

Electric Vehicle Survey Findings and Methodology: Virginia

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Methodology

To better understand American attitudes toward plug-in electric vehicles (PEVs), the Union of Concerned Scientists and Consumer Reports fielded a nationally representative survey to investigate the car buying intentions of U.S. adults. We also investigated the potential impacts that incentives for buying electric vehicles may have on drivers purchase decisions, as well as how they feel about federal and state policies aimed at increasing the usability and convenience of driving PEVs.

The total nationally representative sample consisted of 1,659 American adults, ages 18 and older, who are considering buying or leasing a new or used vehicle within the next two years. This survey was administered online and by phone from April 8, 2019 to April 19, 2019 to members of NORC's AmeriSpeak panel. The Virginia sample consisted of a demographically representative sample of 409 Virginian adults, who are considering buying or leasing a new or used vehicle within the next two years. Minnesotan respondents were obtained from probability and non-probability sample sources.

The margin of error for the Virginian cohort of 409 respondents is +/- 4.85 percent at a 95 percent confidence level. Findings presented in this report represent analyses of data after weighting was applied to respondent-level data to approximate demographic-based estimates.

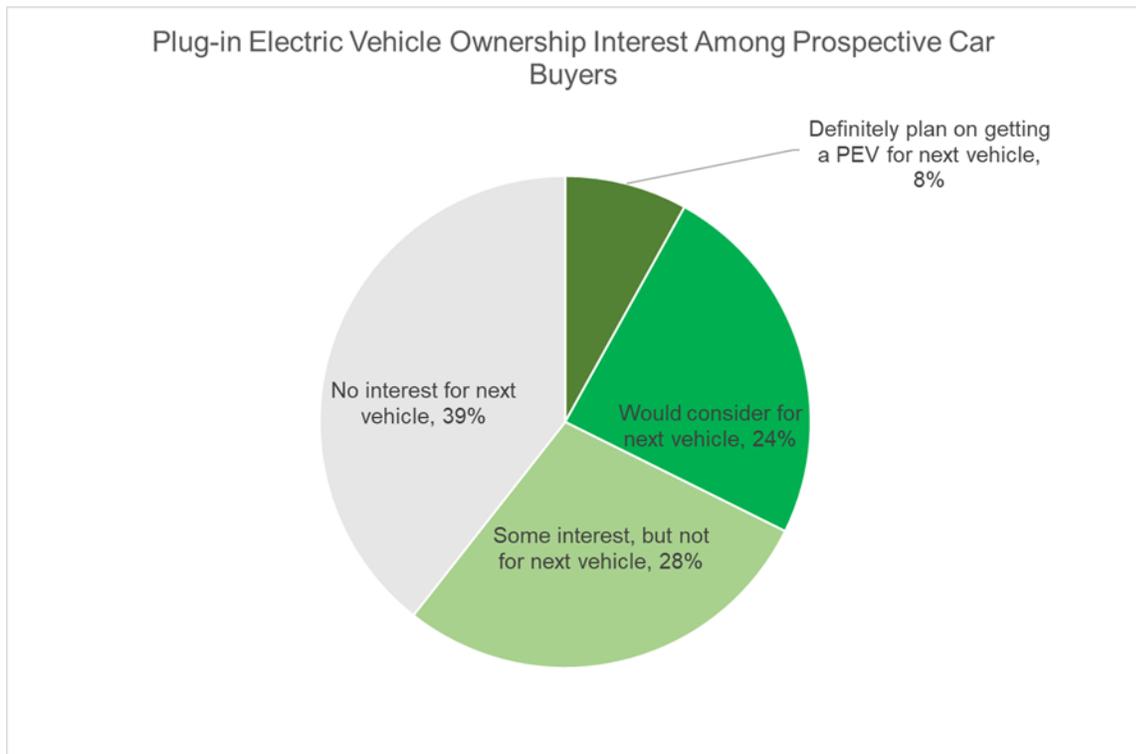
Highlights

- 6 in 10 prospective car buyers in Virginia have some interest in purchasing an electric vehicle, including 32 percent who say they would consider buying one within the next two years, and 8 percent who definitely plan to buy one within the next two years.
- 71 percent of prospective car buyers in Virginia believe that incentives and tax rebates for PEVs should be available to all consumers, with 9 percent in disagreement.
- 3 in 4 prospective car buyers in Virginia agree that widespread PEV use will reduce U.S. oil use, and 74 percent agree that PEV adoption will decrease pollution.
- Many prospective car buyers in Virginia agree that lower purchase prices (61 percent) and longer PEV driving ranges (54 percent) would be most effective in increasing their interest in getting a PEV.
- If drivers do end up buying a PEV and need to charge it when away from home, grocery stores appear to be the most convenient place to do it. Sixty-eight percent of potential car buyers in Virginia would find it most expedient to charge a PEV while shopping for groceries. Many feel that charging while shopping at malls (41 percent), dining at restaurants (45 percent), and in recreational areas (24 percent) such as parks would also be the most convenient options.

