



City Council Report

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Discussion Item 18

Title: Update on Electric Vehicle Initiatives

Location: Citywide

Recommendation: Pass a Resolution providing Directives for Electric Vehicle Readiness.

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Presenter: Jennifer Venema, Sustainability Manager, (916) 808-1859, Department of Public Works

Attachments:

1-Description/Analysis

2-Resolution

Description/Analysis

Issue Detail: Improvements in electric vehicle (EV) technology coupled with increasing interest in private EV infrastructure investments offer a significant opportunity for the City to demonstrate government leadership toward advancing EV infrastructure and increased EV integration in Sacramento. The electrification of transportation is a core strategy to achieve air quality and climate goals, both locally and statewide. State initiatives and new programs also aim to address barriers to zero emission mobility for low income and disadvantaged communities. Staff recommends that the City develop a local EV strategy. While the City has successfully implemented numerous EV initiatives, emerging opportunities now warrant a more comprehensive approach to plan for and support EVs. To ensure that the City is preparing for significant potential investments in EV programs and infrastructure, the recommended action calls for creation of an EV strategy and implementation of near-term action items to maximize local benefits.

While the General Plan supports EV efforts, the City currently lacks a detailed regulatory and policy framework to facilitate new types of EV applications and programs. Emerging opportunities include curbside charging and EV car share programs. The City's early work in EVs has focused primarily on EV infrastructure, with opportunity to expand efforts to better address community-wide barriers to EVs. The recommendation calls for creation of an EV strategy, to address the following topics:

- Near-term tasks for EV readiness;
- Targets for EV and charger deployment;
- Coordination with key partners;
- City role in charging infrastructure;
- Education and outreach; and
- City policies for EV charging and fleet initiatives.

These actions would support potential major investments by Volkswagen Group of America (VW), other private interests, demonstration projects, and City fleet initiatives. Although the City's strategy would focus primarily on EVs, the strategy would also address key considerations for other zero emission fuel types, such as hydrogen.

Policy Considerations: The recommendation implements both General Plan policies and other policies enacted by Council. Implementation of EV initiatives would be consistent with General Plan Section M1, which calls for the use of emerging transportation technologies and services to increase transportation system efficiency (Goal M1.5). Specifically, Policy M1.5.5 commits the City to continue to collaborate with state and regional partners to support rapid adoption of zero emission and low-emission vehicles, including public and private electric

vehicle charging stations. In addition, the recommendation would also support the City's Fleet Sustainability Policy (Resolution No. 2007-771, 2009-045, and 2010-083), which establishes a commitment of 30% alternative fuel and alternatively-powered vehicles, and calls for the purchase of vehicles that offer the greatest fuel economy and lowest emissions for the respective vehicle class.

Economic Impacts: None

Environmental Considerations: The recommendation in this report is not a project under the California Environmental Quality Act (CEQA), because it does not involve any commitment to a specific project which may result in a potentially significant physical impact on the environment, as contemplated by Title 14, California Code of Regulations, Section 15378(b)(4) and is, therefore, not subject to CEQA pursuant to CEQA Guidelines Section 15060(c)(3).

Sustainability: EV technologies and programs are consistent with adopted City Council sustainability policies. The City's 2012 Climate Action Plan identifies EV strategies to help achieve community-wide greenhouse gas (GHG) emissions targets. Electrification of the transportation sector leads to reductions in petroleum use, both reducing greenhouse gas emissions and improving local air quality. Electric vehicles can include plug-in hybrid electric vehicles (PHEVs), all battery electric vehicles (BEVs), or fuel cell electric vehicle (FCEV). Both BEVs and FCEVs have zero tailpipe emissions and provide other benefits, such as requiring less maintenance and costing less to operate over time.

Commission/Committee Action: Not applicable.

Rationale for Recommendation: Opportunities with emerging EV technologies and programs are not adequately addressed by existing City policy. The City has been approached by multiple vendors with offers to explore new types of public-private partnership for expanding charging infrastructure. New EV business models have also introduced a diversity of private and public approaches, ranging from EV networks that offer charging as a paid service, to free charging subsidized by public agencies or private businesses, or new partnership models that provide free charging supported by advertising revenues. The recommendation would allow for evaluation of different approaches and recommendations for the City's future efforts to support EVs.

Policies and permit processes are also challenged to accommodate growing levels of EVs at City facilities or in the right-of-way. While City policies allow for discounted monthly EV rates at parking garages, policies do not address other issues, such as charging for the costs of electrical use. Current City permit processes also do not address standards for curbside charging. Issues for curbside charging include parking spot layout and compliance with the

Americans with Disabilities Act. The lack of policy and permit guidance can serve as a barrier to the expansion of EVs.

Although the City has a long-standing history of EV leadership, the City lacks a comprehensive strategy for moving forward. Most recently, the City participated with other agency partners to develop an Electric Vehicle Readiness and Infrastructure Plan for Sacramento County and the incorporated cities. Building on research by SACOG and the U.C. Davis Institute of Transportation Studies, the plan identifies priority charging locations and suggests strategies to expand EV usage. The plan highlights several issues for the City to consider through a local strategy, such as the need to increase education efforts and consider new standards for EV charging. Continued collaboration with key partners is critical to the regional success of EVs. Yet more action is necessary at the local level, to ensure a strategic alignment of policy priorities, codes, and procedures.

