced by the minute, based on the

maximum charging capability of the vehicle.<sup>5</sup>

<sup>3</sup> Neither liquid-cooled cables nor 350 kW charging has ever been deployed commercially in the United States. As a result, Electrify America leased a small space for equipment quality control and validation during 2019.

<sup>4</sup> Idaho National Lab, DOE, and DOT refer to power levels of 350 kW because the limit of the standard is currently 350 amps multiplied by 1000 volts, or 350 kW. Comments from OEMs and experts during the Outreach Plan process have led Electrify America to believe that the next generation of vehicles will be designed to go up to 920V. As such, the actual range delivered per minute will depend on the vehicle, as vehicles govern the power level accepted. This estimate assumes the vehicle being charged can travel approximately 3.5 miles per kWh.

<sup>5</sup> "Electrify America Launches Its First-Ever Mobile App, New Membership Options and a New Pricing Structure to Help Increase Electric Vehicle Adoption," June 3, 2019. <https://media.electrifyamerica.com/en-us/releases/61>



Electrify America is equipping its networked DC fast chargers using the CCS standard with ISO 15118, and it was announced in January that Electrify America will be the first DC fast charging network in the United States to offer “Plug & Charge” capability at its stations. In Q2, Electrify America’s Center of Excellence technology laboratory hosted the 11th International Testing Symposium, bringing together more than 200 engineers and technical experts from global automakers, charging equipment manufacturers, charging networks and related companies to test next-generation technologies for electric vehicle charging. Several global automakers tested vehicles at the symposium, including: Audi; BMW of North America (tested Mini Electric and iX3 pre-production cars); Fiat Chrysler Automobiles; and Karma Automotive.<sup>6</sup>

Finally, all Electrify America DC fast charging stations are networked, using open protocols compliant with Open Charge Point Protocol (OCPP) version 1.6 or higher, and support cellular connectivity.<sup>7</sup> These capabilities are managed for Electrify America by Greenlots. Electrify America has also exchanged roaming specifications with most U.S. charging networks, and in Q2, Electrify America and ChargePoint announced a roaming partnership that will further expand access to EV charging.<sup>8</sup> The interoperability agreement will allow drivers to seamlessly charge their EVs on public chargers between both networks using their existing account credentials, without incurring any additional fees.<sup>9</sup>

#### 2.2.3.1. Chargers and Equipment Ordered and Delivered

Following an RFP process, Electrify America selected four companies – ABB, BTC Power, Efacec, and Signet – as suppliers of its ultra-fast DC fast chargers during Cycle 1.<sup>10</sup> Electrify America has ordered all of the more than 600 chargers needed in California for Cycle 1. Electrify America also began competitive procurement of hardware for Cycle 2 DC fast charging stations during Q2.

**Figure 6 - Electrify America DCFC and User Interface**



<sup>6</sup> “Electrify America Hosts International Testing Symposium for Combined Charging System,” May 21, 2019;

<https://media.electrifyamerica.com/en-us/releases/59>

<sup>7</sup> The network controls are hosted by Amazon Web Service (AWS), which allows a high security standard. Electrify America undertook intensive testing to approve AWS as a safe and secure environment, as well as security audits of Greenlots as part of the licensing of the network. Also Electrify America selected a vendor to perform architecture reviews and penetration tests to provide data security.

<sup>8</sup> Electrify America’s public stations will be equipped with back end systems that can use Open Charge Point Interface (OCPI) 2.1 to communicate with other networks and Open InterCharge Protocol (OICP) to be able to connect to roaming platforms, when a business agreement is secured, in a manner that does not require use of any particular firm’s intellectual property.

<sup>9</sup> “Electrify America, ChargePoint Collaborate on Agreement to Expand Public EV Charging Access,” June 11, 2019.

<https://media.electrifyamerica.com/en-us/releases/64>

<sup>10</sup> Electrify America Press Release. “Designing and Deploying more than 2,000 Ultra-Fast Electric Vehicle Chargers across the U.S., Electrify America Selects ABB, BTC Power, Efacec and Signet as Charging Equipment Suppliers.” April 17, 2018.

<https://www.electrifyamerica.com/sites/default/files/inline-files/Electrify%20America%20Announces%20Charger%20Hardware%20Suppliers%20Update%2004172018.pdf>

These chargers are scheduled to be delivered to station construction sites in 2018 and 2019. By the end of Q2, 329 DC fast chargers had been delivered to construction sites.