Plug-in Electric Vehicle Purchase Intentions

Thirty-two percent of prospective car buyers in Virginia would consider getting a plug-in electric vehicle (PEV) within the next two years, and an additional 28 percent have some interest in a PEV, but not for their next vehicle (see Figure 1).

Figure 1: Plug-in Electric Vehicle Ownership Interest Among Prospective Car Buyers in Virginia



Despite this interest and intentions, many prospective car buyers in Virginia aren't seeing plug-in electric vehicles for sale at their local automotive dealerships (see Table 1). Forty-six percent of prospective Virginia car buyers saw a plug-in electric vehicle available for purchase at a car dealership or store. Virginia car buyers (63 percent) are also slightly less likely than the average American car shopper (67 percent) to have seen an advertisement for a plug-in electric vehicle. However, a majority of Virginians in the market for a car say they are seeing electric vehicle infrastructure, with 59 percent saying they have seen public charging stations. However, this is under below the national average of 69 percent.

Table 1: Availability of Plug-in Electric Vehicles and Infrastructure

| Availability of Plug-in Electric Vehicles and Infrastructure | | |
|--|--------|------------|
| Statement | U.S. % | Virginia % |
| Seen a public charging station | 69 | 59 |
| Seen an ad for a plug-in electric vehicle | 67 | 63 |
| Seen a plug-in electric vehicle in your neighborhood | 44 | 33 |
| Seen a plug-in electric vehicle at an auto dealership or store | 43 | 46 |

Plug-in Electric Vehicle Beliefs and Incentives

Prospective Virginia car buyers are generally optimistic in their assessments about the benefits PEVs can provide, from both a financial and environmental perspective (see Table 2). They are also more likely than not to be supportive of federal and state governments providing the public with incentives to promote the purchase of these vehicles and spending money on building the infrastructure that will make ownership of these vehicles more practical (see Table 3).

71 percent of prospective car buyers in Virginia believe that incentives and tax rebates for PEVs should be available to all consumers. There is also a consensus among prospective Virginia car buyers (72 percent) that automakers should make PEVs in a variety of types, such as SUVs, pickup trucks, and minivans, with only 5 percent in disagreement.

Table 2: Recognition of Plug-in Electric Vehicle Benefits

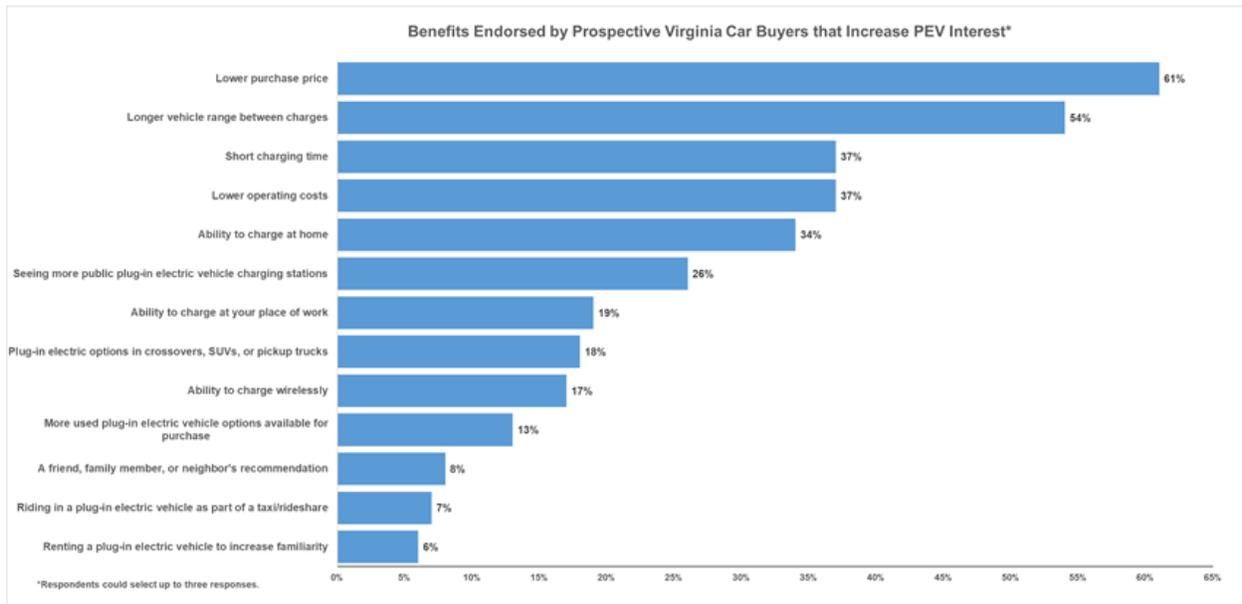
| Recognition of Plug-in Electric Vehicle Benefits | |
|---|------------|
| Statement | Virginia % |
| Widespread electric vehicle use will help reduce U.S. oil use | 75 |
| Widespread electric vehicle use will help reduce pollution | 74 |
| Having an electric vehicle will help save consumers money on gasoline and maintenance | 64 |

