



# COUNTY OF SAN DIEGO

## LAND USE AGENDA ITEM

### BOARD OF SUPERVISORS

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**DATE:** October 16, 2019

**02**

**TO:** Board of Supervisors

### **SUBJECT**

**ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)**

### **OVERVIEW**

On April 10, 2019 (8), the County of San Diego (County) Board of Supervisors (Board) directed the Chief Administrative Officer to develop an Electric Vehicle Roadmap (Roadmap) building on related local studies and progress to date, identify funding sources to support the Roadmap, and return to the Board with recommendations for review and approval. The Roadmap was to include, but not be limited to, strategies to increase electric vehicle (EV) ownership and use, install charging infrastructure, and identify future grant opportunities to support recommendations.

Barriers to EV market growth have historically included public perception of vehicle range limitations, up front vehicle cost, and charging infrastructure availability. However, EV market growth has been trending up and has been spurred by State of California (State) and local policies focused on reducing greenhouse gas (GHG) emissions through electrification of the transportation network and through vehicle incentives. The State's existing EV goals include 1.5 million zero-emissions vehicles (ZEVs) registered by 2025 and 5 million ZEVs registered by 2030. ZEVs are vehicles that run on fuels other than gasoline and include a variety of low-to-no GHG emission technologies including battery electric EVs, plug-in hybrid EVs, and hydrogen fuel cell vehicles.

To meet State ZEV goals there will need to be an increase in EV ownership and significant investment in public and workplace charging infrastructure to meet projected demand. The region currently has approximately 35,000 ZEVs, 1,741 public charging stations including 201 fast chargers, and 3,055 workplace chargers. According to SANDAG research, there will need to be approximately 136,500 ZEVs by 2025 and a total of 449,400 ZEVs by 2030 in the region. To support increased regional charging demand, 6,600 publicly accessible charging stations (public chargers), including 2,500 fast chargers, and 6,700 workplace chargers will need to be installed by 2025. A total of 19,700 public chargers, including 8,300 fast chargers, and 21,300 workplace chargers will need to be installed by 2030.

The unincorporated area has approximately 5,400 ZEVs, 76 public charging stations including 2 fast chargers, and 470 workplace chargers. The unincorporated area's share of projected regional ZEVs and chargers (by population) is approximately 21,000 ZEVs by 2025, and a total of 69,100 ZEVs by 2030. To support charging demand in the unincorporated area, 1,000 public chargers

**SUBJECT: ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)**

including 400 fast chargers, and 1,000 workplace chargers will need to be installed by 2025. A total of 3,000 public chargers, including 1,300 fast chargers, and 3,300 workplace chargers will need to be installed by 2030.

Existing County policies that encourage a transition to EVs are included in the Climate Action Plan, Strategic Energy Plan, and Green Fleet Action Plan. To support these policies and address barriers to increase EV ownership and installation of charging infrastructure in County operations and in the unincorporated area, staff has identified six Roadmap goals and 11 recommendations for the Board's consideration. The Roadmap recommendations include County operations efforts such as increasing the number of EVs in the County fleet, installing charging stations for public use at County facilities, and electrifying County employee commute. Recommendations for the unincorporated area include charging station installation incentives and/or requirements for private development, EV education and outreach, and regional fleet electrification collaboration.

This is a request for the Board to receive the Roadmap and to consider and provide direction on the six goals and 11 recommendations presented in the Roadmap that facilitate the transition to EVs within County operations and the unincorporated area. Staff will return to the Board for further direction and funding requests related to new work programs as needed and described within each recommendation.

**RECOMMENDATION(S)  
CHIEF ADMINISTRATIVE OFFICER**

1. Receive the report on Electric Vehicle Roadmap (Roadmap).
2. Find that the Final Supplemental Environmental Impact Report (EIR), dated February 14, 2018, on file with Planning & Development Services (PDS) as Environmental Review Number PDS2016-ER-00-003 was completed in compliance with the California Environmental Quality Act (CEQA) and the state CEQA Guidelines and that the Board has reviewed and considered the information contained therein and an Addendum dated October 16, 2019, on file with PDS prior to approving the project; and

Find that there are no changes in the project or the circumstances under which the project is undertaken that involve significant new environmental impacts which were not considered in the previously certified Final Supplemental EIR dated February 14, 2018, that there is no substantial increase in the severity of previously identified significant effects, and that no new information of substantial importance has become available since the EIR was certified as explained in the Environmental Review Update Checklist dated October 16, 2019.

3. Find that the Roadmap is also exempt from CEQA pursuant to CEQA Guidelines Section 15303 because it would result in the construction of a limited amount of small electrical equipment as explained in the Notice of Exemption dated October 16, 2019.
4. Provide direction on six goals and 11 recommendations contained in the Roadmap report.
5. Direct staff to report back annually to the Board of Supervisors on Roadmap progress.