Electrify America also ordered battery storage capacity in order to mitigate high demand charges, reduce on-peak energy charges, and ease grid loads. In Q1, Electrify America announced that it had ordered Tesla batteries for more than 60 station sites in California, totaling more than 20 MWh of behind-the-meter energy storage to be delivered and installed in 2019. The destinations of battery systems will continue to be reevaluated based on site-specific limitations, ongoing changes in utility rates, and utility grid needs. Should utility rates for EV charging be modified to better reflect the cost to serve such demand, the storage systems will continue to provide value by reducing costs and stress on the electric grid during on-peak periods and grid events.

### 2.3. Level 2 Workplace and Multiunit Dwelling Charging Stations

Electrify America targeted six metropolitan areas for community charging station investments in Cycle 1. In these communities, Electrify America and its “turnkey” vendors (EV Connect, Greenlots, and SemaConnect) installed and opened Level 2 (L2) charging stations at more than 200 sites. In Q2, Electrify America and its turnkey vendors brought this Cycle 1 investment to a conclusion on time and on budget, opening stations at 145 new sites during the quarter to bring this program’s total open station count to 219 station sites. More than 20 additional stations – many of which were under construction in Q2 – are anticipated to be commissioned and opened in 2019.

Under standardized site host agreements between Electrify America’s vendors and station site hosts (e.g., property developers, office space facility managers, and other real estate site hosts), Electrify America funds all costs of permitting, procuring equipment, constructing and maintaining charging stations. Although this contract structure has not proven to be an economically sustainable investment for Electrify America in Cycle 1, the program provides a truly unique benefit to workplace and residential property owners in California.

By the end of Q2, vendors had secured site agreements for all station locations. Approximately 70% of the charging station sites are workplaces, and the remainder are at multiunit dwellings (e.g., apartment buildings, condominiums and row houses).


Electrify America’s efforts to request station site proposals from state agencies, local governments, and non-profit entities through the National Outreach Plan process bore tremendous fruit, as 33% of all station sites are at government or non-profit workplaces and housing developments. For example, Electrify America funded stations at more than 30 CalTrans workplaces, and the Catholic Diocese’s schools and churches host more than ten stations.

**Figure 7 - Level 2 Project Status**



Each of the vendors is contractually obligated to install 35% of their overall station quota in low-income or disadvantaged community census tracts. At the end of Q2, 43% of contracted sites and 42% of operational station sites were in low-income or disadvantaged communities (Figure 7).

**Figure 8 - Level 2 Charger Technology**

	
<b>Connector type</b>	J1772
<b>Maximum Power (kW)</b>	6.6-9.6
<b>Estimated charge rate</b>	20-25 mi/hr.
<b>Use case</b>	Workplace/ MUD

### 2.3.1. Charger Technology

Electrify America-funded workplace and MUD charging stations typically have four to six Level 2 chargers, each with a minimum power level of 6.6 kW (see Figure 8). The chargers provide 20 to 25 miles of driving range per hour of charging using the non-proprietary SAE J1772 connector, which can be used with all electric vehicles in the United States.

Electrify America's L2 vendors own, operate, and maintain their own electronic data networks in support of L2 chargers installed and operated on behalf of Electrify America, as well as those installed independently of the program's efforts. Electrify America owns the data from these charging stations. The chargers installed under this program will be on vendors' networks, and will be able to connect and interoperate with Electrify America's network.

### 3. Brand-Neutral Education and Awareness

#### 3.1. Brand-Neutral ZEV Education and Awareness Media Campaign

In Q2, Electrify America sustained its \$20 million Cycle 1 education and awareness campaign in California to educate consumers about the reasons to purchase a ZEV. As stated in the Cycle 1 ZEV Investment

