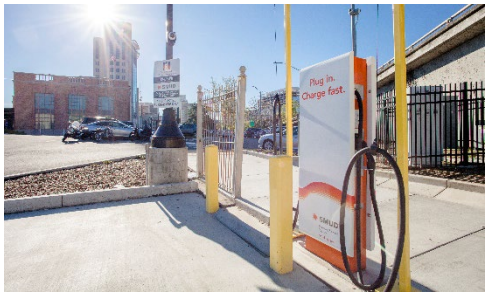
Electric Vehicle Strategy
2-Year Progress Report
Implementation Highlights & Accomplishments









July 2020
www.cityofsacramento.org/ev

City of SACRAMENTO

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Introduction

This document serves as the first progress report on implementation of the City of Sacramento's Electric Vehicle (EV) Strategy. The EV Strategy calls for annual updates to be submitted to City Council. However, this report serves as a two-year update on status and accomplishments since plan adoption in December 2017. The City of Sacramento developed the EV Strategy as a bold plan to advance zero-emission vehicle (ZEV) adoption through charging infrastructure access, partnerships, affordability, innovation, and workforce development. The EV Strategy established overarching zero-emission transportation goals, key performance targets, and an implementation plan with actions to be initiated by 2020 and fully implemented by 2025. The City is proud to support significant momentum towards EV Strategy goals.



The purpose of this report is to provide an update on implementation progress of the 2017 EV Strategy.

More information and resources are available online, including materials from relevant City Council meetings: www.cityofsacramento.org/ev

Sacramento's progress builds from local leadership and expertise, supplemented by strong, collaborative partnerships. This report will highlight the range of public and private partnerships and significant milestones achieved to date, including the launch of two new all-electric car share programs with more than 300 EVs successfully operating in the City, an expansion of City-owned EV charging infrastructure, growth in the City's EV fleet, and a dramatic increase in public incentives, education and outreach.[1] The City has sustained momentum towards EV Strategy goals while creating a platform for broader public and private investment.

From January 2018 to January 2020, Sacramento saw a 38% increase in the number of public EV chargers and is nearly halfway to the 2025 EV Strategy target for public fast chargers. In just ten months after plan adoption, the number of zero-emission vehicles registered in the City of Sacramento increased by 52%. With five years remaining to fully implement all relevant EV Strategy actions, the City is making strides to support zero-emission vehicle adoption and establish Sacramento as an EV-friendly innovation and economic hub. However, significant amplification of efforts and market shifts are needed to achieve the ambitious goals of the EV Strategy, as described further throughout this report.

The City is also currently evaluating EV goals and strategies in light of new efforts since 2017. On Nov. 12, 2019, the Sacramento City Council committed to bold action towards carbon neutrality by 2045 as a guiding principle for the 2040 General Plan. Mayor Darrell Steinberg has further established carbon neutrality by 2045 as a goal in convening the Mayors' Commission on Climate Change. This task force has recommended ambitious

[1] Car Share and Curbside Electric Vehicle Charging Parking Permits: Staff Report and Resolution Number 2018-0313; Car Share Program Terms and Conditions: Staff Report and Resolution Number 2018-0355 (Note: refer to revised terms and conditions as amended in Oct. 2019); Green City; Fleet Sustainability Policy; City of Sacramento Electric Vehicle Initiatives

vehicle electrification as a key mobility strategy to achieve carbon neutrality. While recommending a continued focus on a reduction of single occupant vehicle trips and vehicle miles traveled, the Climate Commission has advised that 70 percent of new vehicle registrations should be zero-emission by 2030, with electrification of all vehicles by 2045. Based on these recommendations, the City is revisiting EV Strategy targets in the Climate Action Plan (CAP) update that is currently underway in 2020, with CAP adoption anticipated by late 2021.

Continued effort is critical to achieve EV goals, especially for progress in private fleets, vehicles, and infrastructure. In addition, the City has opportunity to expand community-based engagement efforts and deepen the benefits of zero-emission technologies for Sacramento's communities. These technologies offer cleaner air, more affordable and reliable transportation, and new workforce opportunities. To realize these outcomes, staff will continue to pursue local funding, regional and state grant funding, and partnerships. By leveraging collective investments, the City, together with both public and private partners, can realize a carbon-neutral mobility system that is clean, affordable, and accessible, with economic benefits for people of all abilities, incomes, and characteristics.



Local leaders and partners launch Envoy's car share program on November 1, 2018. The Sac-to-Zero launch event with Electrify America included Councilmember Eric Guerra, Councilmember Larry Carr, Mayor Darrell Steinberg, and Sacramento County Board Supervisor and California Air Resources Board Member Phil Serna.

Background

On December 12, 2017 the Sacramento City Council approved the City's first ever EV Strategy – a plan of action with the overarching goal to establish Sacramento as the ZEV Capital of California, as a leader in the adoption of electric and zero-emission vehicles, and to realize the economic and community benefits realized with adoption. This was the City's first local, City-specific plan for EV and other ZEV initiatives formally approved by the City Council. The 2025 horizon year was originally chosen to align with Governor Brown's goal of achieving 1.5 million ZEVs on California roads by 2025 as established in Executive Order B-16-2012. However, the EV Strategy serves as a platform to build on for longer-term goals, including meeting or exceeding Sacramento's contribution to the statewide goals for 5 million EVs by 2030 and carbon neutrality by 2045.

The General Plan calls for a multi-modal system to achieve reductions in vehicle miles travelled (VMT). A multi-modal transportation system with active transportation and ZEV technologies supports reductions in fossil fuel combustion, leading to cleaner air and reductions in greenhouse gas (GHG) emissions. Further, a healthy transportation system provides options for people to travel more quickly, affordably, and conveniently. The EV Strategy describes the role ZEVs can play in supporting not only cleaner single-occupant vehicles, but also shared vehicle applications and transit. Further, ZEVs hold potential for other types of trips on City streets, such as commercial delivery, and heavy-duty uses like freight. Advancing ZEVs while realizing the City's goals of reducing vehicle miles traveled (VMT) offers a broad array of benefits to the community. Together, these strategies implement local goals while delivering measurable environmental, public health and cost benefits.

The EV Strategy seeks to spur the use of ZEVs by taking a comprehensive approach that involves programs, partnerships, outreach and education, along with expanded charging infrastructure, new incentives, and other activities. City staff developed the plan through a collaborative process, including extensive community and stakeholder engagement. The City has already made impressive progress in achieving many goals established in the strategy.



2025 EV Strategy Targets:

- 75,000 ZEVs in Sacramento
- 35% of households with ZEVs
- 40% of annual sales to be ZEVs



In just two years since the EV Strategy was adopted, the City has initiated and implemented a wide range of actions. Many of the projects and achievements would not have been possible without effective collaboration across departments and invaluable partnerships with external stakeholders such as the Sacramento Municipal Utility District (SMUD), the Sacramento Metropolitan Air Quality Management District (SMAQMD), Sacramento Regional Transit (SacRT), Electrify America, the Sacramento Area EV Association, EVgo, and many more. The City continues to actively work with the dynamic Sacramento Area Plug-In Electric Vehicle (PEV) Collaborative, which includes a range of local community-based organizations, agency, and industry partners. Numerous projects have arisen through this collaboration, some of which are highlighted throughout this report.

In 2018, the City of Sacramento received the Phase 1 EV Ready Communities Challenge grant from the California Energy Commission (CEC). This allowed the City to advance strategic EV planning through an "EV Blueprint" planning process. This effort included evaluation and prioritization of the City's ZEV-related efforts, with a focus on increasing access for disadvantaged and underserved communities and developing actionable plans for further implementation of the EV Strategy. In developing the EV Blueprint, the City conducted community-wide surveys and held community and stakeholder workshops for dialogue and to better understand community needs and priorities. The final product included EV project prioritization and planning tools, toolkits to increase community and corporate EV awareness, identification of recommended code revisions, and priority actions for City implementation in the near-term. This process gave staff a clearer picture of where to focus energy and resources, and in some cases, which EV Strategy actions should be put on hold or reconsidered.

In order to portray a holistic snapshot of community-wide ZEV efforts and accomplishments, this report highlights: (1) much of the work the City and partners have achieved or initiated thus far, and (2) where key opportunities lie and innovation will continue, recognizing the nature of the evolving and dynamic ZEV market. The following sections of this report are organized as follows:

- **Key Performance Indicators:** presents updates for supportive performance indicators from the EV Strategy
- **Accomplishment Highlights:** provides key outcomes for each implementation action category from the EV Strategy
- **Next Steps:** identifies primary upcoming opportunities and priorities for City efforts
- **Abbreviations:** provides a list of abbreviations used throughout the report and related terminology
- **Appendix A, EV Quick Facts:** consolidates metrics with some additional context
- **Appendix B, Summary Maps:** Publicly Available EV Charging Stations; EV Services/Programs; Select Socioeconomic Considerations
- **Appendix C, Implementation Action Status:** identifies status for each action identified in the EV Strategy
- **Resources:** recommends additional resources for those interested in more information, including resources on the City website
- **References:** cites references for information used throughout the report

In 2019, the UC Davis Institute of Transportation Studies released results from a 2017 study and survey of key drivers in EV adoption in the Sacramento region. This study is the first part of a multi-year project to evaluate the effectiveness of various activities on EV adoption, providing a baseline against which to measure progress over time.

Despite the Sacramento region having the lowest percentage of new vehicles for sale that are listed as EVs when compared to the other major metro regions in the state included in the survey, respondents in the region had a higher awareness of charging infrastructure.

Responses also indicate that considering the purchase of an EV in Sacramento is related to attitudinal factors such as knowing EV owners, being enthusiastic and familiar with the technology, and knowing how to charge. These factors were found to play a stronger role than advertising, awareness of incentives, or infrastructure density. The study provides findings and insights to guide future efforts.

Read more online:
https://escholarship.org/uc/item/2zc5c6hn.



An Electrify America DC fast charger located at the parking lot on the northeast corner of the 16th & L Street intersection in downtown Sacramento

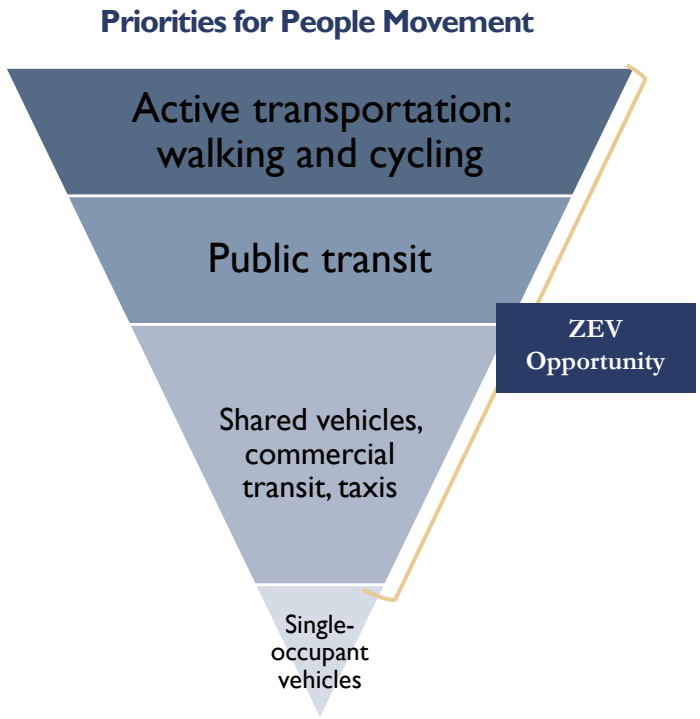
Key Performance Indicators

1,600+ new ZEV registrations and **52% increase in ownership** since EV Strategy adoption

Gap of over **70,000 ZEVs** to attain 2025 goal

This section presents progress across key indicators established in the 2017 EV Strategy. Unless otherwise noted, indicators reflect activity within city limits.

Overall, the City has realized a 52% increase in levels of ZEV ownership and remarkable deployments of public and private investments in infrastructure. In the first ten months of 2018, more than 1,600 new ZEVs were registered in Sacramento, and the market share of new car sales increased from 2% to 8%.[2] This dramatic increase occurred in the ten months following the adoption of the EV Strategy. This progress exemplifies how the City and key partners have effectively supported the reduction of barriers to acquire and use ZEVs through policy, incentives, infrastructure buildout, and awareness campaigns. The City anticipates even higher growth in adoption than evidenced by available data, but delays in reporting timelines result in potential under-representation of progress to date.



Nonetheless, absent significant investment and market advancement, the City will be challenged to realize ambitious 2025 goals. Current adoption rates represent less than 7% of the 2025 goal for 75,000 ZEVs. Similarly, only an estimated 2.6% of Sacramento households own a ZEV, relative to the EV Strategy goal of 35% of households by 2025.

The overarching, key performance metrics in this section depict various factors associated with ZEV adoption. This report also provides additional supportive indicators that serve as benchmarks for progress, identifying both 2017 status and targets for 2025. Based on best available information at the time of EV Strategy development, these indicators represent the City's efforts to translate the overarching EV Strategy goal of 75,000 ZEVs in Sacramento by 2025 into supportive, trackable metrics that demonstrate local progress and health of the ZEV ecosystem.

