

Electric Vehicle Survey Findings and Methodology: **Minnesota**

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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 Minnesota sample consisted of a demographically representative sample of 413 Minnesotan 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 Minnesotan cohort of 413 respondents is +/- 4.82 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.

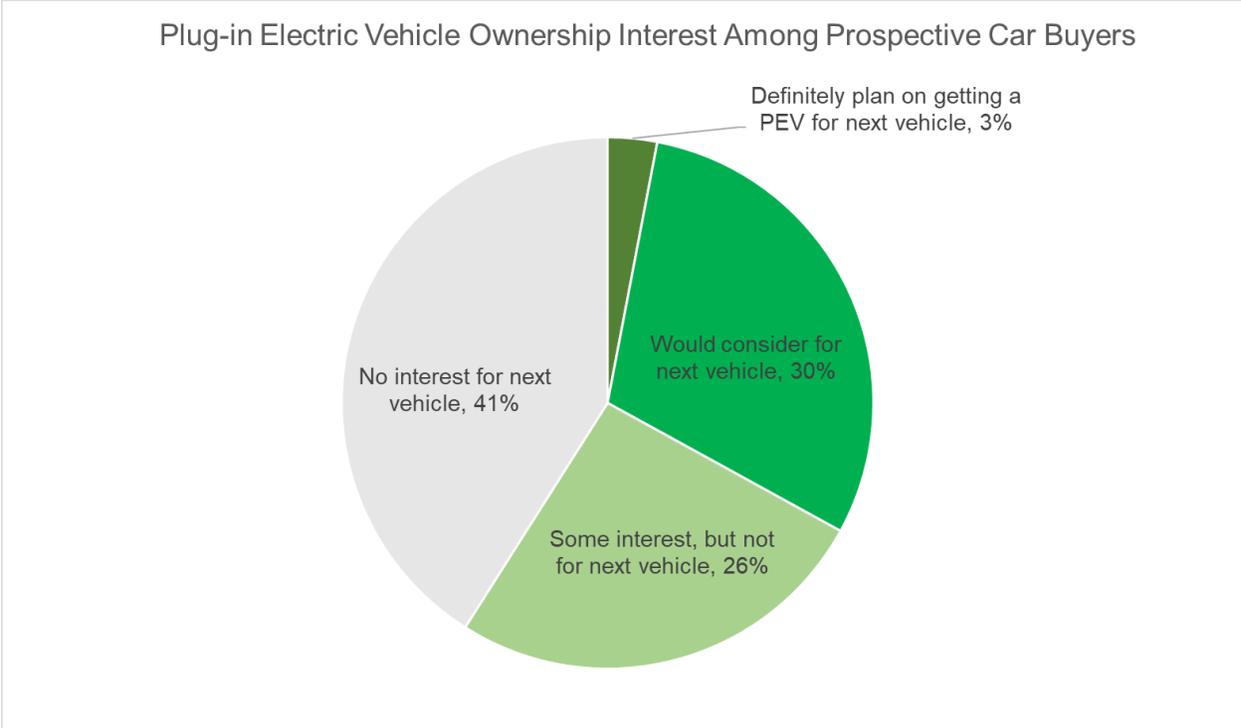
Highlights

- About 6 in 10 (59 percent) prospective car buyers in Minnesota have some interest in purchasing an electric vehicle, including 30 percent who say they would consider buying one within the next two years, and 3 percent who definitely plan to buy one within the next two years.
- 67 percent of prospective car buyers in Minnesota believe that incentives and tax rebates for PEVs should be available to all consumers, with 11 percent in disagreement.
- 67 percent of prospective car buyers in Minnesota agree that widespread PEV use will reduce U.S. oil use, and 69 percent agree that PEV adoption will decrease pollution.
- Many prospective car buyers in Minnesota agree that lower purchase prices (59 percent) and longer PEV driving ranges (46 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. 61 percent of potential car buyers in Minnesota would find it most expedient to charge a PEV while shopping for groceries. Many others feel that charging while shopping at malls (35 percent), dining at restaurants (26 percent), and in recreational areas (31 percent) such as parks would also be the most convenient options.