**Figure 9 - "Plug into the Present" Landing Page**

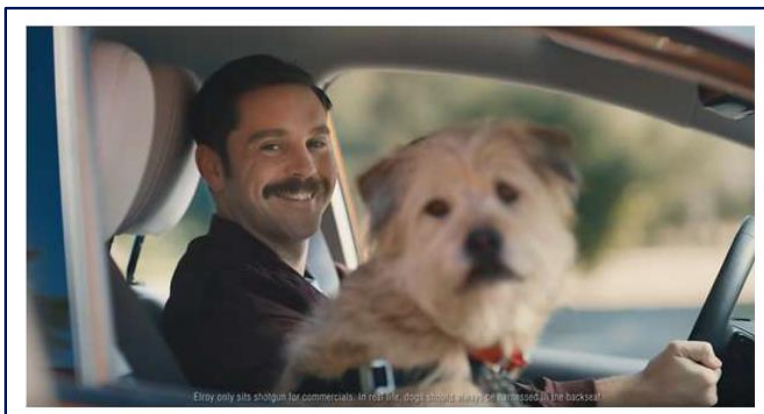


Plan, Electrify America committed to leverage “media to put ZEVs on the big stage in order to help consumers understand that ZEVs not only meet the majority of their needs today, but even more so as the charging infrastructure network grows.” The education and awareness effort included a brand-neutral TV spot, radio, paid search campaign in all California media markets, and a bilingual landing page ([www.plugintothepresent.com](http://www.plugintothepresent.com)) that provides an overview of the benefits of both battery electric and hydrogen fuel cell electric ZEVs, with links to third-party websites containing robust content for users.

##### 3.1.1. JetStones

In Q2, Electrify America continued Flight 3 of its multimedia campaign, with increased impression and investment levels compared to Q1. The campaign centers around the “JetStones” spot, which uses the themes from two popular Warner Bros.’ Hanna-Barbera cartoons, “The Jetsons” and “The Flintstones,” as a playful take on the transition of personal transportation from the Stone Age to the reality of electric vehicles available today. The TV spot, which can be viewed at [www.plugintothepresent.com/#tv-spot](http://www.plugintothepresent.com/#tv-spot), features the Chevy Bolt EV and includes zero emission vehicles from six different car manufacturers – Chevrolet, Hyundai, BMW, Volkswagen, Honda, and Nissan. Electrify America offered to numerous other automakers the opportunity to have their vehicles featured at no cost. Electrify America also developed companion radio spots using the same music, themes, and messages, in both English and Spanish.

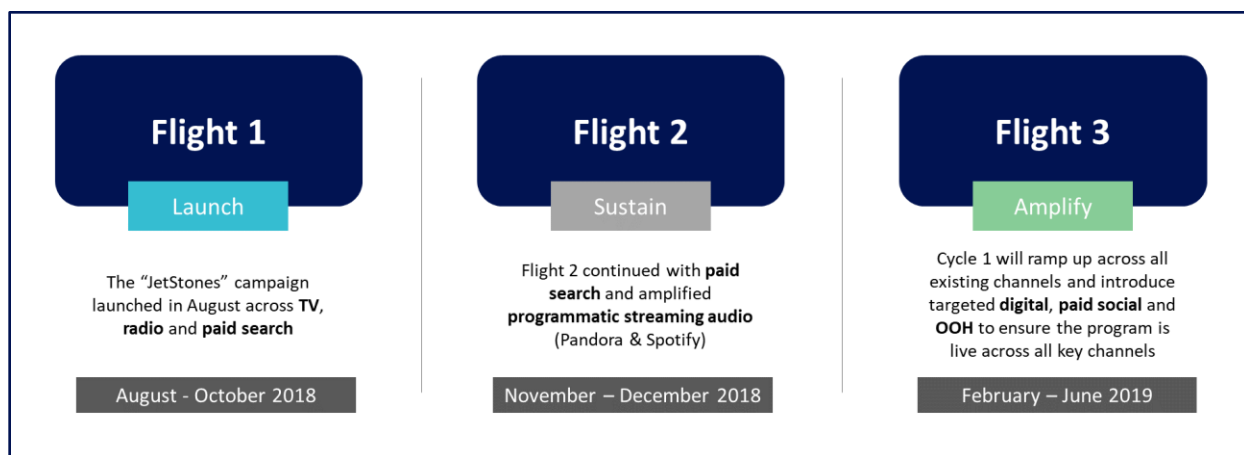
**Figure 10 - Scene from “JetStones” Advertising Spot**



Electrify America developed a comprehensive plan to deliver messaging about both ZEV benefits and overcoming barriers to ZEV adoption. The media plan for Cycle 1 has been broken out into three media flights, the third of which continued in Q2 (Figure 11).

During Q2, Electrify America continued awareness-raising efforts across local TV, streaming audio, paid search, digital display/video, podcasts, social media, and out-of-home channels. Radio ads launched in Q2, in addition to increased out-of-home messaging. Electrify America continued to leverage existing assets from our JetStones shoot to develop new creative materials for Flight 3.

