



TOWN OF
SAN ANSELMO
EST. 1907

Town of San Anselmo
Electric Vehicle Strategy

Passed by the Town Council on February 12, 2018

Introduction

This Electric Vehicle Strategy is prepared to advance the adoption of Electric Vehicles (EVs, or zero emission vehicles) in San Anselmo with the goal of reducing greenhouse gasses from transportation sources. The Town Sustainability Commission prepared this plan in follow up to their recommendation to develop a draft plan, made to the Town Council at a Greenhouse Gas update briefing in 2018. This strategy furthers the Town’s Climate Action Plan Community Mitigation Measure 3.3.C5 “Accelerate Adoption of Electric Vehicles.”

Transportation produces the largest percent of greenhouse gas emissions in the Town of San Anselmo. Transportation activities accounted for approximately 55% of San Anselmo’s emissions in 2016.¹ In addition, Town government vehicles and Town government employee commuting make up about 26% of the greenhouse gases generated by the Town operations. The Town can reduce its greenhouse gas emissions significantly by encouraging walking, biking, public transit, carpooling, and use of zero emission vehicles in combination with green power sources.

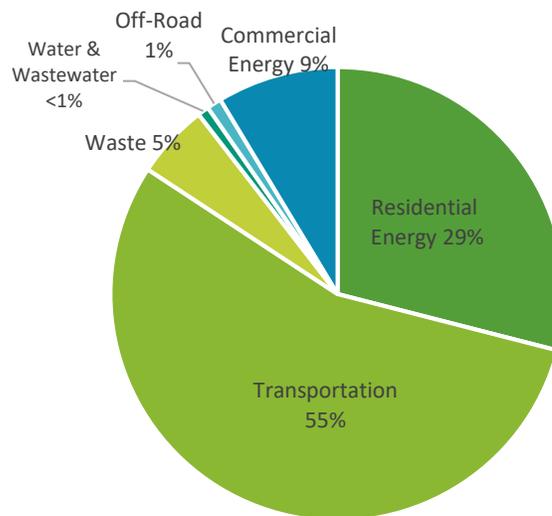


Figure 1 Town-wide Emissions by Sector 2016

In 2018, Governor Brown issued Executive Order B-48-18 which seeks 5 million zero-emission vehicles in California by 2030.² The zero-emission vehicle market is consistently expanding. As

¹ “Town of San Anselmo 2016 Greenhouse Gas Inventories for Community and Government Operations Emissions”, November 2018, by the Marin Climate & Energy Partnership

² <https://www.gov.ca.gov/2018/01/26/governor-brown-takes-action-to-increase-zero-emission-vehicles-fund-new-climate-investments/>

of July 2018, over 410,000 zero emission vehicles have been sold in California. In 2017, zero emission vehicles constituted 5% of new car sales in California, up from 3.8% in 2016.³

Based on the critical need to act swiftly to combat climate change as noted in recent federal and UN reports, in 2018 the Sustainability Commission recommended the Town Council adopt a goal of increasing the number of electric vehicles in Town from 377 to 3,000 by 2030⁴, which would represent approximately 23% of all vehicles in San Anselmo, an increase from the current total of about 3% (as noted in Table 1 below). This will reduce total emissions by 6,680 metric tons of carbon dioxide annually, about 10% of San Anselmo's current annual emissions.⁵ This will also support State goals of 5 million electric vehicles on the road by 2030, as well as Marin County's aggressive GHG reduction goals as articulated in Drawdown Marin⁶.

The objectives of this plan are to: 1) to summarize the Town's current EV infrastructure and policies and 2) to set goals and strategies to increase the use of EVs to further local and state goals for transportation emissions reduction. There are two sets of actions for the Town of San Anselmo. One is to show leadership by replacing Town vehicles with EVs. Second is to take steps to encourage residents and workers in San Anselmo to switch to EVs. Since most of the vehicles in San Anselmo are owned by the residents of San Anselmo, the most effective actions the Town can take are those that will motivate the residents of the Town to lease or buy EVs.

The goals of the EV Strategy are:

1. Increase and accelerate EV use within the Town to achieve 3,000 zero emission vehicles in San Anselmo by 2030.
2. Increase the visibility and awareness of EVs as a preferred transportation option.
3. Make it easier and less expensive to install electric vehicle charging infrastructure in the Town.
4. Advance an efficient distribution of public charging infrastructure that is optimized for future technologies and EV demand.