**SUBJECT: ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)**

**FISCAL IMPACT**

There is no fiscal impact associated with accepting the Electric Vehicle Roadmap (Roadmap). There are implementation costs for the recommendations contained in the Roadmap. Funds for these requests are not included in the Fiscal Year (FY) 2019-20 Operational Plan. If all the recommendations are accepted and directed by the Board of Supervisors, additional costs are estimated up to \$16,680,00 in one-time and \$125,000 in ongoing funding requests from FY 2020-21 to FY 2024-25. This request includes \$2,660,000 in one-time funding requests in FY 2020-21; \$4,050,000 in one-time funding requests in FY 2021-22; \$2,050,000 in one-time funding requests in FY 2022-23; \$4,390,000 in one-time funding requests in FY 2023-24; and \$3,530,000 in one-time funding requests in FY 2024-25; and \$25,000 in ongoing costs beginning in FY 2020-21. Upon Board direction, costs and funding will be included in future Operational Plans based on ongoing and one-time funding sources, beginning in FY 2020-21.

Further, the Department of General Services anticipates an increase of 1.0 staff year in FY 2020-21 with an estimated annual cost of \$148,000 to manage the fleet conversion to electric vehicles; identify and pursue incentives and grant funding opportunities; conduct outreach; keep pace with technological trends; track the costs and benefits of fleet conversion; and update the Green Fleet Action Plan. The funding source is charges to client departments. Additional staffing, and associated costs and revenue will be included in future Operational Plans.

The total annual estimated fiscal impact over the next five fiscal years is as follows:

<i>Incremental cost in millions – not to exceed</i>	<i>FY 20-21</i>	<i>FY 21-22</i>	<i>FY 22-23</i>	<i>FY 23-24</i>	<i>FY 24-25</i>
<b><i>One-time Funding Requests</i></b>	\$2.66	\$4.05	\$2.05	\$4.39	\$3.53
<b><i>Ongoing Costs</i></b>	\$0.17	\$0.17	\$0.17	\$0.17	\$0.17
<b><i>Total Annual Cost</i></b>	<b>\$2.83</b>	<b>\$4.22</b>	<b>\$2.22</b>	<b>\$4.56</b>	<b>\$3.70</b>

Costs for the implementation of the recommendations proposed in Goal 1, Recommendation A; Goal 2, Recommendations A and C; and Goals 3, 4 and 6 have yet to be identified. Upon Board direction, staff would return to the Board with associated implementation costs, for which funding would impact the availability of General Fund resources, including General Purpose Revenue and/or available General Fund fund balance.

**BUSINESS IMPACT STATEMENT**

The Roadmap report includes goals and recommendations that support the local economy by providing new opportunities for additional charging infrastructure to be installed, and by conducting targeted outreach and marketing that will increase demand for the conversion to EV vehicles.

**ADVISORY BOARD STATEMENT**

Staff presented draft recommendations in a public presentation to various stakeholders on July 18, 2019.

**SUBJECT: ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)**

**BACKGROUND**

On April 10, 2019 (8), the Board of Supervisors (Board) directed the Chief Administrative Officer (CAO) to investigate ways to develop an Electric Vehicle Roadmap (Roadmap) that builds on related local studies and progress. The purpose of the Roadmap is to identify policies, programs, and actions that the Board can direct in order to increase electric vehicle (EV) ownership and increase installation of charging infrastructure within the unincorporated area.

The Board’s direction to explore strategies to increase the transition to EVs aligns with the County of San Diego’s (County) adopted Climate Action Plan (CAP) and greenhouse gas (GHG) reduction targets, which commit the County to reduce GHG emissions in accordance with State of California (State) legislation.

In January 2018, Governor Brown issued Executive Order B-48-18 that established goals for 200 hydrogen fueling stations and 250,000 EV charging stations including 10,000 direct current fast chargers to support 1.5 million ZEVs on California roads by 2025 and 5 million ZEVs on the road by 2030. ZEVs are vehicles that run on fuels other than gasoline and include a variety of low- to no-GHG emission technologies including battery electric EVs, plug-in hybrid EVs, and hydrogen fuel cell vehicles. This Executive Order supports vehicle electrification strategies that reduce GHG emissions from the transportation sector to achieve GHG reduction targets established by the Global Warming Solutions Acts of 2006, Assembly Bill 32 (AB 32), and Senate Bill 32 (SB 32). Vehicle electrification decreases GHG emissions and improves air quality because the energy supplied to vehicles on the grid is from a cleaner fuel mix that includes renewable wind and solar energy sources rather than gasoline and diesel fuels. Transportation emissions from conventional vehicles such as passenger vehicles, light- medium- and heavy-duty trucks, buses and motorcycles make up a majority (41%) of the State’s total GHG emissions.

Similar to state-wide emissions, on-road transportation sources in the unincorporated county account for a majority of total GHG emissions (45%). This is due in large part to the suburban and rural nature of the county’s 3,570 square miles containing 26 communities and approximately 171,000 existing dwelling units with limited options for public transportation.

EV market growth has been spurred by federal and State incentives and local policies that have increased the affordability of EVs, prevalence of EV charging infrastructure, and consumer demand in the past several years. However, to meet State ZEV goals there will need to be an increase in EV ownership and significant investment in public and workplace charging infrastructure to meet projected demand.