**Figure 11 - "JetStones" Media Schedule**



During Flight 3, Electrify America and its media agency have bought air time on cable networks in specific zip codes, in order to ensure that 35% of all media spending occurred in low-income and disadvantaged communities. The targeting for this campaign has remained consistent from Q1 to Q2. Electrify America is also continuing to run both English and Spanish advertising.

The table below illustrates how these channels accomplished a total of over 518 million impressions (i.e., listeners and viewers) in the second quarter.

California Advertising Impressions – Q2 2019			
Media Type	Statewide Campaign	Campaign Targeted at LIC/DAC Areas	Total Impressions
TV	63,809,500	5,681,000	69,490,500
Radio	46,190,700		46,190,700
Streaming Audio	20,110,772	13,548,936	33,659,708
Paid Search	618,094	163,631	781,725
Digital/Video	78,839,949	82,807,354	161,647,303
Podcasts	818,417		818,417
Social	33,200,588	38,775,141	71,975,729
OOH	18,331,560	115,867,194	134,198,754
<b>TOTAL</b>	<b>261,919,580</b>	<b>256,843,256</b>	<b>518,762,836</b>

Electrify America also continued its partnership with Veloz, investing in the "Kicking Gas" ZEV education and awareness campaign featuring Arnold Schwarzenegger. In Q2 2019, Electrify America invested

\$1,469,000 to fund the production and initial media buy for the campaign, which launched in California on June 26, 2019. Consistent with past agreements, Veloz has agreed to raise funds to match Electrify America's commitment in the future.

The Kicking Gas campaign will run through the end of 2019 using digital billboard displays along major commuting corridors in Northern and Southern California, paid social media placement on Facebook and Instagram, search placement on Google, YouTube and Bing, and digital display banners. 35 percent of the media buy will be targeted towards LIC/DAC zip codes.

### 3.1.2. Low-Income and Disadvantaged Community Outreach Investments

In the Cycle 1 Supplement to the California ZEV Investment Plan, Electrify America committed \$2-3 million – a very substantial portion of its education partnerships budget – to seek partnerships with entities with particular access and credibility within California's disadvantaged and low-income communities.

In October 2018, Electrify America contracted with six Community-Based Organizations (CBOs) for \$2.7 million in work to support Electrify America's mission of providing education campaigns to low-income and disadvantaged communities in the State of California. Electrify America awarded these contracts to: Valley Clean Air Now (Valley CAN); Pacific Asian Consortium in Employment (PACE); Chinese Newcomers Service Center (CNSC); Self Help for the Elderly (SHE); Liberty Hill Foundation (LHF); and GRID Alternatives.<sup>11</sup> Red Horse Hill provides project management services for this program.

At the end of Cycle 1, CBOs had spent more than 99% of contracted funds, and concluded the first phase of outreach work. Partner CBOs have submitted final reports to Electrify America, which will be reviewed during the third quarter to help inform future phases of outreach.


The activities of these organizations in Q2 are described in the following table:

---

<sup>11</sup> Electrify America Press Release. November 7, 2018. <https://media.electrifyamerica.com/en-us/releases/20>