³2018 ZEV Action Plan Priorities Update, Office of Governor Edmund G. Brown Jr., Governor's Interagency Working Group on Zero-Emission Vehicles, September 2018 <http://business.ca.gov/Portals/0/ZEV/2018-ZEV-Action-Plan-Priorities-Update.pdf>

⁴ 3,000 EVs would equal 23% of all fuel type vehicles in Town as of January 1, 2018.

⁵ Using the following assumptions: 1.) Origin-Destination method to allocate Vehicle Miles Traveled; 2.) Average San Anselmo vehicle was driven about 7,628 miles per year in 2016; 3.) The ZEV fleet in 2025 will be comprised of 65% BEVs and 35% PHEVs, similar to the split reported by the DMV in 2018; 4.) ZEV uses .32 kWh per mile; 5.) 74% of the distance a PHEV drives is electric; 6.) The carbon intensity of electricity is the same as it was in 2016. As electricity gets greener, the emissions reduction will increase over time. This number could be higher if we assume the strategy will also encourage workers and visitors to drive zero emission vehicles to San Anselmo.

⁶ Drawdown Marin is a community-driven campaign to reduce greenhouse gas emissions and prepare for climate change impacts. <https://www.marincounty.org/depts/cd/divisions/sustainability/climate-and-adaptation/drawdown-marin>

The EV Strategy has an Action Plan that identifies strategies to accomplish each goal. Each strategy will require additional analysis and further actions for implementation. The document sets preliminary timelines to accomplish these goals.

Grant funding and rebates are available to assist the Town and property owners to fund vehicle leases or purchases, charging stations and other strategies. Funding agencies include the Transportation Authority of Marin (TAM);⁷ MCE Clean Energy (MCE);⁸ the Bay Area Air Quality Management District (BAAQMD);⁹ Pacific Gas and Electric (PG&E);¹⁰ State agencies, such as the California Energy Commission (CEC);¹¹ and the Federal government.¹²

Town Progress Accelerating Adoption of Electric Vehicles

In April 2011, the Town Council adopted a Climate Action Plan with goals to:

- Purchase or lease low or zero-emissions vehicles and the most fuel-efficient models possible for the Town fleet, including police patrol cars and construction vehicles.
- Increase ownership of plug-in electric vehicles (EV) by providing EV charging station infrastructure, where appropriate, and encouraging property owners and developers to install EV charging stations in commercial and residential projects.

EV Ownership

As of January 1, 2018, EVs made up 3% of the total vehicles in San Anselmo. Currently there is no source of information for electric bicycles.

Table 1 San Anselmo Vehicles by Fuel Type, CA Department of Motor Vehicles, 1/1/18

Gasoline	10,583	82%
Hybrid Gas	998	8%
Ethanol	515	4%
Diesel	395	3%
Battery Electric/Plug In Hybrid	377	3%

⁷ <https://www.tam.ca.gov/projects-programs/alt-fuel-electric-vehicle-program/>

⁸ <https://www.mcecleanenergy.org/news/press-releases/electric-vehicle-programs-2018/>

⁹ http://www.baaqmd.gov/?sc_itemid=F026D4AC-FE69-4FBD-9232-187E17FC428D

¹⁰ https://www.pge.com/en_US/large-business/solar-and-vehicles/clean-vehicles/ev-charge-network.page

¹¹ <https://calevip.org/>

¹² <https://www.energy.gov/sites/prod/files/2016/07/f33/Guide%20to%20Federal%20Funding%20and%20Financing%20for%20PEVs%20and%20PEV%20Charging.pdf>

Natural Gas/Methanol/Fuel Cell/Propane	11	>1%
Total	12,879	

Building and Zoning Regulations

The Town has not adopted any special zoning standards or requirements for EV parking spaces.

The Town has adopted the California Green Building Standards (CALGreen) Code, which includes mandatory provisions for pre-wiring to support the future installation of charging stations. Pre-wiring is when builders provide sufficient basic infrastructure, such as electrical conduits, and adequate electrical panel and circuitry capacity, for future electric vehicle equipment. New single-family homes and duplexes with attached garages must pre-wire for one EV charger. New multi-family developments (17 or more units) must pre-wire 3% of the total parking spaces. Non-residential developments with 10 or more parking spaces must pre-wire for between 3% and 10% of total parking spaces.