The region currently has approximately 35,000 ZEVs, 1,741 public charging stations including 201 fast chargers, and 3,055 workplace chargers. According to SANDAG research, there will need to be approximately:

<b>ZEVs</b>	<b>Chargers</b>
<ul style="list-style-type: none"><li>• 136,500 ZEVs by 2025.</li></ul>	<ul style="list-style-type: none"><li>• 6,600 publicly accessible charging stations (public chargers) including 2,500 fast chargers; and 6,700 workplace chargers by 2025.</li></ul>
<ul style="list-style-type: none"><li>• 449,400 ZEVs by 2030.</li></ul>	<ul style="list-style-type: none"><li>• 19,700 public chargers including 8,300 fast chargers; and 21,300 workplace chargers by 2030.</li></ul>

**SUBJECT: ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)**

The unincorporated area has approximately 5,400 ZEVs, 76 public charging stations including 2 fast chargers, and 470 workplace chargers. The unincorporated area's share of projected regional ZEVs and chargers (by population) is approximately:

**ZEVs**

- 21,000 ZEVs by 2025.
- 69,100 ZEVs by 2030.

**Chargers**

- 1,000 public chargers including 400 fast chargers; and 1,000 workplace chargers by 2025.
- 3,000 public chargers including 1,300 fast chargers; and 3,300 workplace chargers by 2030.

**Project Description, Analysis, and Discussion**

Preparation of the Roadmap included a review of EV-related policies from over 30 jurisdictions throughout the nation, evaluation of industry expert research and guidance documents from over 30 government and non-government sources, and engagement of industry experts within the region.

The Roadmap provides a summary of key legislation and policies that drive EV adoption and infrastructure development, EV market context, and availability of funding and incentives to support future EV efforts. The Roadmap describes projected market demand and constraints that limit transportation electrification in the region. The recommendations described within the Roadmap and below, address these market constraints and aim to increase EV ownership, and increase the availability of charging infrastructure in the region.

**Current County EV-Related Program and Policy Descriptions**

*Board Policies*

DGS implements Board Policies F-22, G-15, H-1 and H-2 which establish guidelines to maximize fleet fuel efficiency, reduce vehicle emissions, and control costs. Board Policy F-22 establishes property lease requirements for County use. Board Policy G-15 establishes County facility design, construction, and improvement principles. Board Policies H-1 and H-2 establish fleet vehicle replacement standards and administer the Fleet Management Internal Service Fund and vehicle purchasing procedures. As part of the Roadmap, staff is recommending amendments to these Policies to support County fleet EV conversion.

*Strategic Energy Plan (SEP) and Green Fleet Action Plan (GFAP)*

DGS manages County fleet emissions reduction efforts including the development of charging station infrastructure to support EV conversions. The SEP and GFAP established a goal to convert 50 vehicles to EV by 2020 and 250 vehicles by 2025. Currently, the County fleet has over 4,500 vehicles including 40 EVs. An additional 10 EVs were ordered in FY 2019-20 to ensure the County will meet the 2020 SEP and GFAP goal. The County has 84 charging stations at eight sites that support County fleet EVs. There are an additional 37 charging stations at 10 County-owned sites that provide charging opportunities for employees and the public. As part of the Roadmap, staff is recommending amendments to the SEP and GFAP to increase the number of fleet EV conversions and charging infrastructure.

*Climate Action Plan (CAP)*

PDS is coordinating the implementation of CAP Measures T-2.2, T-2.3, T-2.4, T-3.3, T-3.4, and T-3.5, which include existing EV-related policies and could be modified to accommodate EV

**SUBJECT: ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)**

Roadmap recommendations. CAP Measures listed above and associated supporting efforts require the following:

- Measure T-2.2: Reduce emissions from commute vehicle miles traveled in new non-residential development by 15% by 2030;
- Measure T-2.3: Reduce County employee commute emissions by 20% by 2030;
- Measure T-2.4: Develop a shared and reduced parking ordinance by 2020;
- Measure T-3.3: Develop a local vehicle retirement program by 2020;
- Measure T-3.4: Reduce County fleet emissions by 10% by 2020 and 20% by 2030 (consistent with the SEP and GFAP);
- Measure T-3.5: Install 2,040 Level II chargers by 2030;

Supporting Efforts:

- Develop a local EV charging station program;
- Provide education and marketing related to the purchase of EVs, charging infrastructure, and existing EV resources and programs; and
- Collaborate regionally to increase the installation of EV charging infrastructure.

Staff will continue to implement CAP Measures and supporting efforts. For example, as part of CAP Measure T-3.5 implementation, APCD is coordinating with the San Diego Association of Governments (SANDAG) and the California Energy Commission (CEC) on the development of a Regional EV Charging Station Incentive Program. This program is anticipated to start in mid-2020.

**Electric Vehicle Roadmap**

The Roadmap contains six goals and 11 recommendations for County operations and the unincorporated area, which collectively aim to increase EV ownership throughout the region, and increase charging infrastructure availability in County facilities and throughout the unincorporated area. Recommendations also support implementation of the CAP, SEP, GFAP and GHG reductions. Each recommendation presented for the Board's consideration will be implemented by actions that are based upon education, outreach, and regional collaboration objectives to increase the awareness of environmental and economic benefits of EV use and ownership. In recognition of the rapidly advancing technology of the EV sector, recommendations are structured such that the most feasible, commercially available, and cost effective solutions are recommended as near term efforts, and those options that are not yet commercially available or cost effective at this time appear as future efforts.