Table 3: Support for Plug-In Electric Vehicle Policies

| Support for Plug-in Electric Vehicles | |
|---|------------|
| Statement | Virginia % |
| Automakers should make a variety of vehicle types available as plug-in electric models | 72 |
| Incentives and tax rebates for plug-in electric vehicles should be available to all consumers | 71 |
| Electric utility providers should offer discounts to charge plug-in electric vehicles | 68 |
| My state should support increasing the number of plug-in electric vehicle charging stations | 68 |
| My state should make it easier for consumers to purchase and charge plug-in electric vehicles | 65 |
| My state should support increasing the use of plug-in electric school buses, public transit, and fleets | 63 |
| Incentives and tax rebates for plug-in electric vehicles should be targeted towards low and moderate income consumers | 58 |

More than half of all prospective Virginia car buyers agree that lower purchase prices (61 percent) and/or longer driving ranges (54 percent) in between charges would be most effective in increasing their interest in getting a PEV. Conversely, fewer prospective car buyers feel that renting a PEV (6 percent), getting a PEV recommendation from family or friends (8 percent), or riding in a PEV as part of a taxi or rideshare (7 percent) would increase their interest in PEVs. When it comes to efforts focused on widening the adoption of PEVs, increased familiarity therefore does not seem as important as targeting the current cost and range limitations of these vehicles (see Figure 2).

Figure 2: Changes that would make PEV purchases more likely in Virginia



The Potential Impact of State Policy on PEV Purchases

Federal and state policies that reduce costs to consumers is a strong tool for increasing interest in plug-in electric vehicles. Four in ten prospective car buyers in Virginia say that rebates at the time of purchase would be one of the things that most increases their interest in buying or leasing a PEV (see Table 4). Thirty-seven percent say rebates in the form of tax credits would increase their interest. Thirty-five percent say that getting discounted rates from their electric utility provider to charge PEVs would also increase their interest in getting a PEV.

Access to public fast-charging is another tool to increase interest in PEVs. Forty-one percent of prospective Virginia vehicle buyers say that access to public charging stations along major highways would significantly increase interest, which is a higher response than the national average.

Table 4: Potential State and Federal Policies that can Increase PEV Purchases

| Potential State and Federal Policies that can Increase PEV Purchases* | |
|---|------------|
| Potential Policy | Virginia % |
| Rebates at the time of purchase | 41 |
| Public charging stations along highways | 41 |
| Rebates as tax credits | 37 |
| Discounted charging rates from your electric utility provider | 35 |
| Discounts to install a home charging station | 35 |
| Access to workplace charging stations | 17 |
| Preferential parking spaces for plug-in electric vehicles | 16 |
| Access to HOV lanes with only the driver in the vehicle | 15 |
| Charging stations or access to plug-in vehicles at multi-family housing | 11 |

*Respondents could select up to three responses.

The Convenience of Charging Plug-in Electric Vehicles in Virginia

Out of five charging options we inquired about in our survey, 66 percent of prospective car buyers in Virginia say that charging a PEV overnight at home 2 times per week for a full charge would be highly (i.e., “completely” or “very”) convenient (see Table 5). The second most convenient option appears to be charging at a nearby fast charging station for 10 minutes twice a week, reported as highly convenient by 54 percent of these consumers.

Table 5: Convenience of PEV Charging Options

| Convenience of PEV Charging Options* | |
|--|------------|
| Charging Option | Virginia % |
| Charging overnight at home 2 times per week | 66 |
| Charging at a nearby fast charging station for 10 minutes twice a week | 54 |
| Charging at a nearby fast charging station for 30 minutes once a week | 36 |
| Charging at a shopping center or restaurant for 2 hours twice a week | 27 |
| Charging at a shopping center or restaurant for 4 hours once a week | 24 |

*Percentages represents the proportion of respondents rating option as “completely convenient” or “very convenient.” Other options included “moderately convenient,” “slightly convenient” and “not at all convenient.”

If drivers must charge their vehicle outside their homes, grocery stores would be the most popular place to do it. Sixty-eight percent of prospective car buyers in Virginia would find it most convenient to charge a PEV while shopping for groceries (see Table 6). Nearly half (45 percent) said that charging while dining at restaurants would be convenient, and around four in ten feel that charging while shopping at malls (41 percent) would be most convenient.

Table 6: Convenience of Potential PEV Charging Locations

| Convenience of Potential PEV Charging Locations* | |
|---|------------|
| Charging Location | Virginia % |
| Grocery stores | 68 |
| Restaurants | 45 |
| Shopping malls | 41 |
| Major warehouse clubs (e.g., Costco, Sam's Club) | 26 |
| Recreational areas (e.g., parks) | 24 |
| Entertainment locations (e.g., museums, music venues, movie theaters) | 23 |
| Pharmacy chains (e.g., Walgreens, CVS) | 14 |
| Other | 12 |

*Respondents could select up to three responses.

END