Plug-in Electric Vehicle Purchase Intentions

Thirty-three percent of prospective car buyers in Minnesota would consider getting a PEV within the next two years, and an additional twenty-six 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 Minnesota



Despite this interest and intentions, many prospective car buyers in Minnesota aren't seeing advertisements for plug-in electric vehicles, and aren't noticing them for sale at their local automotive dealerships (see Table 1). 36 percent of prospective Minnesotan car buyers saw or noticed a plug-in electric vehicle available for purchase at a car dealership or store, which is less than the national average (43 percent). Minnesotans are also seeing fewer advertisements for plug-in electric vehicles (57 percent) compared to the average American car shopper (67 percent). However, most Minnesotans in the market for a car say they are seeing electric vehicle infrastructure, with 62 percent saying they have seen public charging stations, just under below the national average (69 percent).

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

Availability of Plug-in Electric Vehicles and Infrastructure		
Statement	U.S. %	Minnesota %
Seen a public charging station	69	62
Seen an ad for a plug-in electric vehicle	67	57
Seen a plug-in electric vehicle in your neighborhood	44	32
Seen a plug-in electric vehicle at an auto dealership or store	43	36

Plug-in Electric Vehicle Beliefs and Incentives

Prospective Minnesota 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).

67 percent of prospective car buyers in Minnesota believe that incentives and tax rebates for PEVs should be available to all consumers. There is also a consensus among prospective Minnesota car buyers (66 percent) that automakers should make PEVs in a variety of types, such as SUVs, pickup trucks, and minivans, with only 5 percent in disagreement.

Many prospective Minnesota car buyers (45 percent) say their state should require automakers to offer plug-in electric vehicle options for purchase. Over a quarter of these Minnesotans (28 percent) say they neither agree or disagree with this policy option, and about one quarter (26 percent) say they disagree.

Table 2: Recognition of Plug-in Electric Vehicle Benefits

Recognition of Plug-in Electric Vehicle Benefits	
Statement	Minnesota %
Widespread electric vehicle use will help reduce U.S. oil use	67
Widespread electric vehicle use will help reduce pollution	69
Having an electric vehicle will help save consumers money on gasoline and maintenance	60

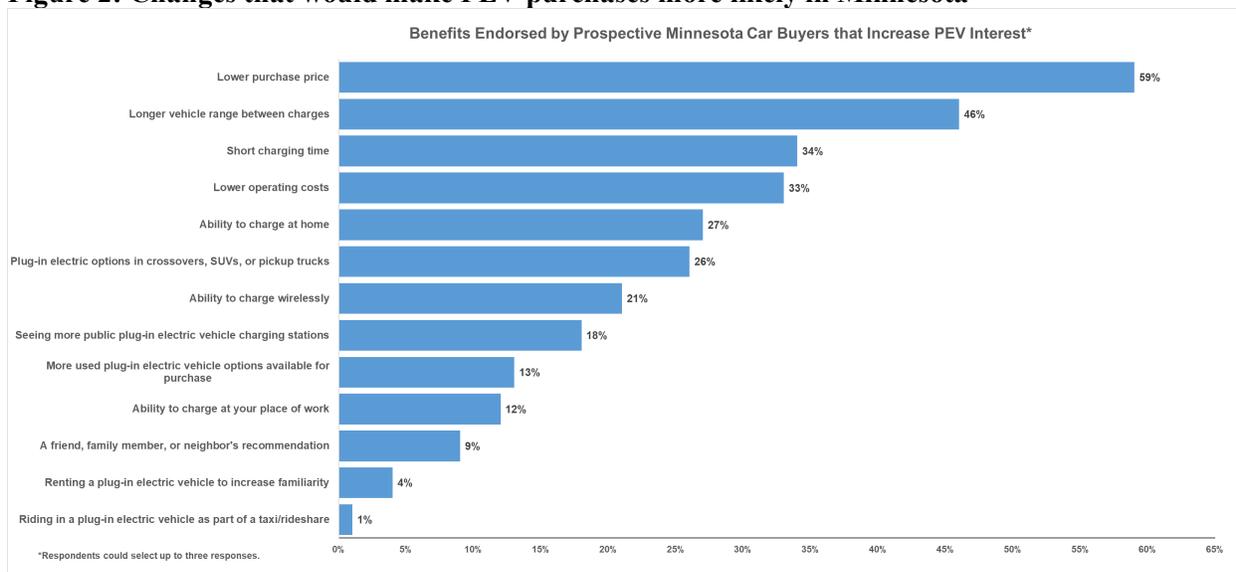
Table 3: Support for Plug-In Electric Vehicle Policies