County operations Roadmap recommendations increase County fleet and employee EV use and charging station installations at County facilities. These goals demonstrate leadership in transportation electrification efforts and contribute to GHG emissions reductions from County operations:

*Goal 1: Further Reduce the County's Fleet of Gas-Powered Vehicles.*

- Targeted Outcome: Increase the number of EVs in the County's fleet to 501 vehicles by 2027.

**SUBJECT: ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)**

*Goal 2: Accelerate the Installation of EV Charging Stations at Public Locations in County Facilities and in the Unincorporated County.*

- **Targeted Outcome:** Contribute to the regional EV charging network by installing 2,040 Level II charging stations at County facilities and throughout the unincorporated area by 2028.

*Goal 3: Promote and Incentivize County Employee EV Ownership.*

- **Targeted Outcome:** Increase County employee EV ownership and use to reduce employee commute emissions.

The following tables outline three goals and eight recommendations for County operations:

<b>County Operations – Goal 1</b>	
Further Reduce the County’s Fleet of Gas-Powered Vehicles.	
<b>1-A</b>	<p><b>Recommendation:</b> Amend Board policies F-22, “Lease of Real Property for County Use”, H-1, “Fleet Management and Internal Service Fund”, and H-2, “Fleet Vehicle and Mobile Equipment Acquisition Policy”, in the October 2019 sunset review. Policy amendments would assist EV conversion by requiring new vehicles to be EV when feasible.</p> <p><b>Costs:</b> There is no additional funding requested to amend the policies. However, the implementation of the amended policies could have associated costs that would impact the availability of General Fund resources, including General Purpose Revenue and/or available General Fund fund balance, which would be included in future Operational Plans.</p> <p><b>Timeframe:</b> Short-Term (1 Year)</p>
<b>1-B</b>	<p><b>Recommendation:</b> Convert 250 County fleet gas-powered vehicles to EVs by 2025 and install necessary EV charging infrastructure. This recommendation will mandate the implementation of Green Fleet Action Plan (GFAP) goals for EV purchases. EV purchase premiums of approximately \$9,500-\$14,800 per vehicle will be paid for by each department. Cost estimates include the additional upfront EV purchase and charging infrastructure installation costs associated with Recommendation 1-A.</p> <p><b>Costs:</b> Phased approach with one-time funding requests to be included in future Operational Plans (FY 2020-21: \$1.85M, FY 2021-22: \$4.05M, FY 2022-23: \$2.05M) and an ongoing cost of \$0.148M to fund 1.0 additional FTE beginning in FY 2020-21.</p> <p><b>Timeframe:</b> Mid-Term (2-4 Years)</p>
<b>1-C</b>	<p><b>Recommendation:</b> Convert an additional 251 County fleet gas-powered vehicles to EVs for a total of 501 by 2027 and install necessary EV charging infrastructure at 16 County sites. This recommendation will exceed the GFAP goal for EV purchases through a phased approach through FY 2026-27 EV purchase premiums of approximately \$9,500-\$14,800 per vehicle will be paid for by each department. Cost estimates include the additional upfront EV purchase and charging infrastructure installation costs associated with Recommendation 1-A. This recommendation would result in GHG emissions reductions and demonstrate leadership in fleet electrification efforts.</p> <p><b>Costs:</b> Phased approach with one-time funding requests to be included in future Operational Plans (FY 2023-24: \$4.39M, FY 2024-25: \$3.53M, FY 2025-26: \$3.52M, FY 2026-27: \$1.70M).</p>

**SUBJECT: ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)**

<b>County Operations – Goal 1</b>	
Further Reduce the County’s Fleet of Gas-Powered Vehicles.	
	<b>Timeframe:</b> Long-Term (>5 Years)
<b>1-D</b>	<p><b>Recommendation:</b> Keep pace with technological trends, track the costs and benefits of fleet conversion, and update the Green Fleet Action Plan no later than 2025 to set goals for medium- and heavy-duty fleet vehicle conversions. Consider additional categories of light-duty vehicles for conversion, and purchase EVs as feasible. Consider additional categories of light-duty vehicles for conversion, and purchase EVs as feasible. This recommendation would result in GHG emissions reductions and demonstrate leadership in fleet electrification efforts.</p> <p><b>Costs:</b> \$50,000 in one-time costs for fleet vehicle telematics and technology tracking in FY 2020-21.</p> <p><b>Timeframe:</b> Long-Term (&gt;5 Years)</p>
<p><b>Implementing Actions:</b></p> <p>Continue to:</p> <ul style="list-style-type: none"> <li>• Identify and pursue incentives and grant funding including state vehicle rebates, to bridge the gap between the cost of gas-powered light-duty vehicles and that of EV light-duty vehicles.</li> <li>• Identify and pursue incentives and grant funding to install EV charging infrastructure.</li> <li>• Promote use of an EV motor pool for employees to use for County operations.</li> </ul> <p>2021-2025:</p> <ul style="list-style-type: none"> <li>• Identify and pursue incentives and grant funding opportunities including SDG&amp;E Medium- and Heavy-Duty EV Charging Infrastructure Program, Carl Moyer, Hybrid and Zero-Emissions Truck and Bus Voucher Project (HVIP), the Clean-Off-Road Equipment Voucher Incentive Program (CORE), and the Volkswagen Mitigation Trust Heavy-Duty Replacement program, to bridge the gap between the cost of gas-powered medium- and heavy-duty vehicles and that of EV medium- and heavy-duty vehicles when the technology is commercially available.</li> <li>• Identify funding availability and investigate cost effectiveness of transitioning to DC fast charging, solar powered EV charging systems, and other available technology to supplement fleet and public charging at County facilities.</li> </ul> <p>2026-2030:</p> <ul style="list-style-type: none"> <li>• Take advantage of the opportunities that EV batteries have for resiliency such as storage, vehicle-to-grid charging, other emerging cutting-edge charging infrastructure technology.</li> <li>• Apply fleet wireless charging technology when it becomes commercially available, efficient, and cost-effective.</li> <li>• Evaluate autonomous and other emerging EV shuttles technology and cost effectiveness of providing shuttle services between County facilities for employee use.</li> </ul>	