[2] Vehicle registration data reflects the most recent DMV registration data available at time of report preparation, from October 2018. Data likely undercounts vehicle registrations, due to the absence of vehicle registrations for 2019.

Adoption of ZEVs occurs within an interconnected mobility system. Progress towards ZEV adoption is considered with the City's overall mobility goals of reducing vehicle miles traveled, supporting active transportation and transit, and using ZEVs to increase affordable and equitable clean mobility along with the economic opportunities that can result. With an increased focus on shared trips and new mobility programs, new or revised indicators for ZEV adoption may better serve the City to gauge future progress. Re-evaluation of suitable indicators and targets is occurring through the City's Climate Action Plan update in 2020, considering recommendations from the Climate Commission. These considerations are further addressed in the 'Next Steps' section of this report (page 20).

Table 1: Key Performance Indicators

Metric	2025 Target	2017	Q3 2018	Percent Change
Households with ZEVs	35%	2%	2.6%	+30%
Number of registered ZEVs	75,000	3,200	4,849	+52%
Annual sales to be ZEV	40%	2%	8%	+300%

Note: compares 2017 data available at time of 2017 EV Strategy to October 2018 DMV data, which was the most recent data available at time of report preparation in February 2020. Table likely undercounts progress since EV Strategy adoption and does not capture known EV procurements in 2019 for the City Fleet or over 300 EV procurements for car share programs in Sacramento.



An EV awareness campaign in Sacramento involved the wrapping of 25 plug-in vehicles with a bright design created by a local artist, Micah Crandall-Bear. The initiative ran for nearly five months, sponsored by the Clean Vehicle Rebate Program and administered by the Center for Sustainable Energy. cleanvehiclerebate.org

Table 2: Supportive Performance Indicators

Action Category	Metric	2025 Target	At time of 2017 Strategy	Achieved to-Date at Time of this Report[2]	Percent Change	Gap
Community Charging and Infrastructure	Public or workplace chargers - L2s, DCFC, and high power	3,800	430	682[3]	+59%	3,118
	DCFC dispensers (subset of total chargers above)	300	23	129	+461%	171
City Facility Charging Infrastructure	Chargers or L1 ports at City facilities available for public or employee workplace charging	300	91	168	+87%	130
	EV Parking Program participants	800	355	110[4]	-69%	690
Fleets	Annual City fleet light-duty replacements to be ZEV	50% by 2018; 75% by 2020	12%	53% in 2019	+342%	exceeded
Economic Development and Innovation	OEM or transportation company partnerships for ZEV deployments	5	2	10	+400%	exceeded
Programs, Partnerships, and Engagement	Annual test drives	3,200	640	2,211	+245%	exceeded
	Annual events	52	30	141	+370%	exceeded

Notes:

1. *Includes new metrics available at time of report preparation. Refer to the EV Strategy for a full list of all supportive performance indicator targets for 2025.*
2. *Time periods for available metrics vary. Data is based on the latest available information*
3. *At least 400 additional chargers expected in 2020 – 2021 based on available CALeVIP rebates, as addressed further throughout this report.*
4. *The number of EVPP memberships only reflects monthly garage customers receiving an EV discount and is not reflective of the full amount of EV drivers parking in the five City-owned and operated garages. EVPP enrollment has continued to evolve throughout the program's 25-year lifespan and can tend to fluctuate. The current program includes participation thresholds that determine the EV parking discount for monthly customers. By 2018, free monthly parking was fully phased out for the program in all City-owned garages as EV transactions exceeded 5%. The decline in monthly customers is at least partly attributable to this change, but other factors may play a role. In 2020, staff are developing program updates to better achieve City Council goals for the program. However, modifications to the EVPP may shift are evolve due to the COVID-19 pandemic.*

Accomplishment Highlights: EV Strategy Implementation Actions

Accomplishments discussed in this progress report are grouped by category from the Implementation Action section of the EV Strategy. This summary is not intended to serve as an exhaustive list for all policies, programs, projects, or decisions, but rather highlights many of the key accomplishments to date. While the City serves as a lead for many actions, implementation will continue to be a highly collaborative effort. Attainment of EV Strategy goals requires ongoing partnership with other agencies, community-based organizations, non-profits, businesses, and industry partners who may be better positioned to implement or direct certain activities. A culture of teamwork has emerged in Sacramento to deliver collaborative outcomes and evaluate learnings while supporting ambitious local, regional, and state goals. Appendix C provides a complete list of EV Strategy actions and status (page 29).

This report identifies collective accomplishments within Sacramento since EV Strategy adoption in December 2017. In many instances, successes are a collaborative achievement resulting from work by numerous agencies, community-based organizations, and other partners. The local Sacramento Area PEV Collaborative continues to be a key local network for EV initiatives. This diverse group of partners includes public agencies, community-based organizations, local stakeholders, businesses, and EV charging and network companies. The City serves as a steering committee member and will continue to utilize the group to collaborate and spur local adoption. City staff are also engaged in peer-to-peer networks such as the Urban Sustainability Directors Network (USDN), involving collaboration with other cities throughout the state, nation, and even internationally. In this capacity, staff served on the inaugural USDN EV High Impact Practices Committee to advise for accelerating EV work across the entire North American network.

Technologies and services are evolving rapidly with opportunities changing quickly, even since adoption of the EV Strategy. Numerous opportunities anticipated in late 2017 have shifted, with new ones emerging even as others have proven less feasible or impactful. Efforts will continue to evolve over time as the City works towards carbon neutrality goals. Table 3 in the 'Next Steps' section of this report identifies near-term priorities for 2020. Additionally, the City will further evaluate next steps based on

The City is committed to achieving equitable access to ZEV technologies and benefits by low-income populations and disadvantaged communities, including job training and employment opportunities (EV Strategy Goal 5).

Despite lower levels of EV infrastructure and EV ownership in disadvantaged and low-income communities to-date, several important accomplishments demonstrate progress towards achieving this goal, as described further throughout this report:

- Launch of new ZEV transit and car share benefitting these communities, including Sac-to-Zero programs and Our Community CarShare
- Designation of the AB 617 South Sacramento community, for approximately $15 million in ZEV incentives
- Launch of Clean Cars 4 All, which will provide up to $11,500 in incentives to eligible low-income households to replace polluting "clunker" vehicles with PEVs, or $7,500 in transit or ride share subsidies
- Prioritization of City facilities for the next phases of EV infrastructure siting and planning

Refer to Appendix B and C for more information.

recommendations from the Mayor's Climate Commission and the Climate Action Plan update that is currently underway. Refer to pages 20-22 for more information. Please note that some of these efforts may have to be delayed due to COVID-19.



The Sacramento PEV Collaborative meets monthly to coordinate on regional EV efforts, discuss research, and share best practice and lessons learned.



New public EV chargers were installed at all City-owned and operated parking garages in Spring 2020, leveraging CALeVIP rebates.

1. Community Charging and Infrastructure

One of the greatest barriers to ZEV adoption for many customers is access to reliable charging. In order to foster an EV-friendly community and eliminate these barriers, the City and partners have worked to strategically increase access to public charging infrastructure for a wide range of EVs through public and private charging infrastructure.

The City is committed to removing barriers for charger installation. In 2019, the State of California Governor's Office of Business and Economic Development (GO-Biz) recognized City staff in the inaugural round of "ZEV-e" awards for bold leadership advancing EV deployments, and as one of the first cities and counties to date to have effectively developed and implemented a streamlined EV Charging Station permitting process in accordance with AB 1236.



59% growth

in publicly available chargers (L2 & DCFC) from December 2017 to January 2020

10+ fast charging hubs

launched within City limits from 2018-2019

1st curbside chargers

launched at Southside Park with EVgo

2nd highest metro area

nationally for number of publicly available fast chargers (DCFC) per million population

$198,000

of competitive grant funds secured to develop an actionable "EV Blueprint" to further implement the City's EV Strategy and conduct outreach

$14 million

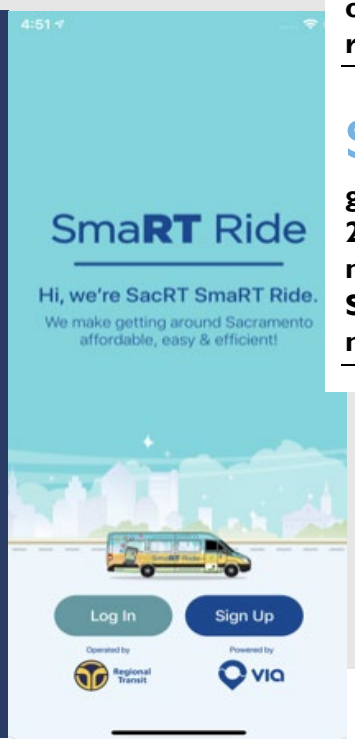
of CALeVIP charger incentives launched by the California Energy Commission and SMUD in 2019 to fund at least 400 L2 chargers and 70 DCFC units in Sacramento County

2. Heavy-Duty and New ZEV Applications

While light-duty vehicles accounted for 59% of the U.S. transportation sector GHG emission in 2018, medium- and heavy-duty vehicles accounted for nearly a quarter of this sector's greenhouse gas emissions.

Much of the City's focus to date has been on the transition of the thousands of light-duty vehicles in the City to zero-emission models, yet heavy- and medium-duty vehicles – such as semi-trucks and buses – will continue to be important for achieving climate and air quality goals. The zero-emission technology for this sector is emerging and is not yet as fully developed as the technology for light-duty vehicle deployment. Nonetheless, the City has collaborated with key stakeholders to support expansions in creative ZEV transit services and heavy-duty charging infrastructure. More of these ongoing efforts are highlighted in Section 3, 5, and 7.

In 2018, Sacramento Regional Transit (SacRT) first piloted SmaRT Ride in Sacramento for the Franklin/South Sacramento community. This is the first on-demand micro-transit service in Sacramento. As of February 2020, this zone serves over 230 passengers per day, providing mobility within the community and first-mile/last-mile connections to major destinations and transit routes. This unique micro-transit service was made possible through inter-agency collaboration and partnerships, including SacRT, Franklin Boulevard Neighborhood Development Corporation, Electrify America, and the City of Sacramento. Through Electrify America's $44 million investment in Sacramento, SacRT obtained three all-electric shuttles to replace the compressed natural gas shuttles currently in operation for the zone. Electrify America fully subsidized the costs of the electric shuttles and the chargers to support them. The electric shuttles went into service in June 2020, with an expanded zone that now goes into Oak Park. This program is innovative in its service model – providing point-to-point transportation free-of-charge for groups of five or more. SacRT launched additional on-demand services in January 2020 for North Sacramento and Downtown-Midtown-East Sacramento. While these new services are not yet electrified, SacRT will transition the new services as feasible.



3 electric shuttles

for SacRT's Franklin-South Sacramento SmaRT Ride on-demand shuttle

12 electric buses

linking Davis and Sacramento through SacRT & Yolo County Transit District's "Causeway Connection"

3 hydrogen stations

operating in the greater Sacramento region

$76 million

grant application submitted in early 2020 for regional bus and electrified mobility hub at Sacramento Valley Station, including 10 bays wired for 10-minute bus top-off charging

3. Electrify America's Green City Initiative: Sac-to-Zero

The Volkswagen subsidiary Electrify America designated Sacramento as the first Green City in its ZEV Investment Plan in 2017 and invested $44 million in Sacramento by the close of 2019. The "Sac-to-Zero" campaign was established to help generate broad public awareness for the key elements of Electrify America's investment strategy: ZEV car share programs, electric shuttle and bus services, and electric charging infrastructure across the Sacramento region. These investments were intended to catalyze a transformational shift in mobility to zero-emission technologies by installing charging infrastructure, conducting outreach and education, and implementing programs designed to increase access to and use of ZEVs.

The City and Electrify America successfully deployed this investment through a strong, collaborative partnership. Not only did the City guide program development, the City also created an entirely new permitting program to allow and incentivize a rapid launch of free-floating car share in the right-of-way. City engagement helped to maximize benefit, with a focus on service to disadvantaged and low-income communities.

The effort has led to a monumental shift in visibility and EV access. The community now offers the largest free-floating all-electric car share fleet in the United States. The effort included broad-based community outreach and marketing. The City will continue to support Sac-to-Zero programs to spur adoption and distribute EV benefits communitywide.