Organization	Description	Q2 Accomplishments
 <p>Self Help for the Elderly (SHE)</p>	<p>SHE is a San Francisco-based lead agency of a statewide coalition of immigrant-serving CBOs, providing outreach and education to communities with limited English proficiency.</p>	<ul style="list-style-type: none"> <li>• Convened full-day, all-CBO training for community advocates providing ZEV resources and updates, promoting information sharing among CBOs, and increasing effectiveness of services to LIC/DAC communities</li> <li>• Provided ZEV education to 8,128 consumers in 25 languages</li> <li>• Participated in 17 community events attended by 10,577 people</li> <li>• Conducted ZEV education through 12 local, in-language media channels</li> </ul>
 <p>Chinese Newcomers Service Center (CNESC)</p>	<p>CNESC focuses on educational and outreach activities for Chinese immigrants in the San Francisco area.</p>	<ul style="list-style-type: none"> <li>• Included ZEV outreach activities in bi-weekly new immigrant orientations</li> <li>• Participated in the Chinatown Resource Fair, engaging 550 people, as well as Chinatown Family Fun Day</li> <li>• Broadcast interview on Singtao Chinese Radio, sharing “saving tips for EV drivers”</li> <li>• Recruited 25 potential EV buyers for field visits during Ride &amp; Drive event on June 23</li> <li>• Reached 3,566 people through Facebook with 4-minute video clip promoting EV ride and drive event</li> </ul>
 <p>Pacific Asian Consortium in Employment (PACE)</p>	<p>PACE is a non-profit community development organization that creates economic solutions to meet the challenges of the environment, employment, education, housing, and business development for low-income residents in the Pacific Asian and other diverse communities in Los Angeles county.</p>	<ul style="list-style-type: none"> <li>• Participated in 39 community events to promote ZEV information, benefits, and rebate programs</li> <li>• Reached 1,112 residents who signed up for informational materials</li> <li>• Reached 5,278 residents in LIC/DAC areas with handouts and flyers</li> <li>• Ran ads in native language media for Korean, Vietnamese, and Filipino communities: Korea Daily, Korea Times, Asian Journal, a widely-circulated Filipino newspaper, and Nguoi Viet Daily News</li> </ul>
 <p>GRID Alternatives</p>	<p>GRID Alternatives, based in the San Francisco Bay area, is a non-profit organization providing low-carbon solutions exclusively to low-income communities.</p>	<ul style="list-style-type: none"> <li>• Conducted seven Ride and Drives with 615 attendees <ul style="list-style-type: none"> <li>○ 291 completed drives</li> <li>○ 245 pre-drive survey completions</li> <li>○ 224 post-drive survey completions</li> </ul> </li> <li>• Mailed 1,000 postcards to income-qualifying residents within five miles prior to three events</li> <li>• Social media promotion for three events totaled <ul style="list-style-type: none"> <li>○ 14,220 reached</li> <li>○ 246 engagements</li> <li>○ 150 shares</li> </ul> </li> </ul>
 <p>Valley Clean Air Now (ValleyCAN)</p>	<p>Valley Clean Air Now, based in Sacramento, is a public charity committed to quantifiably improving air quality in California's San Joaquin Valley, a region with some of the worst air quality in the nation.</p>	<ul style="list-style-type: none"> <li>• Added two Tune In &amp; Tune Up events to Q2 schedule, averaging 495 vehicles at each event</li> <li>• Hosted ZEV Ride &amp; Drives at five Tune In &amp; Tune UP events: <ul style="list-style-type: none"> <li>○ Turlock – 85 in-car experiences</li> <li>○ Merced – 81 in-car experiences</li> <li>○ Fresno – 112 in-car experiences</li> <li>○ Bakersfield – 117 in-car experiences</li> <li>○ Merced – 101 in-car experiences</li> </ul> </li> <li>• Convened 14 Community Clean Car Clinics, resulting in 424 attendees and 118 EFMP Plus-Up applications</li> <li>• Paid social media promotion reached 258,000 people</li> </ul>

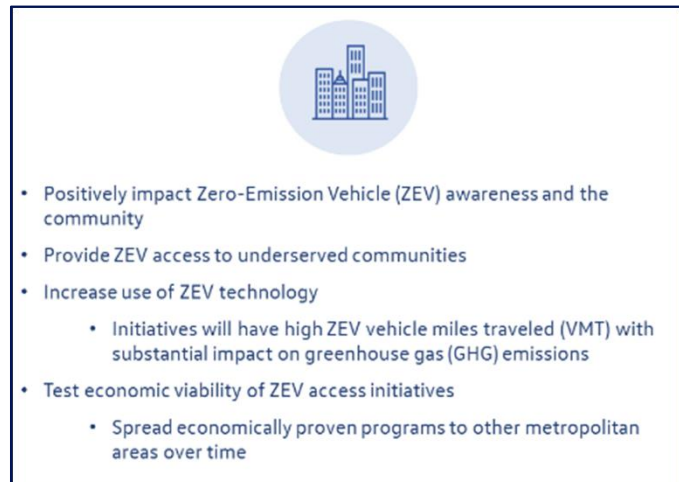
Organization	Description	Q2 Accomplishments
 Liberty Hill Foundation (LHF)	Liberty Hill Foundation, based in Los Angeles, has experience working with grassroots organizations in LIC/DAC across Los Angeles County.	<ul style="list-style-type: none"> <li>• Partner CBOs conducted 5,196 one-on-one consumer surveys to provide feedback on emPOWER sales flow and beta customer relationship management (CRM) platform</li> <li>• Partner CBOs completed 2,041 consumer surveys</li> <li>• Held six Ride and Drives with over 450 rides</li> <li>• Trained individual CBOs on new CRM platform and program tracking procedures</li> <li>• Collaborated with ValleyCAN on implementing efficient creation of LIC/DAC pipelines for ZEV incentives, adaptation of a digital CRM platform to streamline data collection, and eligibility for ZEV incentives</li> <li>• Coordinated with Pacific Asian Consortium on Employment (PACE), leveraging expertise in providing multiple residential energy efficiency programs</li> <li>• Collaboration with GRID Alternatives (and Southeast LA County partner, East Yard Communities for Environmental Justice) on a bonus Ride and Drive in June 2019</li> </ul>