<b>County Operations – Goal 2</b>	
Accelerate Installation of EV Charging Stations at Public Locations in County Facilities and in the Unincorporated County.	
<b>2-A</b>	<p><b>Recommendation:</b> Amend Board Policy G-15, “Design Standards for County Facilities” in the October 2019 sunset review to require all new County facilities to include charging infrastructure for public and employee use. The policy amendment will increase the availability of public charging infrastructure at County facilities.</p>

**SUBJECT: ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)**

<b>County Operations – Goal 2</b>	
Accelerate Installation of EV Charging Stations at Public Locations in County Facilities and in the Unincorporated County.	
	<p><b>Costs:</b> There is no additional requested funding to amend the policy. However, the implementation of the amended policy could have associated costs that would impact the availability of General Fund resources, including General Purpose Revenue and/or available General Fund fund balance, which would be included in future Operational Plans.</p> <p><b>Timeframe:</b> Short-Term (1 Year)</p>
<b>2-B</b>	<p><b>Recommendation:</b> Fund the installation of 63 publicly accessible Level II chargers at seven County facilities for public and employee use. This recommendation would increase the number of public charging infrastructure at County facilities to 100 chargers by 2021 and contribute to meeting CAP Measure T-3.5 targets.</p> <p><b>Costs:</b> \$760,000 in one-time costs in FY 2020-21.</p> <p><b>Timeframe:</b> Short-Term (1 Year)</p>
<b>2-C</b>	<p><b>Recommendation:</b> Complete an EV charger site assessment study and develop the EV Charger Installation Program by FY 2022-23. Return to the Board for funding and install 2,040 Level II chargers by FY 2027-28. This recommendation would accelerate the installation of publicly accessible charging infrastructure at priority locations in the unincorporated area to meet the anticipated demand timeframe. Implementing actions include coordinating with regional partners to identify funding and infrastructure gaps to support vehicle electrification efforts and equitably distribute charging infrastructure across the region and developing an outreach plan to site charging infrastructure at multi-family residential and workplaces in the unincorporated area.</p> <p><b>Costs:</b> There is no additional funding requested specifically to complete an EV charger site assessment study. However, the installation of the chargers will have associated costs that would impact the availability of General Fund resources, including General Purpose Revenue and/or available General Fund fund balance, which would be included in future Operational Plans.</p> <p><b>Timeframe:</b> Long-Term (&gt;5 Years)</p>
<p><b>Implementing Actions:</b></p> <p>Continue to:</p> <ul style="list-style-type: none"> <li>• Coordinate with regional partners such as SANDAG, SDG&amp;E, CalTrans, and other local jurisdictions to evaluate regional EV charging infrastructure gaps and opportunities for funding in the region.</li> <li>• Participate in the CALeVIP, SDG&amp;E Parks Pilot, and Volkswagen Mitigation Trust infrastructure grant programs and coordinate with Electrify America to identify locations for possible charger installations in the unincorporated area as part of their Cycle 2 rural investment.</li> <li>• Educate the community on the economic and environmental benefits of EVs and promote available funding from infrastructure grant programs and EV incentives.</li> </ul> <p>2021-2025:</p> <ul style="list-style-type: none"> <li>• Lead an initiative with local agencies to streamline local EV Charger permitting process to provide certainty for infrastructure developers and reduce project timelines and costs.</li> <li>• By 2022, prepare an EV charger site assessment for County facilities and the unincorporated area and return to the Board of Supervisors with implementation options. The site assessment shall be prepared using consultant resources and shall consider the following:               <ul style="list-style-type: none"> <li>○ Highly travelled corridors, including east-west corridors and others lacking charging infrastructure;</li> </ul> </li> </ul>	

<b>County Operations – Goal 2</b>
Accelerate Installation of EV Charging Stations at Public Locations in County Facilities and in the Unincorporated County.
<ul style="list-style-type: none"><li>○ Priority areas and communities of concern with lower income and higher exposure to air pollutants;</li><li>○ Popular commercial and public destinations;</li><li>○ Public right-of-way options; and</li><li>○ Workforce centers.</li></ul>
2026-2030: <ul style="list-style-type: none"><li>● Keep pace with emerging technology and investigate cost effectiveness of transitioning program implementation to include:<ul style="list-style-type: none"><li>○ Remote charging and battery storage (including the re-use of EV batteries) infrastructure to increase grid resiliency in disaster prone areas;</li><li>○ DC fast charger installations at County facilities for public use and to benefit priority populations; and</li><li>○ Public right-of-way installation applications, including charging stations on streetlights, with partner agencies.</li></ul></li></ul>