Most construction in the Town is remodels of single-family residences. In 2018, only 5 units were approved that will require EV pre-wiring. None of the approved apartment projects (754 Sir Francis Drake and 1 Lincoln Park) meet the unit threshold to require EV infrastructure under current regulations.

Fleet Integration

Currently, there are no EVs in the Town fleet. In 2019, the Public Works and Building Department will replace one building inspection gasoline vehicle with a leased Nissan Leaf and will be leasing two additional Nissan Leaf electric vehicles for staff use. The Town is considering replacing gasoline engines with electric vehicles in 2 or 3 medium to heavy duty trucks.

Parking Policies

EV drivers have had free parking, within posted limits, since 2011 ([Town Council Resolution 3937](#)). The Town currently allows free EV charging at the Town parking lots with pay stations. In order to assist with time limit enforcement, the Town now charges for EV parking at lots with pay stations between 7:00 a.m. and 6:00 p.m.

Charging Stations

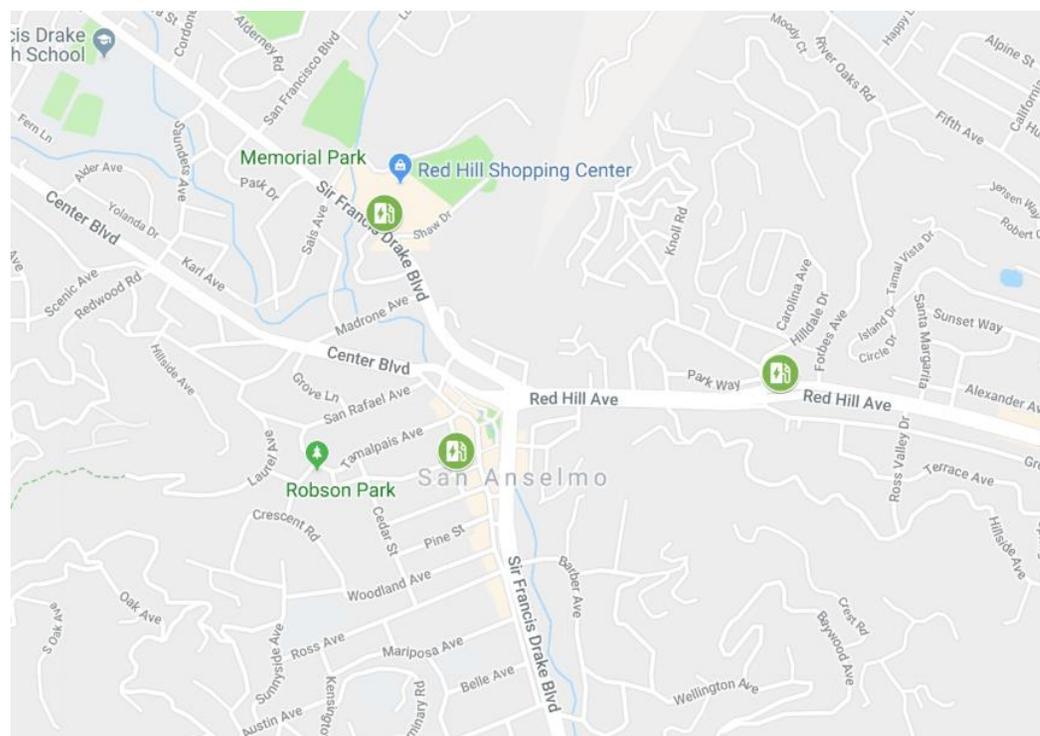
The Town has issued 12 permits for private electric vehicle charging stations since 2014. Most permits are issued on the same day as the application for \$132, which is the standard cost for an electrical permit. The Town Council eliminated the permit fee for installation of EV charging stations, effective in February 2019.

There are currently 13 publicly accessible charging stations in the Town:

8 Level 2 chargers (4 with double heads) in Town parking lot on Magnolia Ave.

2 DC Fast chargers, United Market, 100 Red Hill Ave.

3 Level 2 chargers, Red Hill Shopping Center, 834-916 Sir Francis Drake Blvd.



TYPES OF CHARGERS

Level 1: provides charging through a standard plug, 120-volt AC plug. Based on the battery type and vehicle, AC Level 1 charging requires 15-20 amps of service and adds about 2 to 5 miles of range per hour of charging time. Level 1 is the slowest and least-expensive charging option.