$44 million
invested in Sacramento from 2017 – 2019

2 ZEV transit projects
through partnership with local transit operators for the "Causeway Connection" & "SmaRT Ride"

7 fast charging hubs
in the City offering 3 to 8 charging dispensers per site, up to 150-kW charging

260 free-floating EVs
for public use from GIG Car Share vehicles in an 18 sq. mile "HomeZone" with more than 1 million miles driven as of February 2020

90 EVs at 45+ sites
round-trip, all-electric car share operated by Envoy at multi-family properties, with over 70% in low-income or disadvantaged communities

≥15,000 engaged
at community events, farmers markets, sports events, and launch events 2018-2019


UC DAVIS MEDICAL CENTER
Causeway Connection
Getting between Davis and Sacramento has never been so electric.
UCDAVIS
electrify america
UCDAVIS HEALTH
SAC TO ZERO


ENVOY


SACRAMENTO REPUBLIC FC
SAC TO ZERO


Get in.
Go!
SACTO ZERO

4. City Facility Charging Infrastructure

Providing access to public charging ensures that EVs are an option for all drivers, especially to ease range anxiety or address barriers to plug in for those without access to a charger at home (such as renters, people living in apartments, or those who do not have access to a garage). As of June 2020, the City owns and operates 168 charging connectors at City-owned facilities; 117 are available for public or employee charging.

The City is committed to complementing the overall regional charging landscape by providing public chargers at City facilities. In 2020, the City initiated upgrades to City-owned charging infrastructure and nearly doubled the amount of EV connectors available at City-owned and operated parking garages. Despite limited funding and available staff time, the City has demonstrated its commitment to EVs by using available rebates to the make the project feasible.





40 fleet chargers

installed at City facilities 2018-2019

$400,000+

funds reserved to date in rebates for upgrades to City-owned EV chargers in 2020

100+ chargers

new and replaced at City facilities in Spring 2020

All

City-owned and operated parking garages have public chargers available to customers

Plans are underway for installing the next phases of City-owned chargers to ensure that EV chargers are accessible to neighborhoods throughout the City, with prioritization of improving charging access for multifamily residents and low-income communities in particular.

5. Fleets

Many businesses, as well as government organizations, including the City of Sacramento, own and operate their own fleet of vehicles and equipment for services. The 2017 EV Strategy reiterates the City's long-standing commitment to lead by example with adoption of zero-emission and alternative fuel technologies.

The City's Fleet Management division of the Department of Public Works has consistently gained international recognition for their green fleet efforts. Fleet Management has regularly ranked among the 100 Best Fleets across North America for five consecutive years and was most recently recognized as the Government Green Fleet Award winner for 2019, and runner-up for 2018 due to their exemplary policies, fleet composition, emissions, and education of key stakeholders. This was accomplished in large part through the adoption of an updated Fleet Sustainability Policy in 2017, consistent with EV Strategy recommendations. The policy includes a "ZEV First" commitment to require the procurement of ZEV technologies when Fleet Management identifies feasible options based on vehicle service requirements. Deviation from the standard is only granted by exception.



The City continues to support and promote ZEV incentives and fleet transition through its partnerships and involvement with Electrify America, SMAQMD, SMUD, SacRT, and the Sacramento Clean Cities Coalition. This work includes the participation in and tracking of new state rulemaking and policies that affect fleet adoption.

Awarded #1

government green fleet in the nation in 2019

75%

goal for percentage of the City's annual light-duty vehicle replacements to be ZEV, as adopted by City Council in December 2017

12%

of current City light-duty vehicle fleet is zero-emission consisting of 82 EVs (and growing)

18%

reduction in the total number of active vehicles needed in the City fleet since 2010

3.7%

Reduction in City fuel consumption from 2017 – 2018

75%

operations and maintenance cost reduction for the City's EV fleet when compared to the City's gasoline sedans

6. Economic Development and Innovation

New models of zero-emission vehicles are entering the market with increasing frequency, longer range, and greater affordability. A key goal of the EV Strategy was to leverage early investments to establish Sacramento as a test bed for innovative, advanced clean technology and mobility industries. As the capital of California, Sacramento further aims to serve as the economic center for these advanced clean transportation industries.

In 2019, the City hired a lead consultant to advance the proposed California Mobility Center. The purpose of this collaborative, multi-partner initiative is to foster innovation in clean transportation including EV technology research and development. The center would also help established automakers and mobility startups create, prototype, and scale new technology and hardware in cost-efficient ways. Work is underway to make this Center a reality, with an initial $5 million investment pledged from SMUD.

Through the EV Blueprint grant-funded effort in 2019, City staff worked to evaluate workforce development opportunities through research and stakeholder interviews with local organizations, car dealers, and service center operators. Opportunities to advance a ZEV-ready workforce include integrating ZEV servicing into community college and adult education, computer and technology classes, and expanding the City's Community Workforce Training Agreement to include apprenticeships for mobility-related projects. The City is actively engaging to advance these opportunities with partners such as SMUD and SMAQMD, and local workforce partners.



>$20,000

City investment in a community grant and sponsorship of the Clean Start Showcase through the Rapid Acceleration, Innovation and Leadership in Sacramento (RAILS) program

$99,500

City-issued Business Relocation Assistance Loan to Highlands Power, a manufacturer of high-performance electric motors, for moving to Sacramento

1 City Fleet pilot

for battery swap-out technology demonstration with EV start-up company

1 electric autonomous shuttle pilot

launched at Sacramento State, the Olli shuttle

2 dealer training programs

for EV sales implemented locally

7. Programs, Partnerships, and Engagement

The City, along with partners within the Sacramento PEV Collaborative and beyond, have collectively raised awareness, access, and deployment of ZEVs throughout Sacramento. These concerted efforts have led to the successful implementation of multiple ZEV programs and engagement activities. Partnership, intentional collaboration, and meaningful engagement will continue to be essential for meeting EV goals, reducing greenhouse gas emissions, improving air quality, and increasing access to clean mobility options for all.

In addition to the Sac-to-Zero partnership discussed in section 3 of the Accomplishment Highlights in this report, the City has also supported SMAQMD, SMUD, the Sac EV Association and others in planning and implementing various projects and programs. Together, there have been hundreds of community engagement events and connections since 2017. Partnerships and opportunities established through the Sacramento PEV Collaborative led to the City supporting Green Tech in developing the Del Paso Mobility Hub by providing City-owned land as the mobility hub site. This Mobility hub will be located in a low-income community in North Sacramento, providing service, education, and engagement to expand ZEV awareness and access. The mobility hub will include EV charging infrastructure and serve as an EV car share site, among other services.



In the top 3 cities

in California for EV promotion actions according to the International Council on Clean Transportation

140+

community events or ride-and-drives hosted by the Sac EV Association, SMUD, or the City 2018 – 2019

$400,000+

awarded by SMUD to local businesses & agencies for 244 Level 2 EV chargers, 2 EV fleet vehicles, and 23 electric forklifts from 2018 – 2019

2,200+

individual riders/drivers participated in SMUD EV ride & drive events in 2019

50% discount

for monthly parking garage customers of City-owned parking garages

$2 million+

of incentives and investments distributed by the Sac Metro AQMD in the City for EV infrastructure, EV car share, and electric school buses 2018 – 2019

8. ZEV Access

The City of Sacramento will not achieve its EV Strategy or community wide GHG emissions goals without the support and involvement of all community members. It is the City's responsibility to ensure that all communities receive equitable access to the resources and services they need in order to utilize ZEV technology, reduce their GHG emissions, and become resilient in the face of climate change. As such, the EV Strategy included actions that would increase access to ZEV mobility options for disadvantaged and low-income communities in Sacramento.

Through partnerships with SMAQMD and Electrify America, the City was able to support, promote, and implement initiatives that increase access to ZEV transportation options and awareness for disadvantaged and low-income communities in Sacramento. Throughout 2019, the City promoted partners' projects and incentives while conducting ZEV outreach. Below first sentence needs editing

With creation of a new regulatory and permitting in 2018, the City established the Car Share Framework Terms and Conditions with special parking privileges in the right-of-way. This contract requires that at least 20% of the total area a car share program services is in a census tract designated as low income or disadvantaged to ensure that all communities benefit from and can utilize this clean transport option. Furthermore, the Clean Cars 4 All program is set to launch in 2020 and will increase the number of ZEVs on the road for low-income families. The program will provide vouchers to income-eligible households to trade in their internal combustion engine vehicle and buy a new or nearly new ZEV.



30+

stakeholder interviews & community events in 2019 as a part of the City's "EV Blueprint" planning process

≥20%

of all City-permitted car share services must be in low income or disadvantaged areas if receiving parking permits for the right-of-way

7 sites & 14 cars

Operational & located at affordable housing communities through SMAQMD's Our Community CarShare program; 2020 expansions coming soon

2 dedicated chargers

operated by the City at Sacramento Valley Station to provide free charging for the Our Community Car Share program

1.5 million+

electric car share miles driven collectively through Sacramento programs as of March 2020

350+ car share EVs

through Our Community CarShare and Sac-to-Zero programs (Envoy and GIG Car Share)

Next Steps

Overview

Building on these early key accomplishments, the City will continue to strive towards attainment of EV Strategy goals. Current efforts underway in 2020 will further guide the City's strategies related to vehicle electrification:

- The Mayors' Commission on Climate Change has recommended actions to achieve 70% of new vehicle registrations to be ZEV by 2030 and for electrification of all vehicles by 2045 as part the City's 2045 carbon neutrality goal. At the time of report preparation, the Commission's draft reports were available online (https://www.lgc.org/climatecommission/).
- The City's Climate Action Plan update will include quantification of strategies based on existing efforts and goals, along with new opportunities and information, since development of the EV Strategy in late 2017.

In late 2020 and 2021, City staff will re-evaluate the EV Strategy based on the outcomes of these efforts. Staff anticipate opportunity to revisit the EV Strategy goals to better reflect direction for greater shifts in vehicle ownership trends, VMT reductions, and transit and shared mobility programs. The transportation field is evolving rapidly, necessitating an iterative and adaptive approach. The City is spurring vehicle electrification as part of an overall strategy for more efficient, shared, and active mobility. This approach defines all the City's work in the EV space.

City Council's commitment to carbon neutrality by 2045 further requires ongoing efforts to shift all public and private vehicle fleets to cleaner zero-emission technologies. Attainment of these goals will require new resources, programs, and regulations at all levels– including action by the City, State, auto manufacturers, employers, developers, and more. Partnerships and collaboration characterize the City's EV strategies. Most often, the City plays a supportive, regulatory, or enabling role. In very few instances can the City act independently to achieve targets in the EV Strategy. Even when implementing projects at City facilities, staff are leveraging available incentives from the State, SMUD, and the Air Quality Management District to make projects feasible. Currently, the City's efforts are largely supported by existing staff resources, state and regional rebates and incentives, and competitive grant funds. Sustained progress will require new resources such as grants, incentives, dedicated personnel, or local funds to ensure the City can continue to catalyze broader community-wide progress.

Upcoming Efforts

Despite significant progress, several key actions from the EV Strategy are yet to be initiated or are currently underway but not yet complete. The following table highlights implementation priorities for 2020. This includes both actions led by the City, and actions implemented by other entities and supported by the City. These efforts are primarily implemented through partnerships and collaboration with both the public and private sectors. A full status list for all EV Strategy actions is available in Appendix C. An overarching priority for EV implementation in 2020 and beyond is equity-based, community-centered program design to bring the benefits of ZEV technologies and industries to all of Sacramento's communities of opportunity.

At the time of report release, the City of Sacramento is in a position like other agencies, working to adapt to the economic and social constraints of the COVID-19 pandemic and prioritize recovery efforts accordingly. Although the immediate pressing focus is to protect public health, safety, and well-being, the City and partners will continue to evaluate new ways for adapting and thriving throughout the pandemic response. The City's recovery is an important opportunity for recovery investment to shift the community towards improved cleaner, zero-emission mobility access that better supports livelihoods, businesses, and overall community resilience. Many of the City's EV efforts, as originally envisioned, may shift or evolve due to the COVID-19 response. However, the City will continue to seek to be strategic and invest in high-priority projects that achieve multiple objectives, including economic, social, and environmental benefits, with a focus on both climate and equity. More information on the City's ongoing EV efforts is available online at www.cityofsacramento.org/ev.