## 4. Green City Initiative

### 4.1. Introduction

The goals of Electrify America's Green City Initiative are to increase ZEV awareness; provide ZEV access to underserved, low-income and disadvantaged communities; increase use of ZEV technology to maximize ZEV miles traveled while reducing greenhouse gas emissions; and test the economic viability of ZEV access initiatives. In the second quarter of 2019 there was considerable progress across all Green City investment pillars. Highlights include: the GIG Car Share service officially launched in May; the *Sac-to-Zero Ride and Drive the Second Saturday Way* signature event was held in June; and Electrify America's sixth DC fast charging station opened in the Sacramento Market.

**Figure 12 - Green City Goals and Impacts**



### 4.2. Car-Sharing and Ride-Hailing Services

Two car-share service vendors – GIG Car Share, a wholly-owned subsidiary of the American Automobile Association (AAA), and Envoy Technology, Inc. – provided car-share services in Sacramento during Q2.

#### GIG Car Share:

- After months of beta testing with a limited fleet, GIG officially launched its free float EV car share service in Sacramento at an event at the California State Capitol on May 3<sup>rd</sup>. With 260 Chevy Bolts funded entirely by Electrify America, this investment is now the largest all-EV car-share program in the United States.
- In June GIG made two slight adjustments to its home zone, including allowing rentals to begin or end on the top floor of the Sacramento State Parking Garage located at the corner of The Esplanade and Arboretum.
- By the end of Q2, GIG's service was demonstrating substantial success – more than 32,000 people had downloaded the GIG Car Share app in the Sacramento region. Sacramento-based cars have logged nearly 25,000 trips and more than 195,000 all-electric miles.
- GIG pursued opportunities with Transportation Networking Companies in Q2, but this opportunity to increase utilization has not yet come to fruition. GIG also engaged with Sacramento AQMD in order to ensure that participants in the Visa Mobility Wallet Pilot Program may use their Visa Card for GIG drive time.

### Envoy:

- In Q2, Envoy launched its round-trip car share service at six additional properties. Each property has two EVs, and Envoy installed an L2 charging station for each vehicle. At the end of Q2, Envoy was operating at 23 Electrify America-funded sites with 46 cars and 46 L2 charging stations.
- Envoy completed its contracting with multi-unit dwelling (MUD) site hosts during the second quarter, signing its 45th “Mobility Service Agreement” within Sacramento.
- Envoy continues to have wide ranging utilization from site to site. The highest utilization site reached 25% in Q2, demonstrating the potential for Envoy to be a high-use service. Envoy reported that utilization was above 5% at seven of its service locations.
- Envoy continues to engage in discussions with Transportation Networked Companies (TNCs) on options for their fleet to be used for ride-hail services by members which are tenants at Envoy properties, but Envoy made no announcements in Q2. Electrify America has also facilitated a dialogue between Envoy and Sacramento AQMD in order to ensure that participants in the Visa Mobility Pilot Program may use their Visa Card for Envoy drive time.

Quarterly utilization of car-sharing services is presented in the appendix.

### 4.3. ZEV Shuttle / Bus

In Q2, there was significant progress towards the launch of two services: a bus service from Davis to Sacramento jointly provided by Sacramento Regional Transit (SacRT) and Yolo County Transportation District (YCTD); and an on-demand, micro-shuttle service in the Franklin Boulevard region proposed by Franklin Neighborhood Development Corporation and operated by SacRT.

**Figure 13 - SacRT Franklin Boulevard Shuttle**



For the UC Davis-Sacramento route, Electrify America and service providers –SacRT and YCTD – secured a manufacturing timeline from Proterra for delivery of 12 E2 Catalyst buses uniquely configured for the route’s needs in October or November 2019. Electrify America and the service providers also developed a pre- and post-delivery inspection and testing protocol for the buses. The first completed bus will be shipped to Electrify America for charging system integration testing, and in June, Proterra provided a 40 ft. DuoPower bus for on-route testing. While the DuoPower model is not identical to the E2 Catalyst, the models are sufficiently similar to yield valuable testing data. Additional testing is planned for October 2019. Electrify America also helped establish a monthly interagency operational meeting between stakeholders to maintain collaboration and address all working items until the service launches.