<b>County Operations – Goal 3</b>
Promote and Incentivize County Employee EV Ownership.
<p><b>Recommendation: Promote and incentivize County employee EV use</b> by developing partnerships with banks, credit unions, dealerships to extend lending and pricing benefits. This recommendation would include employee outreach, and test drive events to promote and incentivize County employee EV use.</p> <p><b>Costs:</b> There is no additional funding requested specifically to expand the scope of the measure. However, the implementation of these options could have associated costs that would impact the availability of General Fund resources, including General Purpose Revenue and/or available General Fund fund balance, which would be included in future Operational Plans.</p> <p><b>Timeframe:</b> Mid-Term (2-4 Years)</p>
<p><b>Implementing Actions:</b></p> <p>Continue to:</p> <ul style="list-style-type: none"><li>● Prepare outreach materials to advertise the benefits of driving an EV for personal and fleet use.</li><li>● Host workplace charging challenges and collaborate with regional partners to hold EV “ride and drive” events at County facilities.</li><li>● Coordinate with and leverage existing County partnerships to extend lending and pricing benefits.</li></ul> <p>2021-2025:</p> <ul style="list-style-type: none"><li>● Establish employee ownership incentive programs including lending and pricing benefits, parking incentives, EV car share, and other similar strategies.</li><li>● Track and report on employee participation to determine GHG reductions.</li></ul>

Unincorporated area Roadmap recommendations leverage the County’s land use authority, permitting processes, and outreach platforms in order to increase EV ownership and charging installations in the unincorporated area. These goals support State EV goals and encourage regional collaboration to decrease GHG emissions from the transportation sector:

**SUBJECT: ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)**

*Goal 4: Incentivize and/or Require EV Charging Infrastructure in New and Existing Private Multi-Family Residential and/or Non-Residential Development.*

- **Targeted Outcome:** Increase charging station installations in new and existing private development.

*Goal 5: Fund EV Expert/Consumer Advocate as a Regional Resource.*

- **Targeted Outcome:** Increase EV ownership and charging station installations through education, outreach, regional collaboration, and incentives.

*Goal 6: Collaborate with Regional Partners to Support Public and Private Fleet Electrification.*

- **Targeted Outcome:** Increase EV use in regional light-, medium-, and heavy-duty fleets.

The following tables outline three goals and three recommendations for the unincorporated area:

<b>Unincorporated Area – Goal 4</b>
<b>Incentivize and/or Require EV Charging Infrastructure in New and Existing Private Multi-Family Residential and/or Non-Residential Development.</b>
<p><b>Recommendation:</b> Prepare a cost/benefit analysis of options to incentivize and/or require EV charger installations in new and/or retrofits of multi-family and non-residential development in the unincorporated area. This recommendation would explore options to increase the availability of publicly accessible, private residential, and workplace charging stations in private development throughout the unincorporated area. Incentives could include amending the County’s Green Building Incentive Program to include EV charging stations as a qualifier for expedited plan check and reduced building permit fees, a permit fee waiver, and reduced parking space requirements for projects that include EV charging station installations. Requirements to be considered could include adopting building code requirements that exceed the State’s existing EV charging parking space requirements.</p> <p><b>Costs:</b> There is no additional funding requested specifically to prepare a cost/benefit analysis. However, the implementation of these options could have associated costs depending on the types of incentives and/or requirements, which may result in the request for a waiver of the full cost recovery directive of Board Policy B-29, <i>Fees, Grants, Revenue Contracts – Department Responsibility for Cost Recovery</i> and would impact the availability of General Fund resources, including General Purpose Revenue and/or available General Fund fund balance. These costs and a request for funding would be brought to the Board for further consideration.</p> <p><b>Timeframe:</b> Mid-Term (2-4 Years)</p>
<p><b>Implementing Actions:</b></p> <p>Beginning in 2019:</p> <ul style="list-style-type: none"><li>• Evaluate parking and related EV charging stations requirements to implement shared parking facilities.</li><li>• Promote streamlined County EV charging station permit process to encourage development of charging infrastructure in the unincorporated area.</li></ul> <p>2021-2025:</p> <ul style="list-style-type: none"><li>• Evaluate options for Building Code amendments for multi-family and non-residential new development and major retrofits to:<ul style="list-style-type: none"><li>○ Increase requirements for “EV capable” parking spaces (conduit and electrical panel capacity);</li></ul></li></ul>