Level 2: provides charging through either a 240-volt (typical in residential applications) or 208-volt (typical in commercial applications) AC plug. Level 2 charging requires 20 to 100 amps of service (typically 20-40 amps) and adds about 10 to 25 miles of range per hour of charging time.

DC Fast Charging: Direct-current (DC) fast charging equipment, also called Level 3, requires a dedicated circuit (20-100 amps) with a 208/480-volt AC three-phase input. It is the fastest charging option available. EVs equipped with either a CHAdeMo or SAE Combo DC fast charge receptacle can add 50 to 70 miles range in about 20 minutes.

EV ACTION PLAN

Action	Lead	Timeline	Cost/Funding Source
<p>1. Increase and accelerate EV use within the Town to achieve 3,000 zero emission vehicles in San Anselmo by 2030.</p> <p><i>Measure of success:</i> number of EVs in Town, number of EV chargers and e-bike charging stations.</p>			
1.1. When adopting the 2019 Energy Code Standards (which take effect 1/1/20), consider adopting the County of Marin model ordinance that includes more stringent requirements for pre-wiring single family and multifamily development than state regulations, e.g. requiring pre-wiring for substantial remodels, taking into consideration the cost to property owners. Require new and remodeled commercial projects to install a minimum number of electric vehicle chargers for use by employees, customers, and residents.	Public Works Engineering and Inspection (Public Works)	August 2019	No cost for County model ordinance - Staff Time and Town Attorney Review
1.2. When adopting the 2019 Energy Code Standards (which take effect 1/1/20), consider requiring new and remodeled commercial projects to install a minimum number of electric vehicle chargers for use by employees, customers, and residents.	Public Works	August 2019	Staff Time and Town Attorney Review
1.3. Consider requiring new and remodeled gas stations to provide EV fast chargers and hydrogen fueling stations.	Planning	2019-2020	Staff Time Only
1.4. Consider feasibility of incentives for EVs such as providing free parking for EVs at metered parking spaces, but requiring EVs to comply with posted time limits.	Public Works	2020	Staff Time Only
1.5. Promote adoption of electric bicycles, scooters and motorcycles.	Planning	Ongoing	Staff Time Only
1.6. Identify locations for e-bike charging stations.	Public Works	2020	Staff Time Only
1.7. Run Town fleet vehicles on 100% renewable sources by 2030. Purchase or lease EVs for Town fleet wherever possible, unless no	Public Works	2019	General Fund and Grants

Action	Lead	Timeline	Cost/Funding Source
model is economically viable. Ensure that all available pricing incentives, purchase contracts and financing options are considered when assessing EV fleet purchases. Consider resale value of vehicles in cost comparisons.		3 EVs and one converted truck	Including TAM Rebates. 2019 \$60,000 (already allocated) 2020-2030 \$50,000/yr. (minus fuel savings)
1.8. Encourage or require, as practicable, ride hailing companies to utilize zero emission vehicles.	Administration	As Opportunities Arise	Staff Time Only
1.9. Update the EV Strategy annually to reflect advances in EV policies and technologies.	Planning, SC	March 2020	Staff Time Only
<p>2. Increase the visibility and awareness of EVs as a preferred transportation option.</p> <p><i>Measure of success:</i> number of EVs in Town fleet and number of impressions delivered by media coverage, number of public participants reached during dedicated outreach activities.</p>			
2.1. Initiate public awareness campaign for benefits of EV ownership, available rebates, preferential utility rates and pricing, and expected electricity costs as compared to gasoline powered transportation, through mechanisms including the Town newsletter, website, and neighborhood social media, and over-the-counter handouts developed by EV organizations at Town Hall.	Planning, Sustainability Commission (SC)	February 2019 with information posted at least quarterly	Staff Time Only
2.2. Seek opportunities to promote EVs at Town events, such as by running a Public Service Announcement during summer Movies in the Park and including EV/Ebikes in the Country Fair Day parade.	Planning, SC	2019	Staff Time Only