Regarding the Franklin Boulevard shuttle project, the SacRT Board approved the purchase of three GreenPower EV Star Transit Plus shuttles, and SacRT in turn issued the Authorization for Purchase. Delivery of the shuttles is expected in late September or early October 2019.

#### 4.4. Disadvantaged and Low-Income Impact

The Electrify America Green City Initiative has prioritized investments that increase access to ZEV technology in low-income and disadvantaged communities in Sacramento. GIG Car Share has an approximately 13 sq. mile “Home Zone” operations area, in which 65% of served census tracts are designated as low-income or disadvantaged communities.

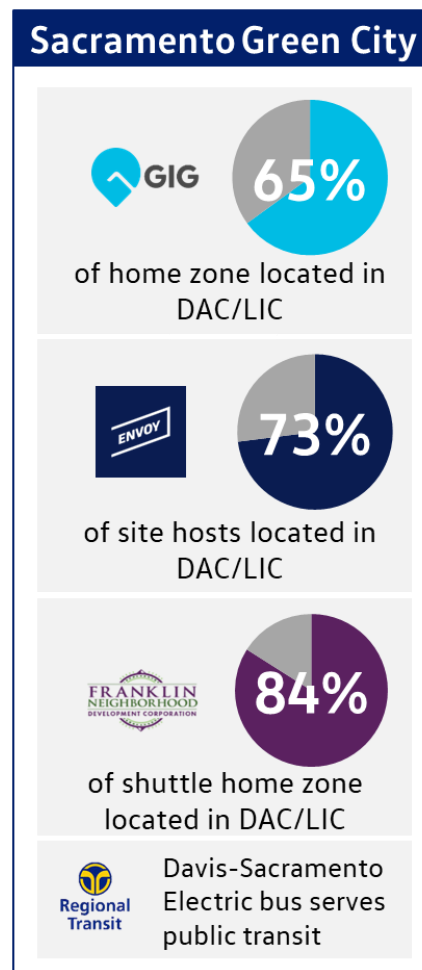
Envoy continues to focus on low-income and disadvantaged communities, and has achieved a key benchmark of 73% of its properties being located in these areas. Of the six Envoy properties launched in Q2, four are in low-income or disadvantaged communities, including Sutter View, Fairground Apartments, Phoenix Park, and Washington Plaza. In total, Envoy has launched at 18 properties in low-income or areas to date.

In order to educate property residents and encourage use of the service, Envoy held 12 learning events in Q2, and continues to enlist local residents to serve as “Envoy Ambassadors.” These ambassadors have a demonstrable impact on enrollment and utilization at their corresponding properties. Envoy has now engaged 10 total ambassadors for Sacramento properties, adding two new ambassadors during Q2.

During Q2, Electrify America facilitated a dialogue between GIG, Envoy and the Sacramento Air Quality Management District (SAQMD), with the goal of adding GIG to the Visa Mobility Pilot Program, which assists low-income Sacramento residents with transportation services.

The two ZEV shuttle/bus services will also operate in low-income and disadvantaged communities. The Davis-Sacramento public transit route will serve stops in low-income and disadvantaged communities. And of the census tracts served by the Franklin Blvd shuttle service, 84% are low-income or disadvantaged communities. These percentages are illustrated in Figure 14.

**Figure 14 - Green City Project Impact on Low-Income and Disadvantaged Communities**



#### 4.5. Infrastructure

Electrify America continued to build and open DC fast charging stations in the Sacramento market – consistent with Electrify America’s plan to provide Sacramento with the highest per-capita density of Electrify America’s DC fast chargers in the nation. Electrify America invested in both public charging stations and in charging infrastructure to support the Sacramento-Davis bus route and Franklin Boulevard shuttle service.

Electrify America had completed public charging stations at seven Sacramento sites by the end of Q2, providing nine 50kW dispensers and fifteen 150kW dispensers to the public. For the bus and shuttle charging infrastructure, site license agreements with all stakeholders – UC Davis Campus and Medical Center, SacRT and YCTD – for both the Sacramento-Davis route and Franklin Boulevard service were finalized in Q2.