Table 3: Selection of 2020 Actions & Priorities

Topic	2020 Priorities & Efforts
1. Community Charging and Infrastructure	1.1. Continue stakeholder engagement and amend City Codes to advance EV readiness in new construction and further encourage installations in existing development 1.2. Launch phase 2 of curbside fast charging (anticipated construction completion in Fall 2020) 1.3. Adopt EV parking code to allow enforcement of on-street parking spaces for active EV charging only 1.4. Support community wide EVSE installations and promote available incentives such as the CALeVIP program
2. Heavy-Duty and New ZEV Applications	2.1. Continue to identify opportunity for the co-location of multi-use charging hubs and work collaboratively to secure funding 2.2. Support the launch of on-demand electric microtransit in South Sacramento/Franklin in Spring 2020
3. Electrify America Green City Initiative ("Sac-to-Zero")	3.1. Support the launch of electrified transit services in Spring 2020 including the Causeway Connection EV bus service and SacRT's SmaRT Ride Franklin-South Sacramento EV shuttle service 3.2. Continue to operate the City's program to allow and incentivize EV car share in the right-of-way 3.3. Support ongoing utilization of services and Sac-to-Zero community engagement
4. City Facility Charging Infrastructure	4.1. Complete EVSE replacements at City parking garages and key City facilities in Spring 2020 using CALeVIP and additional rebates 4.2. Community centers and libraries: design, secure funding, and construct EV chargers for public use at City-owned community centers and libraries, with a focus of communities of opportunity and supportive incentives (target completion in 2021) 4.3. Evaluate updates to the City's EV Parking Program to phase-in new incentive structure, based on community feedback from stakeholder meetings and community workshops that occurred in 2019 (program revisions will be delayed due to the COVID-19 pandemic) 4.4. Evaluate charger utilization in City garages to develop proposed charging fees and new parking time limits, as appropriate, following at least six months of utilization data from charger upgrades currently underway (installation completed in Spring 2020)

Topic	2020 Priorities & Efforts
5. Fleets	5.1. Expand City fleet chargers to support the "ZEV First" commitment and 75% of annual light-duty replacement target 5.2. Establish new protocols for allocation of City fleet charging expenses, using newly upgraded networked chargers 5.3. Support partner efforts to create a pledge for private fleets
6. Economic Development and Innovation	6.1. Identify concrete next-steps and prioritize project opportunities for local ZEV workforce programs 6.2. Continue to support the launch of the California Mobility Center
7. Programs, Partnerships, and Engagement	7.1. Deploy EV signage at City facilities to increase awareness of EV charging options 7.2. Amend City Code to better incentivize ZEVs and zero-emission car share in new development and remodels 7.3. Continue to collaborate with key partners to accelerate community awareness and promote ZEV technologies and programs 7.4. Continue to operate EV chargers for Our Community CarShare, and support program expansions in 2020
8. ZEV Access	8.1. Apply for Phase 2 grant funding from the California Energy Commission EV Blueprint program, or other state or regional programs, for community-based equity analysis and outreach for ZEV mobility needs and opportunities with a focus on environmental justice, disadvantaged, and low-income communities 8.2. Enter into a memorandum of understanding with key partner agencies to accelerate collaborative EV initiatives and develop a joint project list for implementation 8.3. Support launch of Clean Cars 4 All with information on public charging options 8.4. Advance efforts to fund and develop community-serving ZEV demonstrations at City-owned properties in Sacramento's communities of opportunity

Appendix A: EV Quick Facts

Collaborative ZEV Initiatives

ZEV Initiative	Partner	Description	Metrics
Our Community CarShare	SMAQMD*	Nation's first all-electric carshare program at affordable housing communities.	7 sites 14 EVs 500+ participants
Gig Car Share	Electrify America	Largest free-floating ZEV car share program in the US	260 Chevy Blots >1.16 million electric miles driven since March 2019 launch >6,700 members in Sacramento
Envoy Car Share	Electrify America	Round Trip ZEV car shares at multifamily apartment complexes, with 73% serving low income or disadvantaged residents	45 sites 90+ Volkswagen eGolfs (+9 additional Sacramento sites and 17 eGolfs supported by the California Energy Commission)
Fast Charging Stations	Electrify America, EVgo, Tesla	Sacramento regional fast charging sites	10+ stations
Causeway Connection	Electrify America	Launching 2020: ZEV bus service from UC Davis to Sacramento	12 ZEV shuttle buses owned by SacRT and Yolo County Transit District (YCTD)
SmaRT Ride	Electrify America	On-demand microtransit shuttle in Franklin-South Sacramento	7 zones

** Collaborative program with partners including the City of Sacramento, SMUD, Zipcar, Breathe California, Mutual Housing, the Sacramento Housing and Redevelopment Agency, and more*

ZEV / EVSE Statistics

Registered ZEVs: City & County Level	
Total ZEVs Registered in the City of Sacramento (Oct. 2018) *	4,849
Total ZEVs Registered in the County of Sacramento (Jan. 2019)	11,267
Total Clean Vehicle Rebate Project (CVRP) Rebates in Region (Mar. 2010 – Nov. 2019)	7,658

Public EVSE Infrastructure in City Limits**	
L1 Connectors	89
L2 Connectors	464
DCFC Connectors	92
TESLA Connectors	37
TOTAL Connectors	**682**

** October 2018 DMV data, which was the most recent data available at time of report preparation in February 2020. Table likely undercounts progress since EV Strategy adoption and does not capture known EV procurements in 2019 for the City Fleet or over 300 EV procurements for car share programs in Sacramento.*
*** As of 1/31/2020, per the Alternative Fuels Data Center (AFDC)*

City-owned Chargers*	
City-owned Public or Employee Chargers	72
City Fleet Chargers	48
Total City-owned Chargers	120

**Note: In spring 2020, more than 40 new connectors will be available after EVSE replacements*

Fleet Sustainability Policy (2017)

- "Zero-Emission Vehicle First" policy: annual light-duty purchases to be 50% ZEV by 2018 and 75% ZEV by 2020
- **Current City Fleet: 50% alternative fuel vehicles, including 82 zero-emission vehicles that represent 12% of the light-duty vehicle fleet**
- The City's EV operating and maintenance costs are 25% the costs of gasoline equivalent sedans in the City's fleet

2010 – 2018	2017 – 2018
18% reduction in total active vehicles in Fleet	3.69% reduction in total fuel consumption
	6.6% reduction in diesel consumption
	1.97% GHG emissions reduction

Curbside Charging Pilots

- First Curbside Charging Pilot launched in May 2019 at Southside Park
- The second Curbside Charging Pilot with EVgo is anticipated to launch at two additional Downtown sites by Fall 2020.

Key Southside Park Charging Plaza Metrics: From Launch (May 2019) – 1/28/2020	
Location	Southside Park
DC fast chargers in right-of-way	6
Number of Charging Sessions	6,833
Average Sessions Per Day (entire site)	25+
Average Sessions Per Charger Per Day	4+
Unique Vehicles	757
EV Miles Powered	474,345
GHG Avoided (MT)	107.68
Gas Avoided (Gal)	19,520

Electric Vehicle Parking Program (EVPP)

- 100% electric vehicles receive 50% discount on monthly parking
- 110 members as of December 2019

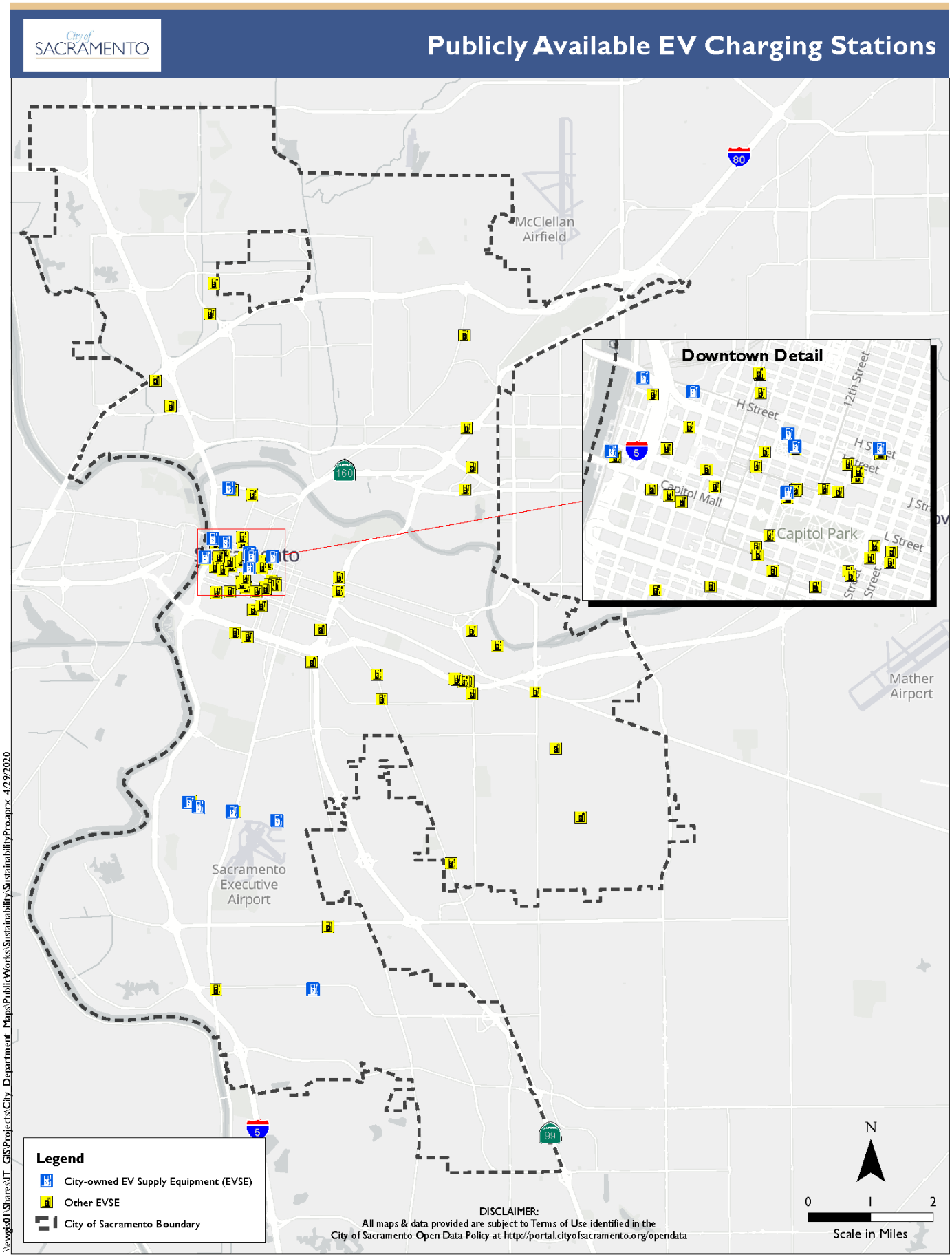
AB 1236 Compliance

- City of Sacramento is one of 40 cities and counties that developed and implemented a streamlined EVCS permitting process in accordance with AB 1236.

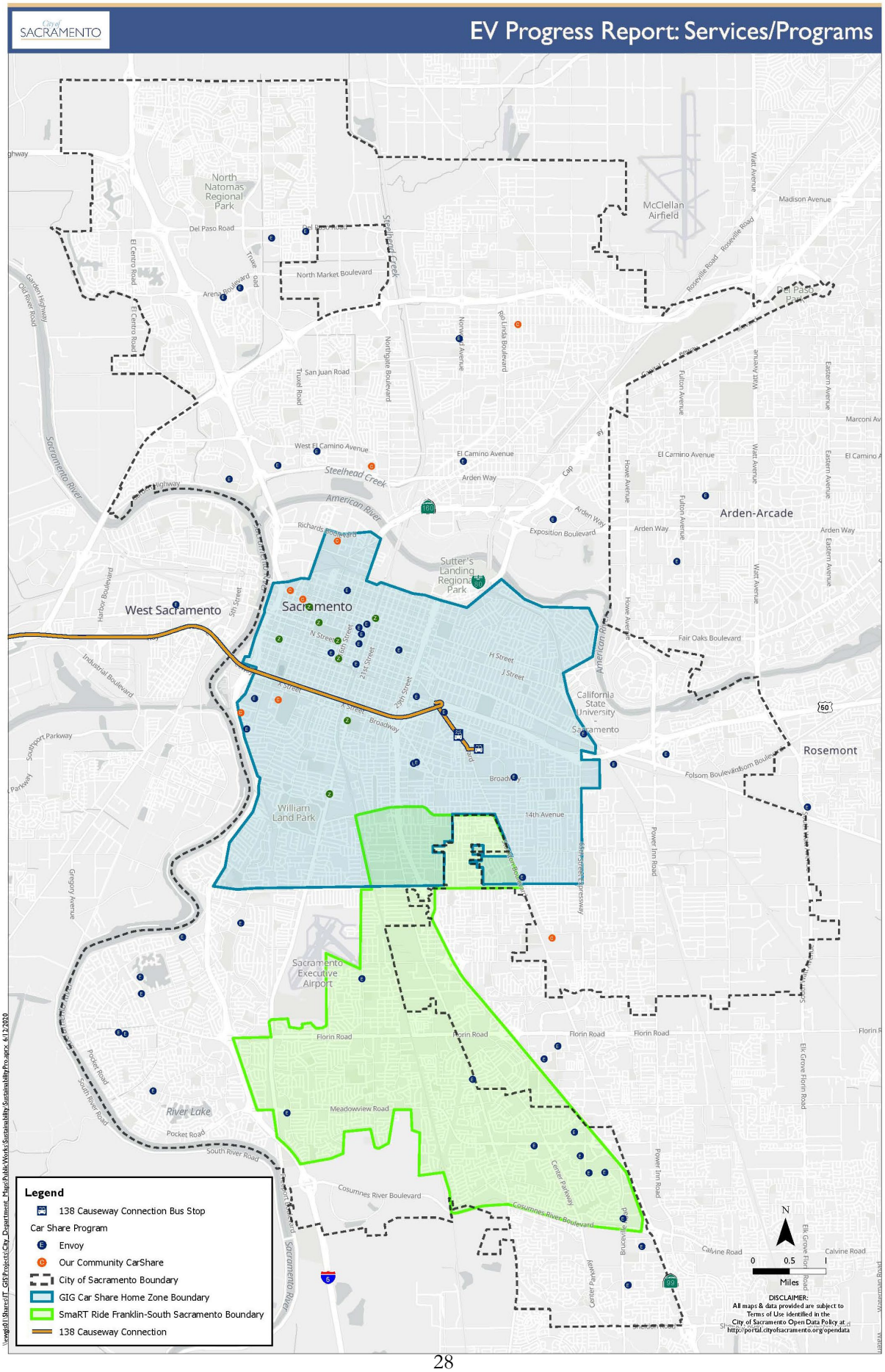
Note: all data presented here is representative of current available data at time of report preparation, and subject to change