Development of an EV strategy would also prepare the City for potential near-term funding. An EV strategy would support the City's efforts to secure funding for ZEV programs from Volkswagen Group of America (VW). As part of its diesel emissions settlement, VW is investing \$800 million in California over a ten-year period on ZEV infrastructure, education, and access activities. In response to VW's solicitation for proposals, the City submitted a proposal for ZEV initiatives. In March 2017, VW released its first California ZEV Investment Plan. At the time of report publication, the proposed plan identified the City of Sacramento for the investment of approximately \$44 million by June 30, 2019. The proposal requires approval by the California Air Resources Board CARB. If approved, investments further warrant a strategic framework to support City EV priorities.

Financial Considerations: Preparation of an EV framework would position the City to evaluate and prioritize funding needs for EV implementation. The City is challenged to complete significant strides in EV deployment due to funding constraints. Investments in EV chargers, vehicles, and programs are costly. Similarly, an expansion of public outreach efforts for EVs could also require an investment in funds. The recommendation would equip the City to prioritize funding recommendations for EV priorities. Emerging partnership opportunities and EV business models also provide new options for expanding and maintaining EV infrastructure. More analysis and policy direction is necessary to evaluate these options and identify recommended approaches.

Planned expansions to the City's EV fleet will also require investments in additional City charging infrastructure. A proactive approach can ensure coordinated budgeting to ensure that the City can support a growing electric fleet with electric infrastructure. The City currently funds and operates 91 chargers at City facilities, 78 of which are available as workplace and public charging. Operation of these chargers includes costs of electricity and maintenance. The City

also pays an annual fee of approximately \$10,000 to ChargePoint for equipment network services. Many chargers are older equipment models, with opportunities for upgrades to expand charging access and efficiency. However, upgrades would require additional investment. The only City policy regarding EV charging costs establishes the public EV discount program for City parking garages. New policies for EV costs and fees can incorporate best practices to ensure financial sustainability and long-term success of the City's charging infrastructure.

Local Business Enterprise (LBE): Not applicable.

Background: Preparing for EV-readiness builds on the City's early EV leadership. Several examples of the City's existing efforts and accomplishments include:

- The EV Parking Program, providing free or discounted parking to owners and lessees of EVs in City-owned parking garages, with 355 current customers.
- Provision of electric vehicle charging at all City-owned parking facilities at no additional cost to charge (with the exception of DC fast charging at the Sacramento Valley Station lot).
- Participation as a partner in the U.S. Department of Energy Workplace Charging Challenge since February 2013.
- Deployment of a trial car share program with Zip Car, providing more than 24 dedicated curbside parking spots to a program that now has over 900 local members.
- Operation of 91 EV chargers at all City facilities, with 78 chargers available for workplace or public charging.
- Recognition as the 2015 #1 Green Fleet in North America by the Government Green Fleet Award Program with 50% alternative fuels, including 28 BEVs and plug-in hybrid EVs, four all-electric motorcycles, and 2 hydrogen fuel-cell vehicles.
- Ongoing efforts to expand the City's electric fleet include the recent purchase of one of the nation's first all-electric refuse trucks and four all-electric GO-4s for parking meter support, in addition to work currently underway to replace 29 fleet vehicles with BEV Chevy Bolts that provide a 238-mile range on a single charge.
- Partnership with other agencies to support state-of-the-art charging and innovative EV programs, such as partnership with the Sacramento Municipal Utility District (SMUD) to provide DC fast charging at the Sacramento Valley Station, and collaboration with the Sacramento Air Quality Management District (SMAQMD) to support the Our Community CarShare Program, the first low-income electric car share program to launch in California.
- Participation in the Sacramento Clean Cities Coalition, a network of other agencies and partners supporting the reduction of petroleum use in transportation.

- Participation in the Sacramento Plug-in Electric Vehicle (PEV) Collaborative to develop an Electric Vehicle Readiness and Infrastructure Plan for Sacramento County, in partnership with the County of Sacramento, SMUD, SMAQMD, the Sacramento Area Council of Governments, the Sacramento Clean Cities Coalition, Valley Vision, and the Sacramento EV Association.

Despite City leadership in EV efforts, more policy direction is necessary to establish appropriate local goals and targets for EV deployment. Developing a policy framework can allow for prioritization of tasks and evaluation of program outcomes. Citywide, Sacramento has more than 400 public and workplace EV chargers. Yet the Sacramento region is behind other areas in ZEV adoption rates. While City-specific data is unavailable, data from the Electric Power Research Institute indicates that through March 2017 just 0.36% of all county residents have purchased or leased an EV, compared to 0.72% statewide. Ambitious state policies further indicate the need to plan for a more aggressive deployment of EVs. California Governor Jerry Brown established the target for 1.5 million ZEVs on California roads by 2025 with issuance of Executive Order B-16-2012. To realize Sacramento County's share of the Governor's target, UC Davis recently developed scenarios that indicate agencies should aim to support approximately 66,000 to 84,000 ZEVs countywide by 2025. To realize these levels, the current countywide fleet of roughly 5,400 ZEVs needs to grow by more than twelve times. A strategy is needed to develop local targets for the City, a key step to evaluate implementation and monitor progress going forward.