#### 4.6. Green City Marketing

3fold Communications continued the “Sac-to-Zero” education and awareness campaign in Q2. The campaign is an umbrella of all Electrify America services in the Sacramento Region, and it deploys events and media, including social media channels under the Sac-to-Zero tagline.

During the quarter, 3fold held 14 Sac-to-Zero events and activities, engaging 13,576 individuals. The activities included community-based events, professional sporting events and one media partnership opportunity. Of the 14 events, 11 took place in low-income or disadvantaged communities.

To build awareness, 3fold promoted the events via Sac-to-Zero.com and Sac-to-Zero Social Media Channels (Facebook & Instagram). For each event, a social media posting was made, and for the largest events 3fold created an event-specific landing page. Many community and sports partners also engaged their networks to further promote the activities.

At each event, Sac-to-Zero staff were available to answer questions and engage participants regarding Electrify America’s investments in Sacramento. Each event had a selection of Sac-to-Zero giveaways, and each event also had one or both rideshare partners’ vehicles present (Envoy or GIG Car Share).

The largest engagement of Q2 was the *Sac-to-Zero Ride and Drive the 2nd Saturday Way* event, which took place on June 7th at the centrally located Electrify America charging station in the California New Car Dealers Association parking lot at 16th & L Street. At the event Electrify America, its Green City vendors, and other partners had an opportunity to showcase their efforts related to Sac-to-Zero, as well as other sustainability initiatives. Community participants included the City of Sacramento, the California New Car Dealers Association, GIG Car Share, Envoy Car Share, Sacramento Regional Transit, Yolo County Transit District, Sacramento Municipal Utility District, Sacramento Republic FC, and 3fold.

**Figure 15 – Image from Green City Signature Event**



#### 4.7. Problems, Concerns and Lessons Learned

The Green City Initiative made major strides in Q2. As Electrify America reached the end of Cycle 1, there were a number of lessons learned from Green City activities.

In Q2 2019, Electrify America and Envoy collaborated to conduct program adjustments to site locations and vehicle counts. Together, the two companies revised the property count plan to 45 locations, 90



electric vehicle and 90 Level 2 charging stations, down from an original total of 71 locations. These adjustments will provide the 45 sites with more focused engagement, education, and support. With a narrowed focus, Envoy was able to complete Mobility Service Agreements for all sites in the program during Q2, and the program is now on schedule to be fully launched in 2019.

After launching in May, GIG identified a number of ways to increase utilization of its vehicle fleet. For example, GIG has observed that person-to-person marketing engagement is the most effective means of converting an app download to a driving member in Sacramento. Testing levers to increase specific types of utilization, GIG lowered their full-day trip rate in early June from \$85 to \$59, with initial results indicating an 80% increase in full-day trips during weekdays, and a 30% increase on weekends.

## 5. Vendor Survey

Electrify America surveys its vendors semi-annually on the economic and job creation impact of its Cycle 1 investment in California. The vendor survey was highlighted to company vendors, and they were notified of its importance to Electrify America's reporting needs repeatedly.

As Cycle 1 investment increased in 2019, the pool of vendors receiving the end-of-year survey also increased. Though vendors can neither require their employees to provide demographic information, nor can Electrify America independently verify the residence information provided regarding vendor employees, 27 separate firms voluntarily responded to the survey. Sixteen of these vendors are based in California. Electrify America deeply appreciates that its vendors are willing to invest so much time and effort in order to complete this survey, which highlights the impact on job creation and economic development in disadvantaged and low-income communities across the state.

Many vendors, especially those based in California, noted active efforts to recruit in low-income or disadvantaged communities. For example, one vendor informed Electrify America that, "We actively recruit from DAC and LIC communities and strive to have a racial balance that reflects those communities."

Amongst the total pool of respondents, eight vendors reported recognition as either a woman- or minority-owned entity.<sup>12</sup> Of the survey respondents' total domestically-employed workforce, approximately 18% was employed in California as of the end of Q2. Of the total employees who performed work related to Electrify America projects in California in Q2, 429 vendor employees, including subcontracted personnel, resided in California. Among the California-based vendors who provided information regarding employee demographics, 45% of their employees and subcontractors resided in a disadvantaged or low-income community, while 7% of their employees self-identify as veterans. Lastly and collectively, survey respondents reported working on Electrify America's projects at 288 separate offices, vendor-controlled facilities, and other locations in disadvantaged or low-income California communities.

---

<sup>12</sup> Non-profit organizations qualify as minority-owned or women-owned based on Board of Directors composition.