<b>Unincorporated Area – Goal 4</b>
<b>Incentivize and/or Require EV Charging Infrastructure in New and Existing Private Multi-Family Residential and/or Non-Residential Development.</b>
<ul style="list-style-type: none"><li>○ Require “EV ready” parking spaces (conduit, wiring, and electrical panel capacity); or</li><li>○ Require installation of EV charging stations.</li><li>● Develop options to incentivize multi-family and non-residential new development and major retrofits to install EV charging stations through:<ul style="list-style-type: none"><li>○ Green Building Incentive Program;</li><li>○ Permit fee waiver; or</li><li>○ EV parking space incentives.</li></ul></li></ul>
2026-2030:
<ul style="list-style-type: none"><li>● Keep pace with emerging technology and investigate the costs/benefits of incentivizing and/or requiring:<ul style="list-style-type: none"><li>○ Alternate ZEV fueling station, such as hydrogen fueling;</li><li>○ Wireless charging applications; and</li><li>○ Vehicle-to-grid compatible systems.</li></ul></li></ul>

<b>Unincorporated Area – Goal 5</b>
<b>Fund EV Expert/Consumer Advocate as a Regional Resource.</b>
<p><b>Recommendation:</b> Identify regional partners and cost sharing opportunities to fund a regional “EV Expert/Consumer Advocate” that would provide no-cost consultations for residents, agencies, and businesses to learn more about available incentives, technologies, and charger installation procedures on an ongoing basis. This service would provide education and outreach of EV technology and increases awareness of the environmental and economic benefits of transportation electrification. A similar service was previously administered by SANDAG and is no longer being funded. This recommendation would extend this previously operated service through a regional cost-share program contracted through SANDAG with local and regional agencies.</p>
<p><b>Costs:</b> Not-to-exceed \$25,000 in ongoing costs beginning in FY 2020-21.</p>
<p><b>Timeframe:</b> Ongoing</p>
<p><b>Implementing Actions:</b></p>
Beginning in 2019:
<ul style="list-style-type: none"><li>● Convene local agency partners to determine cost-share agreement between agencies to cover the approximate \$75,000 annual program administration cost.</li><li>● Procure a third-party entity to administer EV Expert/consumer advocate service to provide general and technical support to residents, agencies, and businesses on EV-related topics including incentive availability, technology, and charger installation procedures.</li><li>● Lead and convene local agency partners and dealerships to develop a web based and mobile application that provides a “one-stop-shop” for consumer related information including rebates, incentives, EV vehicle model comparisons, and costs.</li></ul>
2021-2025:
<ul style="list-style-type: none"><li>● Evaluate EV Expert/Consumer Advocate effectiveness and identify opportunities to expand/modify the service to satisfy regional demand.</li></ul>
2026-2030:
<ul style="list-style-type: none"><li>● Expand EV expert advice capabilities to cover emerging ZEV technologies including such as hydrogen fuel cell technology.</li></ul>

<b>Unincorporated Area – Goal 6</b>	
Collaborate with Regional Partners to Support Public and Private Fleet Electrification.	
<p><b>Recommendation:</b> Develop public and private regional partnerships to provide fleet electrification technical support to convert large regional fleets such as delivery services, rideshare, school districts, and transportation network companies to EV on an ongoing basis. This recommendation would reduce GHG emissions from regional transportation sources throughout the region. Examples of efforts include coordination around state funding, regional support for large fleet electrification, identification of regional charging infrastructure needs, and education and outreach to the regional business community.</p> <p><b>Costs:</b> There is no additional funding requested specifically to explore participation in regional partnerships. However, the participation could have associated costs that would impact the availability of General Fund resources, including General Purpose Revenue and/or available General Fund fund balance, which would be included in future Operational Plans.</p> <p><b>Timeframe:</b> Ongoing</p>	
<p><b>Implementing Actions:</b></p> <p>Continue to:</p> <ul style="list-style-type: none"><li>• Coordinate with regional partners such as SANDAG, SDG&amp;E, and other local jurisdictions to:<ul style="list-style-type: none"><li>○ Monitor existing pilot programs and identify future programs to electrify regional fleets including delivery service, school district, transportation network companies, and others to electric in the unincorporated area;</li><li>○ Evaluate fleet opportunities within the unincorporated county and conduct targeted outreach in collaboration with regional partners;</li><li>○ Evaluate charging infrastructure placement to ensure grid stability and resiliency; and</li><li>○ Identify gaps in EV adoption and consider ride share EV fleets to make this technology more accessible, especially to priority populations in the region.</li></ul></li><li>• Promote clean transportation innovations to demonstrate leadership and attract investment in future charging and vehicle technologies.</li></ul>	

### **Incentives and Funding**

There are a number of incentive and grant programs that may be available to implement the Roadmap recommendations. These programs are competitive and offered on a rolling basis, and are restricted based upon income, tax status, and types of vehicles purchased.

The federal government currently provides an EV tax credit program which can result in a maximum of \$7,500 for new light-duty vehicles but this program will phase out as individual automakers reach sales of 200,000 EV models. California offers rebates of up to \$7,000 through the Clean Vehicle Rebate Project (CVRP) to individuals and municipalities that qualify. Medium- and heavy-duty EV model incentives are available through the California Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP), Carl Moyer Program, and Climate Air Protection Program (CAPP) among others.

The County has received CVRP rebates in the past to fund fleet EV conversions and staff will continue to monitor available grant and incentive programs to reduce light-duty fleet EV price premiums of \$9,500-\$14,800 per vehicle. Staff is also monitoring opportunities to compete for medium- and heavy-duty replacement vehicle funding.