Appendix B: Maps

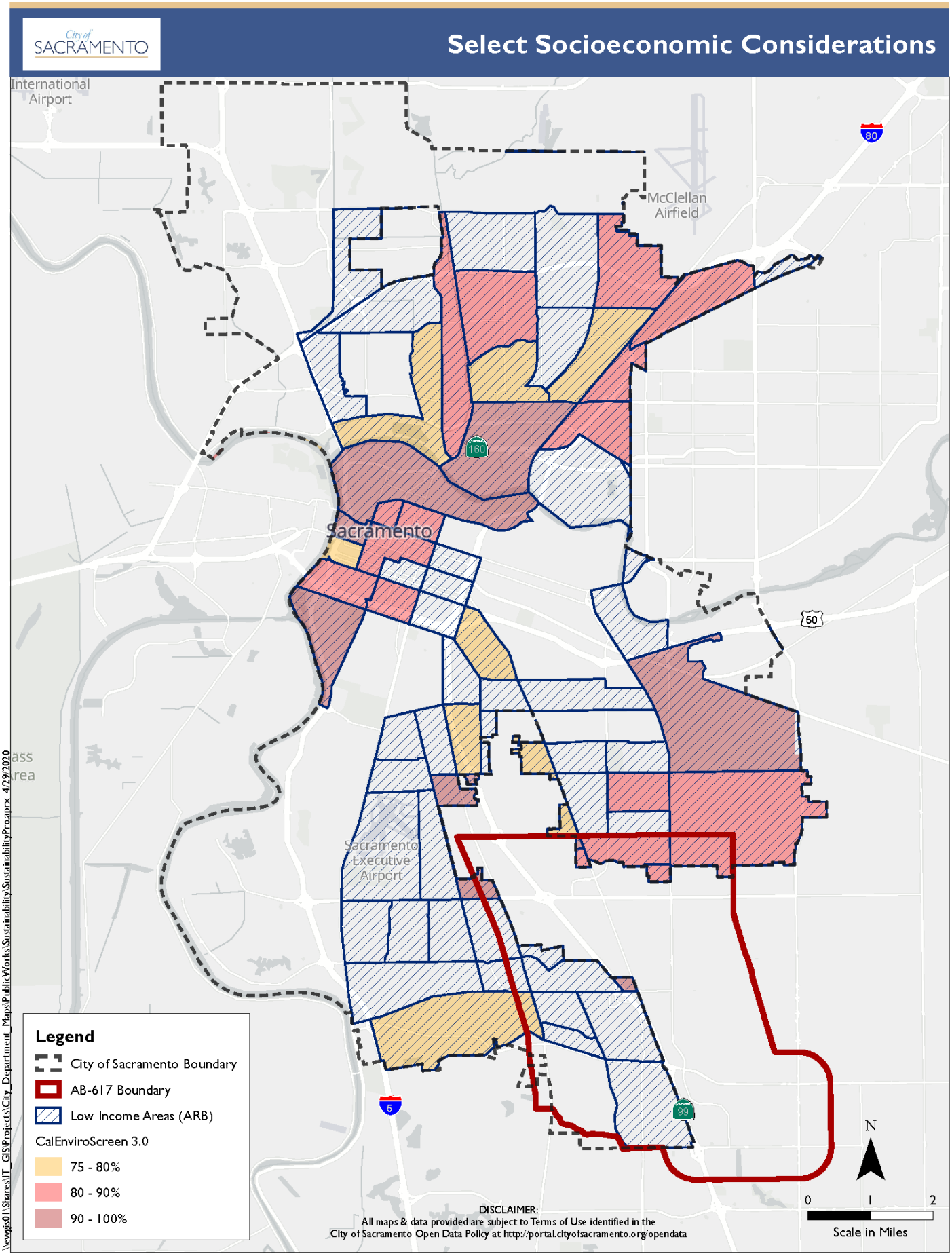
Publicly Available EV Charging Stations



EV Services/Programs



Select Socioeconomic Considerations



Appendix C: Implementation Action Status

The following pages present the City's implementation actions identified in the 2017 EV Strategy. These included both new actions to be initiated, or actions that were already underway. While the City serves as a lead for many actions, implementation continues to be a highly collaborative effort. Successful attainment of the Strategy's goals will require ongoing partnership with other agencies, community-based organizations, non-profits, businesses, and industry. The EV Strategy established a path to guide the City's ongoing efforts with these partners to achieve the City's ZEV goals.

Some of the actions are completed, some are ongoing, and some are on hold or no longer being pursued due to the dynamic nature of ZEV work and new/emerging insights. The City's status represents status from the City's perspective; this list is not necessarily reflective of the status for all other agencies or partners for any particular action. In some cases, the City may not be pursuing a specific implementation action at this time, but other partners or entities may be doing so. As ZEV work evolves, some work is better suited for other organizations to manage, or new laws may supersede original goals. Any Implementation Action with an asterisk (*) means the action was already initiated or underway at the time the EV Strategy was adopted.

Lead Departments and Entities

Implementation actions on the following pages identify actions and responsible entities as laid out in the EV Strategy. This includes both actions led by the City, and actions implemented by other entities but supported by the City. While many of the actions identified in this Strategy are City-led, numerous actions will involve the City in a secondary or supportive role. **Table A1** presents abbreviations for lead and supporting entities, while **Table 2** presents implementation actions. Within **Table A2**, the anticipated lead entity is identified in bold text. The primary City department or division is listed first, followed by other entities or organizations in the order of anticipated involvement.

Table A1: Abbreviations for Implementation Actions

City department and division abbreviations	CCS – Convention and Cultural Services CDD-Planning – Community Development Department, Planning Division CDD-Building – Community Development Department, Building Division CMO – City Manager's Office	DPW – Department of Public Works DPW-Parking – Department of Public Works, Parking Division DPW-SM – Department of Public Works, Sustainability Manager DPW-Fleet – Department of Public Works, Fleet Division OIED –Office of Innovation and Economic Development
Other agency and partner abbreviations	ATOS - Autonomous Open Standards Lab CSUS – California State University, Sacramento ITS – Institute of Transportation Studies, UC Davis RT – Regional Transit Sac County – Sacramento County	Sac EV – Sacramento EV Association Sac PEV Collaborative – Sacramento Area PEV Collaborative SCCC – Sacramento Clean Cities Coalition SMUD – Sacramento Municipal Utility District SMAQMD – Sacramento Metropolitan Air Quality Management District VV – Valley Vision

Status for 2017 EV Strategy Implementation Actions

Table A2: Status for 2017 EV Strategy Implementation Actions

No.	Action	Lead	City's Status
1 Community Charging and Infrastructure			
1.1 Encourage installation of chargers in existing private development.			
1.1.1	Support the co-location of EV charging infrastructure at existing community amenities, and encourage these as additions to existing parking areas.	**DPW**, CDD-Planning, DPW-Fleet, SMUD	**Ongoing**
1.1.2	Streamline the planning review process for installation of EV chargers in existing parking lots with mechanisms such as the Administrative Parking Permit process, which allows applicants to avoid the site and plan review entitlement process for installation of EV charging in existing parking lots.	**CDD-Planning**	**Complete**
1.1.3	Maintain brochures, handouts, and other resources at City permitting counters and on the City website for installation of home and workplace EV charging.	**CDD-Building**, DPW	**Ongoing**
1.1.4	Continue to provide 24-hour permit review for single-family residential EVSE applications and five-day permit review for commercial and multi-family EVSE applications, including DCFC, and update City forms and review cycles to formalize this.	**CDD-Building**	**Complete**
1.1.5	Allow for paper or electronic plan check for EVSE applications.	**CDD-Building**	**Ongoing**
1.1.6	When approved EVSE construction projects submit a request for inspections, continue to provide inspections within a 24-hour period.	**CDD-Building**	**Ongoing**
1.1.7	Explore incentives and develop an educational program in coordination with Sacramento County and other jurisdictions to encourage installation of EV charging citywide in existing development through the plan and permit review process.	**DPW-SM**, CDD-Planning, Sac PEV Collaborative, SMUD	**Near-Term to Do**
1.2 Facilitate installation of EV charging in new private development.			
1.2.1	Evaluate options to advance EV charging in new development projects citywide, such as mandatory standards, incentives, and educational programs; and provide a recommendation to City Council.	**DPW-SM**, CDD-Planning, SMUD	**In Progress**
1.2.2	Develop materials on EVSE resources to share in pre-application meetings for planning entitlements and parking plans, to encourage the installation of EVs in new development.	**DPW-SM**, CDD-Planning, Sac PEV Collaborative, SMUD	**In Progress**
1.3 Foster new types of ZEV charging uses.			
1.3.1	Identify opportunities to encourage the conversion of conventional fueling stations to include ZEV charging hubs, and explore methods to encourage installation of EV chargers at existing gas stations.	**DPW-SM**, CDD-Planning, Sac PEV Collaborative, SMUD	**TBD**

1.3.2	Encourage the integration of ZEV infrastructure and ZEV car sharing programs at multi-modal mobility hubs and transit-oriented development centers through the development review process and engagement with property owners and developers.	**DPW-SM**, RT, CDD-Planning, SMUD	**Ongoing**
1.3.3	Amend the planning and development code to define a separate land use for EV charging stations when EVSE serves as the primary land use, to support greater distribution and potential streamlining of EV charging hubs beyond existing code requirements for gas stations.	**CDD-Planning**	**Not Pursuing or No Longer Relevant**
1.3.4	Support and evaluate implementation of Sacramento's first high-speed charging plaza at Southside Park, developed in partnership with EVgo.	**DPW**, Sac PEV Collaborative, SMUD	**Complete**
1.3.5	Continue to use the City's Demonstration Partnerships Policy to encourage public-private partnership for the expansion of public charging and ZEV infrastructure, including high-power charging technologies.	**DPW**, SMUD	**Complete**
1.3.6	Identify priority areas for the co-location of ZEV infrastructure that supports both light-duty and heavy-duty vehicles.	**CDD**, **DPW**, SMAQMD, SMUD	**In Progress**
1.4 Prioritize public charging for those without other charging options, and encourage charging turnover and at-home charging by users when feasible.			
1.4.1	Amend City Code to allow for designation and enforcement of on-street parking spots for EVs, including assignment of a curb color or striping policy and appropriate signage.	**DPW-Parking**	**In Progress – Schedule TBC**
1.4.2	Provide permit guidance to allow private installations of charging infrastructure in the right-of-way, with priority for applications that serve multi-family or workplace charging, or support EV car share or similar shared mobility programs. Any charging infrastructure in the right-of-way shall use non-proprietary connectors, and DCFC shall support both Combined Charging System (CCS) and CHAdeMO charging standards.	**DPW**, SMUD	**Complete**
1.4.3	Site charging infrastructure in the right-of-way and at City facilities to avoid conflicts with non-vehicular modes. The installation of new infrastructure shall be prohibited where charging infrastructure would pose a direct conflict with existing or planned bicycle, pedestrian, or public transit infrastructure improvements.	**DPW**	**Complete**
1.4.4	Encourage turnover for any new public charging infrastructure at City facilities or in the right-of-way by phasing in requirements that charging be provided as a paid service, except for installations designed to primarily serve low-income or disadvantaged communities.	**DPW**	**In Progress – Schedule TBC**
1.4.5	Evaluate the feasibility of allowing alley encroachments for provision of dedicated EV charging spaces.	**DPW**	**Not Pursuing or No Longer Relevant**

2 Heavy-Duty and New ZEV Applications			
2.1 Promote ZEV technologies for medium- and heavy-duty vehicles.			
No.	**Action**	**Lead**	**City's Status**
2.1.1	Analyze truck routes and concentration of freight activity in Sacramento, and explore opportunities for ZEV freight applications in Sacramento that serve both regional and interstate operations.	**DPW**, SMAQMD, SMUD, Sac PEV Collaborative	**Delayed or Not Yet Started**
2.1.2	Support partner efforts to transition bus fleets to ZEV models.[3]	DPW, **SMAQMD**, Sac PEV Collaborative	**Ongoing**
2.1.3	Collaborate with RT and other fleet providers for the co-location of EV charging at central sites that can support multiple transit and medium- and heavy-duty fleets.	DPW, **RT**, Sac PEV Collaborative	**Ongoing**
2.1.4	Advance the visibility and awareness of medium- and heavy-duty vehicle technologies through strategies such as events, fleet recognition programs, and other partnership efforts.	DPW-SM, **Sac PEV Collaborative, SCC**, SMUD	**Delayed or Not Yet Started**
2.1.5	Partner with other agencies to identify and support grant opportunities for demonstration medium- and heavy-duty ZEV projects.	DPW-SM, **SMAQMD**, Sac PEV Collaborative, SMUD	**Not Pursuing or No Longer Relevant**
2.1.6	Encourage off-road ZEV applications at major public facilities, such as airports, corporation yards, and freight centers.[4]	DPW-SM, **SMAQMD**, Sac PEV Collaborative, SMUD	**Not Pursuing or No Longer Relevant**
2.2 Advance other types of ZEV technologies.			
2.2.1	Collaborate with partners for development of an electric aircraft program at Sacramento airports, starting with small personal aircraft, to install charging infrastructure and replace aircrafts with internal combustion engines with all-electric models.	**SMAQMD**, Sac County, CALSTART, DPW, McClellan Jet Services/McClellan Business Park, Executive Airport	**Ongoing**
2.2.2	Advocate for deployment of new ZEV services that provide first-mile/last-mile connections and support active transportation and transit ridership.	DPW, **RT**	**Complete / Ongoing**
2.2.3	Identify priority locations and opportunities to develop integrated multi-modal mobility hubs that include ZEV infrastructure.	**DPW**, CDD-Planning. RT. SACOG, **SMUD**	**Ongoing**

[3] See Action 5.2.2, which addresses RT and local school district bus fleets.