Support for Plug-in Electric Vehicles	
Statement	Minnesota %
Incentives and tax rebates for plug-in electric vehicles should be available to all consumers	67
Automakers should make a variety of vehicle types available as plug-in electric models	66
Electric utility providers should offer discounts to charge plug-in electric vehicles	61
My state should support increasing the number of plug-in electric vehicle charging stations	60
My state should support increasing the use of plug-in electric school buses, public transit, and fleets	58
My state should make it easier for consumers to purchase and charge plug-in electric vehicles	57
Incentives and tax rebates for plug-in electric vehicles should be targeted towards low and moderate income consumers	54

More than half of all prospective Minnesota car buyers agree that lower purchase prices (59 percent) and/or longer driving ranges (46 percent) would be most effective in increasing their interest in getting a PEV. Conversely, fewer prospective car buyers feel that renting a PEV (4 percent), getting a PEV recommendation from family or friends (9 percent), or riding in a PEV as part of a taxi or rideshare (1

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 Minnesota



The Potential Impact of State Policy on PEV Purchases

About half (49 percent) of prospective car buyers in Minnesota 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). Forty percent say that getting discounted rates from their electric utility provider to charge PEVs would be something that would most increase their interest in getting a PEV.

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

Potential State and Federal Policies that can Increase PEV Purchases*	
Potential Policy	Minnesota %
Rebates at the time of purchase	49
Discounted charging rates from your electric utility provider	40
Rebates as tax credits	40
Discounts to install a home charging station	28
Public charging stations along highways	26
Access to workplace charging stations	14
Preferential parking spaces for plug-in electric vehicles	12
Access to HOV lanes with only the driver in the vehicle	9
Charging stations or access to plug-in vehicles at multi-family housing	8

*Respondents could select up to three responses.

The Convenience of Charging Plug-in Electric Vehicles in Minnesota

Out of five charging options we inquired about in our survey, 64 percent of prospective car buyers in Minnesota 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 45 percent of these consumers.

Table 5: Convenience of PEV Charging Options

Convenience of PEV Charging Options*	
Charging Option	Minnesota %
Charging overnight at home 2 times per week	64
Charging at a nearby fast charging station for 10 minutes twice a week	45
Charging at a nearby fast charging station for 30 minutes once a week	29
Charging at a shopping center or restaurant for 2 hours twice a week	16
Charging at a shopping center or restaurant for 4 hours once a week	12

*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. 61 percent of prospective car buyers in Minnesota would find it most convenient to charge a PEV while shopping for groceries (see Table 6). Over a third also feel that charging while shopping at malls (35 percent) would be most convenient, and at least a quarter (26 percent) would find it convenient to charge while dining at restaurants, and/or hanging out in recreational areas (31 percent) such as parks would also be particularly convenient options.

Table 6: Convenience of Potential PEV Charging Locations

Convenience of Potential PEV Charging Locations*	
Charging Location	Minnesota %
Grocery stores	61
Shopping malls	35
Recreational areas (e.g., parks)	31
Restaurants	26
Major warehouse clubs (e.g., Costco, Sam's Club)	24
Entertainment locations (e.g., museums, music venues, movie theaters)	20
Pharmacy chains (e.g., Walgreens, CVS)	17
Other	19

*Respondents could select up to three responses.

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