Action	Lead	Timeline	Cost/Funding Source
2.3. Coordinate test drive events with local EV dealers, manufacturers and related non-profit organizations to familiarize residents with EV technology and use these forums to present information about available federal and state incentives which significantly reduce costs.	Planning, SC	2019	Staff Time Only
2.4. Repair or replace Town electric bicycles.	Public Works	2019	\$2,000 bike repair or \$3,000 General Fund + TAM grants for new
2.5. Apply decals to Town EVs to promote Town's use of Zero Emissions Vehicles.	Public Works	2019	No cost with Drive Clean Marin materials
<p>3. Make it easier and less expensive to install electric vehicle charging infrastructure in the Town.</p> <p><i>Measure of success:</i> Number of charging stations installed, and time required to issue permits for charging infrastructure.</p>			
3.1. Create an effective and efficient permitting process to set clear and transparent expectations for required materials, fees, the review process, and what plan reviewers and building inspectors will be looking for. AB 1236 (Statutes of 2015, Chapter 598) requires the Town to develop an expedited, streamlined permitting process for EV charging stations. As part of this process, the Town must adopt a checklist of all requirements with which electric vehicle charging stations shall comply to be eligible for expedited review.	Public Works	2019	Staff Time
3.2. Publish submittal checklist and plan check requirements for EV projects on the Town website.	Public Works	2019	Staff Time

Action	Lead	Timeline	Cost/Funding Source
3.3. Continue to waive permit fees for EV charging infrastructure.	Public Works	Ongoing	\$150/permit
3.4. Affirm that charging in an existing legal parking space is an accessory use that does not require a planning permit if charging is not the primary purpose of the site.	Planning	2019-2020	Staff Time and Town Attorney Review
3.5. Affirm that charging spaces designated for EVs count toward meeting minimum parking requirements for business owners and developers.	Planning	2019-2020	Staff Time and Town Attorney Review
3.6. Consider reduced parking requirements for sites with EV charging spaces, particularly since charging improvements can lead to requirements for additional disabled parking, which can reduce site parking.	Planning	2019-2020	Staff Time and Town Attorney Review
<p>4. Advance an efficient distribution of public charging infrastructure that is optimized for future technologies and EV demand.</p> <p><i>Measure of success:</i> number of charging stations in Town.</p>			
4.1. Increase the number of public charging stations and locations to 162 by 2030 ¹³ taking advantage of all relevant grants including funds available through TAM, PG&E, MCE and BAAQMD.	Public Works and Private Property Owners	2019-2020 Install 2 at Pine Street Lot Install 10 in public location	General Fund and Grants 2019-2020 \$25k Pine Street/No cost PG&E Grant
4.2. Install chargers for Town vehicles that may also be used by the public.	Public Works	As Chargers Installed	No Cost if Fee Structure Includes Costs

¹³ This would include both public and private sites. According to the Department of Energy, towns (population 2,500 to 50,000) need 54 public EV plugs per 1,000 EVs.

Action	Lead	Timeline	Cost/Funding Source
4.3. Promote countywide efforts by MCE, PG&E and others to provide rebates for new or used electric vehicles and/or charging stations.	Planning	As opportunities available	Staff Time Only
4.4. Consider EV charging stations and EV conduit for all public parking lot improvements, including parks.	Public Works	As Parking Lots Are Improved	General Fund, Grants
4.5. Explore innovative opportunities to expand the Town's EV charging network, such as installing chargers at existing streetlight locations.	Public Works	2019-2020	Staff Time Only
4.6. Work with PG&E and other entities to identify multi-family and workplace charging sites appropriate for available incentive programs, such as EV Charge Network.	Planning and Public Works	As Programs Available	Staff Time Only
4.7. Encourage Tamalpais Union High School District to install publicly available charging stations	Planning	2019	Staff Time Only
4.8. When installing conduit at Town lots, add EV conduit.	Public Works	As Lots Are Improved	General Fund
4.9. Establish at least one electric bicycle charging station near a bicycle parking area.	Public Works	2020	\$2,000
4.10. Provide wayfinding signage to public EV chargers and link to existing wayfinding programs.	Public Works	2020	General Fund, Grants
4.11. Develop rules and a fee structure for Town EV charging spaces that recovers costs, encourages user turnover and supports the EV program.	Public Works	2020	Savings of \$1000 per month/ Staff Time