[4] Refer to Actions 5.2.9 and 5.2.10, which support County Airport System electrification efforts. Action 5.1.2 addresses ZEV replacements for the City fleet, including off-road equipment.

2.2.4	Participate in regional efforts for ZEV fuel infrastructure planning, including the siting of hydrogen infrastructure.	**SMAQMD**, Sac PEV Collaborative, DPW	**Ongoing**
2.2.5	Support third-party initiatives to develop hydrogen fueling infrastructure in Sacramento, including encouragement of grant applications and support for permit review.	**DPW,** CDD-Planning, CDD-Building, SMAQMD, Sac PEV Collaborative	**Not Pursuing or No Longer Relevant**
2.2.6	Encourage any private installations of charging infrastructure in the right-of-way to evaluate potential to support electric-assist bike charging for the regional bike share program.	**DPW,** SACOG	**In Progress**

3 Electrify America Green City Initiative

3.1 Support Electrify America Green City initiatives.

No.	Action	Lead	City's Status
3.1.1	Collaborate with Electrify America to support the development and implementation of Green City initiatives and California ZEV investments.	**DPW**, DPW- CDD-Building, CDD-Planning, OIED, CDD-Planning	**Complete**
3.1.2	Facilitate engagement of key partners, stakeholders, and the public for Green City program development and implementation.	**DPW**, County, SMAQMD, SMUD, SACOG, Sac EV	**Complete**
3.1.3	Use existing City processes to streamline planning and building applications for Green City implementation, including five-day building permit review for commercial EVSE applications. [5]	**CDD-Building**, CDD-Planning, DPW	**Complete**
3.1.4	Support Electrify America efforts to secure site access agreements with private and public property owners for EV charging installations.	**DPW**, CDD-Planning	**Complete**
3.1.5	Enable the testing of new car share models with Electrify America, expedite ordinance updates necessary to enable new car share models, and support program launch prior to updates to the citywide car share framework.	**DPW**, SMUD	**Complete**
3.1.6	Support deployment of highly visible ZEV installations, such as an all-electric boulevard serving as a concentrated DCFC EV charging destination.	**DPW**, CDD-Planning, SMUD	**Not Pursuing or No Longer Relevant**

[5] Refer to Action 1.1.4, similarly calling for five-day building permit review for all other providers.

3.1.7	Leverage City investment in public infrastructure and assets to support Green City initiatives to the extent feasible, such as the testing of intelligent transportation system controls in key project corridors.	**DPW**	**Not Pursuing or No Longer Relevant**
3.1.8	Connect Electrify America to opportunities for site access in new and existing development, including the hosting of open houses, and provision of program information in pre-application meetings with applicants.	**DPW**, CDD-Planning	**Complete**
3.2 Maximize local and regional benefits of Green City initiatives.			
3.2.1	Collaborate with Electrify America to advance investment benefits for Sacramento's diverse communities, with a focus on disadvantaged and low-income communities.	**DPW**, OIED	**Complete**
3.2.2	Encourage Electrify America's outreach efforts to include local community-based organizations, youth curriculum and programs, and ZEV-workforce training.	**DPW**, OIED	**Ongoing**
3.2.3	Leverage Green City programs to attract further investment and partnership opportunities to develop a local research and development center for zero-emission technologies, and establish Sacramento as a test bed for innovative ideas to advance the clean economy.	**OIED**, SMUD, CSUS, ITS, Sacramento ATOS, Greater Sacramento Economic Council	**Ongoing**
3.2.4	Work with partners to implement complementary ZEV business efforts, such as workforce development programs, local business support services, and expansion of a competitive, creative economy.	**OIED**	**Ongoing**
3.2.5	Explore how Electrify America's initiatives can support social services and other community programs, and encourage Electrify America to provide public education and information on the benefits of owning and driving an electric vehicle.	**DPW**, CMO, Sac PEV Collaborative, SCCC, Sac EV	**Complete**

4 City Facility Charging Infrastructure

4.1 Support public and employee charging at City facilities.

No.	Action	Lead	City's Status
4.1.1	Continue to provide and maintain charging for public use at City facilities with public parking, such as parking facilities, community centers, and facilities with public service counters.	**DPW**, SMUD	**Complete / Ongoing**
4.1.2	Pursue grant funding to upgrade charging infrastructure at City parking garages to allow for submetering of charging activity, improve remote management capabilities, and increase charging options.	**DPW**, SMUD, SACOG	**Complete / Ongoing**

4.1.3	Participate in California's Low Carbon Fuel Standard Program upon upgrades to City charging infrastructure, for the sale of credits and reinvestment of funds into City EV charging initiatives.	**DPW**	**Not Pursuing or No Longer Relevant**
4.1.4	Prioritize development of any public or workplace chargers at City facilities that meet at least one of the following criteria: – Location in a disadvantaged community – Multi-use/ mixed-use facilities, with public access	**DPW**, SMUD	**Ongoing**
4.2 Improve availability and utilization of chargers at City parking facilities.			
4.2.1	Require all new or renovated City-owned buildings to provide chargers at all mandatory EV-ready spots required by CALGreen, and require the provision of additional EV-ready spaces pursuant to CALGreen Tier 2 standards for electric vehicle charging.	**DPW**	**Complete**
4.2.2	Develop a phased approach to update the City's EV Parking Program to increase charging access, encourage other types of ZEVs, encourage at-home charging by patrons when feasible, and ensure the availability of chargers for broad use.	**DPW**	**In Progress – Schedule TBC**
4.2.3	Evaluate technology options to increase charging turnover and access at City garages, such as managed charging systems, technologies to allow for driver queuing, and fees for cars that charge beyond posted time limits.	**DPW**	**Ongoing**
4.2.4	Develop a workplace charging program to expand charging access for employees at City facilities and encourage those converting from internal combustion engines.	**DPW**	**In Progress – Schedule TBC**
4.2.5	Obtain real-time EV charging data for City parking applications with new technology applications and integrate into the City's Parking Mobile system, upon upgrades to City charging infrastructure.	**DPW**	**In Progress**
4.2.6	Identify suitable locations for cost-effective low-power charging solutions conducive to longer dwell times at City facilities, such as L1 charging.	**DPW**	**Ongoing**
4.2.7	Locate new charging installed at City parking facilities to serve multiple vehicles simultaneously and avoid conflicts with non-PEV parking.	**DPW**	**Ongoing**
4.2.8	Include installation of 240-volt electrical outlets or conduit for future charging stations when conducting renovations or new construction at City facilities within or adjacent to parking areas.	**DPW**	**TBD**
4.2.9	Encourage installation of electric ports for workplace L1 in new construction or renovations, and allow for Level 1 charging at City facilities by City fleet and employee vehicles.	**DPW**	**Ongoing**
4.2.10	Locate charger installations that serve the City fleet to allow for daytime public charging and nighttime fleet charging, when feasible.	**DPW**	**Ongoing**

5 Fleets			
5.1 Increase ZEVs in the City fleet.			
No.	**Action**	**Lead**	**City's Status**
5.1.1	Amend the City's Fleet Policy to require a minimum of 50% of annual light-duty vehicle purchases be ZEV by 2018, and 75% of annual light-duty purchases by 2020.	**DPW-Fleet**	**Complete**
5.1.2	Procure ZEV vehicles for any vehicle replacement when suitable ZEV options are available with equivalent operational capability; but allow for an exemption process for vehicle users based on criteria such as emergency response performance, charging challenges, and other operational issues.	**DPW-Fleet**	**Ongoing**
5.1.3	Increase the overall fleet target for alternative vehicle procurement from 30% to 50% across all vehicle classes, inclusive of electricity use.	**DPW-Fleet**	**Complete**
5.1.4	Test and evaluate new ZEV options as they become available for all vehicle categories, including heavy duty, and share metrics and performance outcomes with the public and partner agencies.	**DPW-Fleet**	**Ongoing**
5.1.5	Continue to establish a process to budget for EV infrastructure costs as part of annual EV replacements.	**DPW**	**Ongoing**
5.1.6	Continue participation in joint agency procurements for discounted EV models.	**DPW-Fleet**	**Ongoing**
5.1.7	Develop a system to monitor billing and electricity use for each ZEV in the City's fleet, to allow for tracking, allocating, and reporting of costs and benefits.	**DPW-Fleet**, DPW-SM	**In Progress**
5.1.8	Support establishment of public-private partnerships to enable City staff to use cost-effective private ZEV mobility options to augment City fleet and employee transportation needs, such as car share programs for motor pool functions.[6]	**DPW-Fleet**, DPW-SM	**Delayed or Not Yet Started**
5.2 Support electrification of public and private fleets.			
5.2.1	Participate in grant efforts with other agency partners to electrify public or private fleets.[7]	DPW	**Ongoing**
5.2.2	Encourage RT and local school districts to accelerate the transition of bus fleets to ZEV models.	DPW, RT, **SMAQMD**, Sac PEV Collaborative, SMUD	**Ongoing**
5.2.3	Identify opportunities for co-location of high-power charging infrastructure to serve RT and other fleet needs.	DPW, **SMAQMD**, RT, SMUD, Sac PEV Collaborative	**Ongoing**

[6] Refer to actions in category 2, Heavy-Duty and New ZEV Applications, for additional strategies on ZEV medium- and heavy-duty vehicle advancement.
[7] Refer to Action 2.1.4, which provides further support for medium- and heavy-duty technologies.

5.2.4	Collaborate with RT to encourage the development of EV charging and ZEV car share sites at RT park-and-ride lots and light rail stations.	DPW, **RT**, SMUD, Sac PEV Collaborative	**Ongoing**
5.2.5	Collaborate with SMAQMD and the Sacramento Clean Cities Coalition to promote ZEV incentives and rebates to members of chambers of commerce, business associations, and business improvement districts for acquisition of ZEV fleets, and explore creation of an ZEV-designation pledge for employers taking practical steps to increase use of ZEVs.	DPW, OIED, SMAQMD, SCCC, **Sac PEV Collaborative**, Sac EV, SMUD	**Ongoing**
5.2.6	Educate businesses about financing options for EV charger installations, such as the CalCAP Electric Vehicle Charging Station Program, or property assessed clean energy financing.	DPW, **Sac PEV Collaborative**, Sac EV, SMUD	**Ongoing**
5.2.7	Collaborate for advancement of a local program to transition medium- and heavy-duty delivery fleets to ZEV models.[8]	DPW, **SMAQMD**, Sac PEV Collaborative, Sac EV	**Ongoing**
5.2.8	Support the launch of new types of shared use shuttles and high-occupancy mobility services with ZEV models, such as on-demand electric shuttle programs.	**DPW, RT**, Sac PEV Collaborative	**In Progress**
5.2.9	Support the County Airport System in its efforts to expand electric shuttle bus fleet from terminals to parking lots, in support of shuttle electrification targets proposed by CARB by 2031.	Sac County Airports, SMAQMD, SMUD, City DPW	**TBD**
5.2.10	Support efforts by the County Airport System to increase use of renewable diesel by ground service equipment (GSE) and expand to electric GSE as technology for applications such as medium- and heavy-duty tractors, street sweepers, and gang mowers, become available.	Sac County Airports, SMAQMD, City DPW	**TBD**
5.2.11	Engage with car rental companies to provide ZEVs as part of the available car rental fleet, including County Airports.	Sac County, BERC, SMAQMD, City DPW	**Delayed or Not Yet Started**
5.2.12	Support the State of California, as the City's largest employer, in efforts to increase its ZEV fleet.	DPW, State of California	**Ongoing**

[8] Refer to Action 2.1.5, which addresses grant efforts for medium- and heavy-duty vehicle demonstration.