**SUBJECT: ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)**

SANDAG's *EVCS Funding Opportunities Report* (2018) has identified gaps in regional EV charging infrastructure funding for single-family residential, workplace, and public applications to meet projected demand in 2025.

Charging infrastructure incentives are generally offered at the State and regional level with opportunities in several areas. Currently, SANDAG and APCD are collaborating with the California Energy Commission CALeVIP program to launch a Regional EV Charging Station Incentive Program in 2020. This rebate program will support the development of publicly available charging infrastructure to meet projected demand and will contribute to the charger installations required by CAP Measure T-3.5. County staff is coordinating across departments and preparing to apply for this funding when available. If granted, funding would support the purchase of new charging infrastructure described in Goal 2. The County will also continue to collaborate with regional partners including San Diego Gas & Electric, SANDAG, Caltrans and other organizations that may be seeking to identify locations within the unincorporated area to install charging infrastructure.

Roadmap and CAP implementation education and outreach efforts in the unincorporated area include strategies to increase general public, fleet operators, and employer's awareness of available vehicle and charging infrastructure incentives. These efforts include targeted outreach and collaboration with community-based and business-based organizations to reach communities of concern and targeted audiences to increase the awareness of vehicle and charging infrastructure incentives.

**ENVIRONMENTAL STATEMENT**

As explained in the Environmental Review Update Checklist dated October 16, 2019, there are no substantial changes in circumstances under which the project will be undertaken that will require major revisions to the previous Final Supplemental Environmental Impact Report dated February 14, 2018 due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Also, there is no "new information of substantial importance" as that term is used in the California Environmental Quality Act (CEQA) Guidelines Section 15162(a)(3). In addition, this project is exempt from CEQA under CEQA Guidelines Section 15303 because the project would result in the installation of a limited amount of small electrical equipment and would not trigger any exceptions under Section 15300.2.

**LINKAGE TO THE COUNTY OF SAN DIEGO STRATEGIC PLAN**

Today's proposed action to receive the Electric Vehicle Roadmap and to provide direction to staff on the goals and recommendations contained in the Roadmap, supports the Operational Excellence Initiative in the County of San Diego's 2019-2024 Strategic Plan by pursuing policy and program changes to positively impact residents. Today's proposed action also supports the Sustainable Environments/Thriving Initiative by providing and promoting services that increase the well-being of residents; increasing consumer and business confidence; and enhancing the quality of the environment by focusing on sustainability, pollution prevention and strategic planning.

**SUBJECT:** ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Sarah E. Aghassi". The signature is fluid and cursive, with a prominent initial "S".

SARAH E. AGHASSI  
Deputy Chief Administrative Officer

**ATTACHMENT(S)**

*Note: Due to the size of the attachments, the documents are available online through the Clerk of the Board's website at [www.sandiegocounty.gov/content/sdc/cob/bosa.html](http://www.sandiegocounty.gov/content/sdc/cob/bosa.html).*

Attachment A – Electric Vehicle Roadmap

Attachment B – Environmental Documentation

**SUBJECT:** ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)

**AGENDA ITEM INFORMATION SHEET**

**REQUIRES FOUR VOTES:**            Yes                      No

**WRITTEN DISCLOSURE PER COUNTY CHARTER SECTION 1000.1 REQUIRED**

     Yes                      No

**PREVIOUS RELEVANT BOARD ACTIONS:**

April 10, 2019 (8), Plotting the County’s Electric Vehicle Roadmap; February 14, 2018 (1), County of San Diego Climate Action Plan and General Plan Amendment, POD15-002, GPA16-007; August 3, 2016 (12), An Ordinance Amending County Building Code to Streamline Electrical Vehicle Charging Permits; October 27, 2015 (6), Adopt 2015-2020 Strategic Energy Plan, Receive 2014-2015 Strategic Energy Plan Progress Report, Authorize Energy Initiative Partnership Program Agreements, Authorize Advertisement and Award of Energy Related Contracts; April 8, 2015 (10), An Ordinance Amending County Building Code to Promote Photovoltaic and Electric Vehicle Charging Systems.

**BOARD POLICIES APPLICABLE:**

- F-22 – *Lease of Real Property for County Use*
- G-15 – *Design Standards for County Facilities and Property*
- H-1 – *Fleet Management Internal Service Fund*
- H-2 – *Fleet Vehicle and Mobile Equipment Acquisition Policy*

**BOARD POLICY STATEMENTS:**

In accordance with Board Policy G-15 and H-2, the Department of General Services (DGS) certifies that the charging station infrastructure development at County of San Diego (County) facilities and fleet electric vehicle conversion are worthy of funding with County resources if external financing were unavailable. These DGS projects will help to reduce fleet greenhouse gas emissions and provide fleet, public, and employee charging station infrastructure to encourage the use of electric vehicles in the region.

**MANDATORY COMPLIANCE:**

N/A

**ORACLE AWARD NUMBER(S) AND CONTRACT AND/OR REQUISITION NUMBER(S):**

N/A

**ORIGINATING DEPARTMENT:** Planning & Development Services

**OTHER CONCURRENCE(S):**      Department of General Services  
   Department of Human Resources  
   San Diego Air Pollution Control District

**SUBJECT:** ELECTRIC VEHICLE ROADMAP (DISTRICTS: ALL)

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