EV Issues and Opportunities

Preparation of a strategy would provide guidance for new and emerging issues in EVs. As technologies advance and the usage of EVs spreads beyond the first era of early adopters, new potential barriers to adoption emerge. With growth in EV sales, newer generations of EV users have different types of charging needs. Multi-family and workplace charging are emerging in importance. New types of public and community charging can play a key role in supporting these uses. High-turnover fast chargers are also critical to support a growing community EV stock, with opportunity for highly visible and convenient chargers, such as curbside fast chargers in the public right-of-way. Updates to City code and permit processes can guide these types of EV projects, and help ensure equitable access to EV infrastructure for all user groups.

A City EV strategy can ensure that efforts benefit Sacramento's diverse households and communities. According to the California Vehicle Rebate Project, less than 1% of EV rebates in California come from residents within a state-designated disadvantaged community as defined by CalEPA and the CalEnviro Screen tool. However, residents in disadvantaged communities comprise approximately 24% of state population and 18% of light duty auto sales. Within the City of Sacramento, approximately 36% of all residents live in disadvantaged

communities. While there is potential for outside funding of EV infrastructure, the City has a unique role in understanding needs and opportunities to serve all its communities.

Barriers to EV ownership in disadvantaged communities may include the high cost of entry, in addition to inability to charge at home, or lack of nearby charging infrastructure. The Sacramento Air Quality Management District is currently developing a program for the region to provide additional rebates to low-income residents in disadvantaged communities to turn in older, higher-emitting cars in exchange for newer low- to zero-emission cars. The program is anticipated to launch in late 2017. The City can play a strategic role in connecting local programs to potential EV investments, guiding efforts to maximize benefits for residents. For example, EV infrastructure and education programs should focus on addressing EV barriers in low-income and disadvantaged neighborhoods. The City has a critical role in facilitating investments to the benefit of the community.

RESOLUTION NO. 2017-
Adopted by the Sacramento City Council

DIRECTIVES FOR AN ELECTRIC VEHICLE STRATEGY

BACKGROUND

- A. General Plan policies call for City support of the rapid deployment of zero-emissions and low-emission vehicles to support community-wide greenhouse gas reduction targets, with the City Fleet Sustainability Policy further committing to 30% alternative fuel procurement (Resolution No. 2007-771, 2009-045, and 2010-083);
- B. Near-term opportunities for electric vehicle (EV) initiatives include demonstration projects, City fleet initiatives, and potential major investments by Volkswagen Group of America;
- C. Early City leadership provides a foundation for EV implementation efforts, including early investments in electric vehicle infrastructure, the City's EV Parking Program, and participation with other regional agencies to prepare an Electric Vehicle Readiness and Infrastructure Plan for Sacramento County and the cities within; and
- D. A coordinated EV strategy can maximize benefits of potential EV investment and provide comprehensive guidance for ongoing City initiatives.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

- Section 1. The City of Sacramento recognizes that a comprehensive electric vehicle strategy is a priority for advancing the deployment of zero emission and low emission vehicles and achieving adopted greenhouse gas emissions reduction targets.
- Section 2. To maximize the benefit of potential near-term EV investments and opportunities, staff is directed to initiate near-term priority EV initiatives that will streamline and facilitate concentrated EV investment. Near-term actions shall include, but are not limited to, the following:
 - i. Development of permit guidance for curbside EV chargers in the public right-of-way.
 - ii. Updating and expanding City communications on EV programs, initiatives, and permitting.

Section 3. Staff is directed to prepare an EV strategy that establishes a comprehensive framework for EVs in the city, providing quantitative targets and near-term actions that support longer-term mobility goals and initiatives. Staff shall complete the strategy for Council action by November 30, 2017. Key issues to address in the EV strategy include, but are not limited to:

- i. City permits, codes, and policies
- ii. Access for disadvantaged communities
- iii. Multi-family and workplace charging
- iv. ZEV car sharing and fleets
- v. Community engagement
- vi. Workforce development and community partnerships
- vii. City policy on costs and fees for public charging at City facilities and City fleet charging
- viii. Key considerations for other zero emission fuel types, such as hydrogen
- ix. Other potential incentives or programs to encourage deployment of ZEVs

Section 4. Plan development shall include engagement of key partners and stakeholders, including but not limited to the County of Sacramento, the Sacramento Municipal Utility District, the Sacramento Metropolitan Air Quality Management District, the Sacramento Area Council of Governments, educational institutions, and the public.

Section 5. Staff shall continue collaboration in related EV initiatives, including the Sacramento Clean Cities Coalition and the Sacramento Plug-In Electric Vehicle Collaborative.