6 Economic Development and Innovation			
6.1 Support a vibrant ZEV transportation industry and establish Sacramento as an economic center for advanced transportation technologies.			
No.	**Action**	**Lead**	**City's Status**
6.1.1	Target a certain portion of the City's funds for local competitive economic development grants to advanced transportation technology enterprises.	**OIED**	**TBD**
6.1.2	Collaborate with local partners, dealers, and OEMs to analyze local barriers to ZEV adoption and advance ZEV sales.	OIED, DPW-SM, **Sac PEV Collaborative**, Sac EV, ITS, SMUD	**Ongoing**
6.1.3	Pursue partnerships with OEMs to advance ZEV deployment that provide for collaborative learning, increased ZEV service, workforce training and jobs creation, and community investment.	OIED, DPW-SM, **Sac PEV Collaborative,** VV	**TBD**
6.1.4	Partner with other agencies, OEMs, and ZEV mobility companies such as Electrify America to showcase ZEV technologies at public events, or for display at City-owned or other public facilities.	DPW-SM, OIED, **Sacramento Area PEV Collaborative**, Sac EV, SCC, VV	**Ongoing**
6.1.5	Secure sponsorship and funding to develop a showcase or research and development center for electrification and advanced transportation technologies.	**OIED,** ITS, SMUD, CSUS, UC Davis	**Delayed or Not Yet Started**
6.2 Expand the ZEV workforce.			
6.2.1	Encourage and support efforts to recruit ZEV manufacturers to the region.	**OIED,** VV, Sac PEV Collaborative, SMUD	**Ongoing**
6.2.2	Collaborate with local universities and colleges to strengthen career pathways in Sacramento for the ZEV industry.	**OIED**, DPW-SM, ITS, CSUS	**In Progress – Schedule TBC**
6.2.3	Explore developing a youth ZEV ambassadors initiative or educational program, with opportunity to use the Summer at City Hall internship program.	OIED, **DPW-SM,** Sac PEV Collaborative	**In Progress – Schedule TBC**
6.2.4	Promote and encourage efforts to expand local ZEV workforce training programs, such as supporting efforts of the American River College Alternative Fuels Certificate and Electronic Systems Technology Programs, and Green Tech youth workforce training programs.	OIED, DPW-SM**, Sac Area PEV Collaborative**, VV, SMUD	**In Progress – Schedule TBC**
6.2.5	Support partner efforts to develop a ZEV service center in Sacramento, to service new ZEV models and provide the necessary technical support for fleet purchasers and small manufacturers using new ZEV technologies.	OIED, DPW-SM, **CALSTART**, Sac PEV Collaborative	**Delayed or Not Yet Started**
6.2.6	Encourage local hire for private installation of EV chargers in the public right-of-way by providing such applications with incentives, such as priority for desired charging locations.	**DPW**	**Delayed or Not Yet Started**

6.3 Spur local ZEV innovation and enterprise.			
6.3.1	Encourage regional autonomous vehicle efforts to prioritize pilots for autonomous vehicles that are zero-emission and shared.	**OIED**, SMUD, ATOS	**Ongoing**
6.3.2	Consider future charging needs of autonomous, shared, and electric vehicles when evaluating investments in ZEV charging infrastructure.	OIED, **DPW-SM**, ITS, SMUD	**TBD**
6.3.3	Identify potential locations for fast charging depots and hubs for autonomous, shared, electric vehicles.	OIED, **ATOS**, DPW-SM, ITS, SMUD, Sac PEV Collaborative	**TBD**
6.3.4	Collaborate with SMUD, UC Davis, and Sacramento State University (CSUS) to investigate and pilot the viability of managed charging or vehicle-to-grid technologies to mitigate grid impacts and/or support the integration of more renewable electricity into the grid.	DPW-SM, **SMUD**, OIED, ITS, CSUS	**Delayed or Not Yet Started**
6.3.5.	Encourage the deployment of integrated solar photovoltaics and energy storage with ZEV infrastructure, and utilize the same infrastructure where opportunities for e-bike share exist.	**DPW,** SMUD, SMAQMD, SACOG	**Delayed or Not Yet Started**
6.3.6	Explore opportunities for grid-optimized charging to manage grid impacts and maximize economic benefits of ZEVs.	DPW, **SMUD**	**Delayed or Not Yet Started**
6.3.7	Support SMAQMD efforts to conduct regional ZEV infrastructure planning, and identify opportunities to establish infrastructure for hydrogen infrastructure, and other next-generation ZEV technologies.	DPW-SM, **SMAQMD,** Sac PEV Collaborative, SACOG, SMUD, SACOG	**Ongoing**
6.3.8	Allow for the testing of new ZEV car share models and on-demand shuttle services on a pilot basis.	DPW	**TBD**

7 Programs, Partnerships, and Engagement

7.1 Integrate ZEV requirements and incentives into local programs.			
No.	**Action**	**Lead**	**City's Status**
7.1.1	Include the provision of EV charging for car share as a transportation demand management strategy.	**DPW**	**Delayed or Not Yet Started**
7.1.2	Encourage a minimum target for local hire and employment of residents within Sacramento's disadvantaged communities in partnerships for the delivery of ZEV services.	**DPW**, OIED	**Delayed or Not Yet Started**

7.1.3	Provide parking incentives to ZEVs, such as business merchant permits for preferential ZEV parking.	**DPW-Parking**	**Delayed or Not Yet Started**
7.2 Collaborate with local agencies and partners to monitor and promote local ZEV deployment.			
7.2.1	Continue to participate in the Sacramento Area PEV Collaborative for joint planning and coordination of EV efforts with other agencies, non-profits, and community-based organizations.	**DPW**, **Sac PEV Collaborative**	**Ongoing**
7.2.2	Collaborate with ZEV companies and partners for development of engagement and partnership programs to expand public awareness and education in order to increase public understanding of ZEV feasibility and benefits, with programs that involve local groups, community and business organizations, neighborhood associations, and other stakeholders.	DPW, OIED, **Sac PEV Collaborative**, SMUD, Sac EV	**Ongoing**
7.2.4	Encourage partner and community-based efforts for ride-and-drive events, ZEV showcases, and other ZEV educational initiatives.	DPW, **Sac PEV Collaborative, Sac EV, SCCC**, OIED, SMUD	**Ongoing**
7.2.5	Collaborate with local partners to develop a discounted group-buy or leasing program for used EVs, such as the Sonoma Clean Power Drive-Evergreen EV Incentive Program.	DPW, **Sac PEV Collaborative**, Sac EV, SMAQMD, SMUD	**Delayed or Not Yet Started**
7.2.6	Support efforts by the National Center for Sustainable Transportation and ITS, UC Davis to conduct a baseline EV study and develop a comprehensive database to track data over time on EV usage, sales, and consumer perceptions in the region.	DPW, **ITS**	**Complete**
7.2.7	Engage UC Davis, CSUS, and other research partners to collaborate for evaluation of EV penetration, deployment of pilots, and shared learning activities.	**DPW**, ITS, CSUS	**Ongoing**
7.2.8	Work with local partners and auto dealerships to identify appropriate methods to increase sales of ZEVs, such as incentives, dealer training, and increasing ZEV inventory.	**SMUD**, DPW-SM, OIED, SMAQMD, **Sac PEV Collaborative**	**Ongoing**
7.2.9	Require that all providers of charging in the right-of-way provide "charging event" data for each EV charging station on a regular basis, and provide application programming interface to the City of Sacramento and any other applicable web or app platform of the City of Sacramento's choosing.	**DPW**	**Not Pursuing or No Longer Relevant**
7.2.10	Encourage all publicly accessible EV chargers and ZEV fueling locations to accept multiple payment methods.	**DPW-SM**	**Not Pursuing or No Longer Relevant**

7.3 Increase the visibility and awareness of ZEVs throughout the community.			
7.3.1	Maintain an EV website with information on ZEV resources and rebates for consumers and drivers.	**DPW-SM**	**Ongoing**
7.3.2	Maintain an online EV parking map application integrated with City parking garage information to inform the public of EV charging options and demonstrate the viability of EVs.	**DPW-SM**	**Ongoing**
7.3.3	Explore creation of a public art program for public art displays on utility boxes and equipment associated with EV charging infrastructure.	DPW, **CCS**, SMUD	**In Progress – Schedule TBC**
7.3.4	Encourage development of elementary and high school curriculum on ZEV mobility options and promote incorporation of the curriculum in local programs.	DPW, Sac PEV Collaborative, **ITS**	**Delayed or Not Yet Started or Not Yet Started**
7.3.5	For any City facilities with publicly accessible charging, the City shall install EV signage at the facility entrance to help increase consumer awareness at the facility and from any key adjacent roadways.	**DPW**	**Near-Term to Do**
7.3.6	Collaborate with other EV providers and agencies to increase EV signage and wayfinding throughout the community, improving the visibility of EV options to EV drivers and non-EV drivers alike.	**DPW**, Sac PEV Collaborative, SMUD	**Ongoing**
7.3.7	Explore sponsorship partnerships that allow for ZEV educational displays and signage in City parking garages.	**DPW**	**Ongoing**

8 ZEV Access

8.1 Spur ZEV access and increase mobility for disadvantaged and low-income communities.			
No.	**Action**	**Lead**	**City's Status**
8.1.1	Develop a citywide outreach strategy to increase awareness of ZEVs, with a focus on environmental justice, disadvantaged, and low-income communities.	**DPW-SM,** Sac PEV Collaborative, Sac EV Association, SMUD, SMAQMD, ITS	**Ongoing**
8.1.2	Continue to support car share programs for affordable options that support low-income mobility needs, and encourage program expansion to other neighborhoods and community facilities.	**DPW**, OIED, **SMAQMD**, Sac PEV Collaborative, the Sacramento Housing and Redevelopment Agency (SHRA)	**Ongoing**

8.1 Spur ZEV access and increase mobility for disadvantaged and low-income communities.			
8.1.3.	Review the City's ordinances to develop guidance for car share programs that incentivize ZEV deployments, and prioritize providers that offer service in disadvantaged and low-income communities.	**DPW**, OIED	**Complete**
8.1.4	Promote the Air District's EFMP "scrap and replace" program to provide rebates to low-income households living in DACs who replace internal combustion vehicles with EVs.	DPW-SM, **SMAQMD**, SHRA, Mutual Housing	**Ongoing**
8.1.5	Coordinate with agency partners and support efforts to pursue funding opportunities for new ZEV efforts, such as ZEV ride hailing, commuter shuttles, or ZEV car share.	**DPW**, OIED, Sac PEV Collaborative, SHRA	**Ongoing**
8.1.6	Support efforts to expand ZEV programs to affordable housing communities that do not qualify as disadvantaged communities per CalEnviro Screen 3.0, and are therefore less competitive for Cap-and-Trade grant funding.	**DPW,** SHRA, Mutual Housing, AQMD	**Ongoing**
8.1.7	Encourage SMAQMD efforts to leverage rebate and incentive funds to transition low-income workers into ZEVs, either with ZEV ride hail, financial incentives, or scrap and replace programs.	**DPW**, OIED, **SMAQMD**, Sac PEV Collaborative, SHRA	**Ongoing**
8.1.8	Collaborate with local partners to develop a discounted group-buy or leasing program for used EVs for low- and medium-income households.[9]	DPW, OIED, **Sac PEV Collaborative**, Sac EV, SHRA, SMAQMD, SMUD	**Delayed or Not Yet Started or Not Yet Started**
8.1.9	Collaborate for the co-location of ZEV demonstrations at workforce training centers, community-based organizations, and community centers in Sacramento's disadvantaged communities.	**DPW, Sac PEV Collaborative**, SHRA, Sacramento Employment and Training Agency	**Delayed or Not Yet Started or Not Yet Started**

[9] Refer to Action 7.2.5, for promotion of discounted group-buy or leasing programs for all household types.

Abbreviations

AFDC	**Alternative Fuel Data Center**
BEV	**Battery-electric vehicle:** a vehicle that runs completely on electricity stored in batteries with an electric motor instead of a gasoline engine; BEVs are a type of ZEV.
CALeVIP	**The California Electric Vehicle Infrastructure Project**
CVRP	**Clean Vehicle Rebate Project**
DCFC	**Direct current fast charge:** a charger at 400 to 500 volts and 50 kilowatts or more, providing an 80% charge in less than 30 minutes. High-power chargers are those greater than 50 kilowatts, with some capable of providing up to 20 miles of range per minute.
DMV	**Department of Motor Vehicles**
EV	**Electric vehicle:** a vehicle that is recharged by electricity; can include BEVs and PHEVs.
EVSE	Electric Vehicle Supply Equipment (i.e. electric vehicle charging stations)
FCEV	**Fuel-cell electric vehicle:** vehicle powered by electricity where hydrogen fuel is converted into electricity by a fuel cell– the only emissions are water vapor and heat; FCEVs are a type of ZEV.
ICCT	**International Council on Clean Transportation**
ITS	**Institute of Transportation Studies**, University of California, Davis
L1	**Level 1 charger:** charger at 110-120 volts, 4-6 miles of range per hour of charge.
L2	**Level 2 charger:** charger at 208-240 volts, 10-20 miles of range per hour of charge.
OEM	**Original equipment manufacturer**
PEV	**Plug-in electric vehicle:** another term for EVs, referring to a vehicle that is recharged by electricity; can include both BEVs and PHEVs.
PHEV	**Plug-in hybrid electric vehicle:** a vehicle that has both an electric motor that can be plugged in and a gasoline engine.
Sac PEV Collaborative	**Sacramento Area Plug-In Electric Vehicle Collaborative**
SacRT	**Sacramento Regional Transit**
SMAQMD	**Sacramento Metropolitan Air Quality Management District**
SMUD	**Sacramento Municipal Utility District**
USDN	**Urban Sustainability Directors Network**
VMT	**Vehicle miles traveled**
ZEV	**Zero-emission vehicle:** vehicle that emits no exhaust from on-board sources of power, with zero emissions – includes BEVs and FCEVs[10]

[10] The California Air Resources Board defines ZEVs as a vehicle that uses a zero-emissions technology, providing a pathway to full zero emissions. For City purposes, the term ZEVs is used to only include those vehicles that emit no exhaust from on-board sources of vehicle power.

