City of Piedmont
Sustainability Division

2021 Electric Vehicle Community Survey

About the Survey

The online survey was created in Google Forms, sent out over several City email lists, and posted on the City's website news section. The survey was available from 10/29/2021 to 11/26/2021. 164 Piedmont residents opted to participate in the survey.

Key Findings

- An overwhelming share of respondents are familiar with electric vehicles (EVs) and either currently own or lease one or are looking to purchase or lease one in the near future. Of those who currently drive an EV, most drive a battery EV.
- No tailpipe emissions, the ability to charge at home, the cost to charge an EV compared to fueling a gasoline-powered vehicle, and the ability to charge at a public charging station in Piedmont are the most common responses that would encourage respondents to consider purchasing or leasing an EV. Not enough public charging stations, insufficient driving range ('range anxiety'), nowhere to charge at home, and long charging times are the most common responses that are holding respondents back from purchasing or leasing and EV.
- Most respondents who currently drive an EV use Level 2 charging and charge either at home or a public charging station.
- The main challenges surrounding both those who have had an EV charger installed at home and those who have not had an EV charger installed at home are cost and the need to upgrade an electrical panel.
- A majority of respondents are likely to use public EV charging stations in Piedmont and prefer Level 3/DCFC.

Background

- The City of Piedmont's Climate Action Plan 2.0 provides a roadmap for reducing greenhouse gas (GHG) emissions in the community. A major goal of the plan is to eliminate emissions from the transportation sector, which has consistently comprised nearly half of Piedmont's total GHG emissions. One strategy to achieve this is by accelerating the adoption of electric vehicles (EVs) and the growth of EV Charging Stations in Piedmont. The City has an ambitious target of 50% EV ownership by 2030 and 100% EV ownership by 2050. Currently, EVs account for 11% of the vehicles registered in Piedmont. The City does not have any public EV charging stations currently installed; however, during their October 18, 2021 meeting, the City Council approved an agreement for the installation of four DC fast EV charging stations on Magnolia Avenue near the Exedra.

- The purpose of the survey was to gauge residents' thoughts on EVs and to better understand Piedmonters; EV charging needs and preferences.
- The survey was designed by staff in the Public Works Department.
- The survey was first sent out to residents, through multiple city email lists, in early November 2021, shortly thereafter, a news blurb was written for the city website landing page, linking to the survey.
- The survey ran until November 26, 2022. In total, 164 people self-selected to participate in the survey.
- The survey included a mix of multiple choice and short answer questions.
- Below, staff have listed many of the multiple-choice questions posed in the survey, along with residents' answers to those questions. Staff have also summarized the basic takeaways from respondents' written answers.

A link to the City's EV website page can be found here: https://piedmont.ca.gov/services___departments/planning___building/about_building_/electric_vehicles

Selected Multiple Choice Questions and Answers:

Q: In general, what is your familiarity with electric vehicles (EVs)?

73% Very familiar
22% Fairly familiar
4% Not too familiar
1% Not at all familiar

Q: Do you currently drive an EV?

70% Yes
30% No

Q: If you currently drive an EV, which type do you drive?

70% Battery Electric Vehicle (BEV) – a type of EV that exclusively uses batteries (no fuel)
24% Plug-In Hybrid Electric Vehicle (PHEV) – a type of EV that runs on both an internal combustion engine and an electric motor that uses energy stored in a battery. Can operate in an all-electric mode.
5% Hybrid Electric Vehicle (HEV) – a type of EV that runs on both an internal combustion engine and an electric motor that uses energy stored in a battery. The battery is charged through regenerative braking, not by plugging in.
1% Don't know

Q: If you do not currently drive an EV, are you considering purchasing or leasing an EV?

74% Yes
12% No
14% Don't know

Q: If you are considering purchasing or leasing an EV, when do you anticipate doing so?

36% Long term (years)
36% Medium term (months)
9% Short term (weeks)
19% Don't know

Q: In general, how likely are you to use public EV charging stations in Piedmont?

30% Very likely
22% Somewhat likely
14% Somewhat unlikely
27% Very unlikely
7% Don't know

Q: If you do not own or lease an EV currently, do public chargers being available in Piedmont impact your likelihood to purchase or lease an EV?

22% Yes, I would be much more likely to purchase or lease an EV
28% Yes, I would be somewhat more likely to purchase or lease an EV
46% No impact
5% Don't know

Q: The following locations are either being evaluated for potential public EV charging station sites in Piedmont or have been approved for installation (Site #3 Magnolia Avenue). Please rank your likelihood of using the EV charging stations in the following locations:

	Very likely	Somewhat likely	Somewhat unlikely	Very unlikely	Don't know
Site #1 Red Rock Road (near Coaches Field)	8%	20%	24%	46%	2%
Site #2 La Salle Ave (near Hampton Field)	14%	21%	21%	43%	1%
Site #3 Magnolia Ave (between Bonita and Highland Ave)	33%	32%	17%	17%	1%
Site #4 Grand Ave (between Sunnyside and Wildwood Ave)	24%	19%	23%	34%	1%
Site #5 Linda Ave (between Oakland and Linda Ave)	19%	22%	21%	36%	2%

Q: What type or charger would you like to see at these location(s)?

75% Level 3/DCFC
25% Level 2

Takeaways from Written Responses:

- A majority of respondents either own or lease an EV, knows someone who owns or leases an EV, and have driven or ridden in an EV.
- For those respondents who currently driven an EV, the most common makes and models they own or lease include the Tesla Model 3 and Model Y, Chevrolet Bolt, Kia Niro, Audi E-Tron, Toyota Prius, and Nissan Leaf. For those respondents are considering purchasing or leasing an EV, the makes and models they are most interested in are the Tesla Model 3 and Model Y, Ford F-150 Lightening, Toyota Prius, and Toyota RAV4.
- When respondents were asked to select what attributes would encourage them the most to consider purchasing or leasing an EV, the most common answers include: no tailpipe emissions (exhaust fumes); ability to charge at home; cost less to charge than fueling a gasoline-powered vehicle; ability to charge at a public charging station in Piedmont; a purchase price similar to a gasoline-powered vehicle in the same class; and lower maintenance costs than a gasoline-powered vehicle.
- On the other hand, when respondents were asked to select what attributes are holding them back the most from purchasing or leasing an EV, the most common answers include: not enough public charging stations; insufficient driving range (‘range anxiety’); nowhere to charge at home; long charging times; and the purchase price.
- For respondents who currently drive an EV, an overwhelming majority reported they use Level 2 charging and that they charge at home. A majority of respondents who currently drive an EV also noted they use public or network charging stations.
- When respondents who have an EV charger at home were asked what some of the challenges were, if any, they experienced with the installation process that they would like the City to address, many noted they did not experience any challenges or did not need to install anything (i.e., they use a regular outlet to charge). Others noted challenges surrounding upgrading their electrical panel, difficulties getting a permit, and the cost of an electrician to install the charger.
- When respondents who do not have an EV charger at home were asked some of the reasons why they have not installed one yet, some noted it is due to needing to upgrade their electrical panel and that they do not have a garage or driveway at their residence.
- When asked what impacts their likelihood of using public EV chargers in Piedmont, respondents most frequently cited the availability of charging, the location of the charger, the type of charger (Level 2 vs DCFC), and the cost of charging. If additional public EV chargers were available in Piedmont, most respondents would prefer to use a Level 3/DCFC.