EV Resources

Why go EV?

Electric vehicles use electricity to power an electric motor instead of burning gasoline. As a result, EVs have zero tailpipe emissions, are fun to drive, and can be less expensive to operate and maintain. Learn more about the technology, financial incentives, and options that could work for you.

- Drive Clean California PEV Buying Guide: https://driveclean.ca.gov/pev/
- TakeCharge Sacramento: http://www.takechargesac.org/
- Learn more about types of electric vehicles available for lease or purchase: plug-in EVs and fuel cell EVs:
    - https://driveclean.ca.gov/pev/
    - http://www.cafcp.org/
- Learn about the City's EV initiatives and find more resources: www.cityofsacramento.org/ev

Available programs, financing, & incentives

- CA Energy Commission's California Electric Vehicle Infrastructure Project (CALeVIP) for Sacramento County: https://calevip.org/incentive-project/sacramento-county-incentive-project
- U.S. Department of Energy Workplace Charging Resources: https://energy.gov/eere/vehicles/workplace-charging
- SMAQMD incentive programs: http://www.airquality.org/Businesses/Incentive-Programs
- Clean Vehicle Rebate Project: https://cleanvehiclerebate.org/eng
- SMUD Drive Electric Programs:
    - Residential https://www.smud.org/en/Going-Green/Electric-Vehicles/Residential
    - Business https://www.smud.org/en/Going-Green/Electric-Vehicles/Business
- California Capital Access Program (CalCAP) Electric Vehicle Charging Station (EVCS) Financing Program for the design, development, purchase, and installation of EVs at small business locations in California: http://www.treasurer.ca.gov/cpcfa/calcap/evcs/
- Green Energy Financing options for EV Installations: http://www.cityofsacramento.org/Public-Works/Facilities/Sustainability/Green-Energy-Financing-and-PACE-Programs
- Mayor's Office for Innovation and Entrepreneurship, City of Sacramento: https://innovatesac.org/
- Clean Air Vehicle Decals: https://www.dmv.ca.gov/portal/dmv/detail/vr/decal
- California Air Resources Board's Community Air Grants Program

City & Regional Resources

- Guide - Electric Vehicle Infrastructure Requirements in CALGreen Building Code (Developers, Property Owners, and Property Managers): http://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Electric-Vehicles/EV_Guide-Updated-April-2020.pdf?la=en

- FAQ - Electric Vehicle Supply Equipment Installation (Businesses, Workplaces, Shopping Centers, and Apartments): http://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Electric-Vehicles/EV_FAQs_Updated-April-2020.pdf?la=en
- Guide to City of Sacramento Electrical Vehicle Supply Equipment Residential Permits: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Building/Sacramento-Streamline/CityofSac_ElectricVehiclePermitGuidePacket_1-01-2020.pdf?la=en
- City of Sacramento Electrical Vehicle Supply Equipment for Commercial Projects: http://www.cityofsacramento.org/-/media/Corporate/Files/CDD/Building/Forms/CDD-0317_Electric-Vehicle-Supply-Equipment-EVSE-Requirements-for-Commercial-Projects_2-14-2020.pdf?la=en
- Sacramento Area PEV Collaborative Infrastructure and Readiness Plan: http://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Electric-Vehicles/Sac-County-EV-Inf-Plan.pdf?la=en

Other Resources

- Sacramento EV Association: https://www.saceva.org/
- Sacramento Clean Cities Coalition: http://www.cleancitiessacramento.org/
- Veloz: https://www.veloz.org/
- Forth Mobility: https://forthmobility.org/why-electric/electric-cars-101

References

Introduction

- Electric Vehicle Strategy: https://www.cityofsacramento.org/Public-Works/Electric-Vehicle-Initiatives/EV-Strategy
- Car Share overview: https://www.cityofsacramento.org/Public-Works/Transportation/Programs-and-Services/Car-Share
- Green City Initiative: http://www.cityofsacramento.org/Green-City
- Fleet Sustainability Policy: http://www.cityofsacramento.org/-/media/Corporate/Files/CityTreasurer/Policies/FleetSustainabilityPolicy.pdf?la=en
- City of Sacramento Electric Vehicle Initiatives: http://www.cityofsacramento.org/Public-Works/Electric-Vehicle-Initiatives
- Public charging data from the Alternative Fuel Data Center (AFDC): https://afdc.energy.gov/stations/#/find/nearest?location=sacramento,%20ca&fuel=ELEC
- EV registrations in the City of Sacramento is based on most recent DMV data available at time of report preparation, from October 2018 (Fuel Type by City as of 10/1/2018); available online: https://www.dmv.ca.gov/portal/dmv/detail/pubs/media_center/statistics
- Mayor's Climate Commission (2019) Mobility Technical Advisory Committee Recommendations: https://www.lgc.org/climatecommission/
- City of Sacramento Climate Action Plan (CAP) update: https://www.cityofsacramento.org/Community-Development/Planning/Major-Projects/General-Plan/About-The-Project/Climate_Change

Background

- December 12, 2017 staff report and recorded presentation to City Council, 2017 EV Strategy: http://sacramento.granicus.com/player/clip/4111?view_id=22&meta_id=510191
- 2035 General Plan: http://www.cityofsacramento.org/Community-Development/Resources/Online-Library/2035--General-Plan
- UC Davis Institute of Transportation Studies 2017 Report, *Understanding the Impact of Local Policies and Initiatives on Plug-In Electric Vehicle Adoption - An In-Depth Study of the Sacramento Region*: https://escholarship.org/uc/item/2zc5c6hn

Key Performance Indicators

Action Category	Metric	Source
Community Charging and Infrastructure	Public or workplace chargers - L2s, DCFC, and high power	US DOE Alternative Fuels Data Center (AFDC), SACOG, SMUD
	DCFC dispensers (subset of total chargers above)	SMUD, AFDC
City Facility Charging Infrastructure	Chargers or L1 ports at City facilities available for public or employee workplace charging	City of Sacramento Facilities and Fleet Divisions
	EV Parking Program participants	City of Sacramento Parking Division
Fleets	Annual City fleet light-duty replacements to be ZEV	City of Sacramento Fleet Division
Economic Development and Innovation	OEM or transportation company partnerships for ZEV deployments	City of Sacramento
Programs, Partnerships, and Engagement	Annual test drives	SMUD, Sac EV Association, Electrify America, Institute of Transportation Studies (ITS)
	Annual events	

- ZEV registrations and ownership from DMV data. Assumes preliminary household numbers available at time of report publication from the 2040 General Plan update effort.
- 2020 percent of new sales data from the International Council on Clean Transportation. (ICCT): https://theicct.org/sites/default/files/publications/ICCT_EV_surge_US_cities_20190610.pdf
- At least 400 additional chargers expected in 2020 – 2021 based on available CALeVIP rebates for Sacramento County: https://calevip.org/incentive-project/sacramento-county-incentive-project;

1. Community Charging and Infrastructure

- Public charging data from the AFDC: https://afdc.energy.gov/stations/#/find/nearest?location=sacramento,%20ca&fuel=ELEC
- 1st curbside chargers launched at Southside Park with EVgo: http://www.cityofsacramento.org/Public-Works/Electric-Vehicle-Initiatives/Curbside-Charging
- 2nd highest metro area nationally for number of publicly available fast chargers (DCFC) per million population: https://theicct.org/sites/default/files/publications/ICCT_EV_surge_US_cities_20190610.pdf

- $198,000 of competitive grant funds secured to develop an actionable "EV Blueprint" to further implement the City's EV Strategy and conduct outreach: http://www.cityofsacramento.org/Public-Works/Electric-Vehicle-Initiatives/EV-Strategy
- $14 million of CALeVIP charger incentives launched by the California Energy Commission and SMUD in 2019 to fund at least 400 L2 chargers and 70 DCFC units in Sacramento County: https://calevip.org/incentive-project/sacramento-county-incentive-project

2. Heavy-Duty and New ZEV Applications

- 3 electric shuttles for SacRT's Franklin-South Sacramento SmaRT Ride on-demand shuttle: https://www.sacrt.com/apps/smart-ride/, https://sactozero.com/buses/
- 12 electric buses linking Davis and Sacramento through SacRT & Yolo County Transit District's "Causeway Connection": http://www.cityofsacramento.org/Green-City, https://sactozero.com/buses/, https://www.sacrt.com/apps/causewayconnection/
- 3 hydrogen stations operating in the greater Sacramento region: https://cafcp.org/stationmap
- $76 million grant application submitted in early 2020 for regional bus and electrified mobility hub at Sacramento Valley Station, including 10 bays wired for 10-minute bus top-off charging: http://www.cityofsacramento.org/public-works/sacramento-valley-station

3: Electrify America's Green City Initiative: Sac-to-Zero

- Electrify America's Green City Initiative, Sac-to-Zero overview and resources: http://www.cityofsacramento.org/Green-City
- For purposes of Electrify America's investments, definition of low-income and disadvantaged is defined by the state: https://ww2.arb.ca.gov/resources/documents/electrify-america-reports

4. City Facility Charging Infrastructure

- Data provided from City of Sacramento Facilities, Fleet, and Parking Divisions
- City of Sacramento EV Parking Map application: https://saccity.maps.arcgis.com/apps/webappviewer/index.html?id=e1a39403ed224dffb3d363cdc55fa6ac

5. Fleets

- City of Sacramento Fleet website: http://www.cityofsacramento.org/Public-Works/Fleet
- Awarded #1 government green fleet in the nation in 2019: http://the100bestfleets.com/gf_winners_2019.htm
- 75% goal for percentage of the City's annual light-duty vehicle replacements to be ZEV, as adopted by City Council 12/2017: http://www.cityofsacramento.org/-/media/Corporate/Files/CityTreasurer/Policies/FleetSustainabilityPolicy.pdf?la=en

- 2019 GHG Emissions Report City of Sacramento (for Fleet operations only): http://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Fleet/2018-Greenhouse-Gas-Report---Sacramento.pdf?la=en

6. Economic Development and Innovation

- >$20,000 City investment in a community grant and sponsorship of the Clean Start Showcase through the Rapid Acceleration, Innovation and Leadership in Sacramento (RAILS) program: http://www.cityofsacramento.org/RAILS
- $99,500 City-issued Business Relocation Assistance Loan to Highlands Power, a manufacturer of high-performance electric motors, for moving to Sacramento: https://www.bizjournals.com/sacramento/news/2018/05/30/advanced-electric-motor-company-moving.html
- 1 electric autonomous shuttle pilot launched at Sacramento State, the Olli shuttle: https://www.sacbee.com/news/local/transportation/article226544445.html

7. Programs, Partnerships, and Engagement

- Ranking in the top 3 cities in California for EV promotion actions: https://theicct.org/sites/default/files/publications/Transition_EV_US_Cities_20180724.pdf
- 140+ community events or ride-and-drives hosted by the Sac EV Association, SMUD, or the City 2018 – 2019, as reported by project partners: https://www.saceva.org/
- EV Parking Program, currently offering a 50% discount for monthly parking garage customers of City-owned parking garages: http://www.cityofsacramento.org/Public-Works/Parking-Services/Discount-Programs/Electric-Vehicle
- $2 million+ of incentives and investments distributed by SMAQMD in the City for EV infrastructure, EV car share, and electric school buses 2018 – 2019, as reported by Air District staff: http://www.airquality.org/Businesses/Incentive-Programs

8. ZEV Access

- 30+ stakeholder interviews & community events in 2019 as a part of the City's "EV Blueprint" planning process: http://www.cityofsacramento.org/-/media/Corporate/Files/Public-Works/Electric-Vehicles/Final-Project-Report_Website-Version.pdf?la=en
- ≥20% of all City-permitted car share services must be in low income or disadvantaged areas if receiving parking permits for the right-of-way: https://www.cityofsacramento.org/Public-Works/Transportation/Programs-and-Services/Car-Share
- 7 sites & 14 cars operational and located at affordable housing communities through SMAQMD's Our Community CarShare program: http://www.airquality.org/Our-Community-CarShare/Apply-for-Our-CarShare