

Consumer Interest and Knowledge of Electric Vehicles

2020 Survey Results



Nationally Representative Phone and Internet Survey
Prepared by CR Survey Research Department and Advocacy Division

December 2020

CR Consumer
Reports

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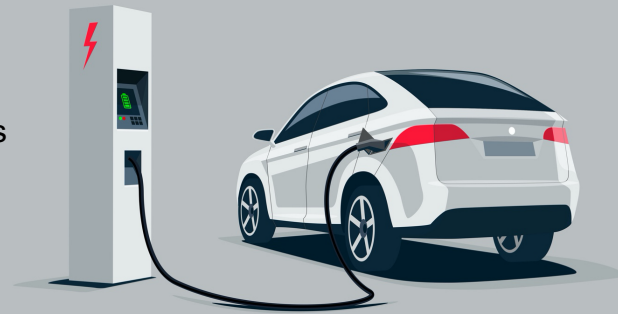
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INTRODUCTION

This nationally representative survey of 3,392 adults residing in the U.S. with valid driver's licenses was conducted by phone and Internet from July 29 through August 12 of 2020. Questions about electric vehicles (EVs) were offered in English and Spanish. The purpose was to better understand Americans' familiarity with and attitudes toward EVs, including what they see as incentives and barriers to owning them.



HIGHLIGHTS

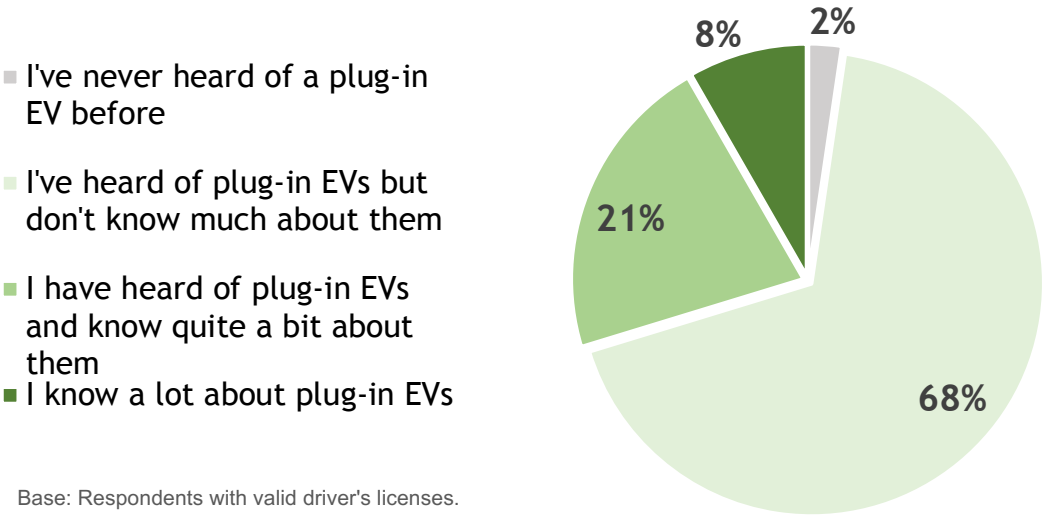
- **KNOWLEDGE:** Approximately 98% of drivers say they've heard of electric vehicles, but only 30% say they're knowledgeable about them. 68% say they have "heard of" plug-in EVs but "don't know much about them."
- **BARRIERS:** Charging is a concern for many; among drivers who are not definitely planning to purchase or lease a plug-in EV for their next vehicle, about half (48%) say "not enough public charging stations" is holding them back.
 - Among all drivers, "public charging stations along highways" is the most common policy that would increase their interest in owning an EV (42%).
 - However, 72% of all drivers say that if they owned an EV, they would most likely do most of their charging "in their private driveway or garage."
- **BENEFITS:** More than half of American drivers of both major political party affiliations agree or strongly agree that:
 - widespread electric vehicle use will help reduce air or climate pollution: 84% of Democrats say they Agree or Strongly Agree; 62% of Republicans say they Agree or Strongly Agree.
 - automakers should make a variety of vehicle types (i.e. pickup trucks, SUVs) available as plug-in electric models: 80% of Democrats say they Agree or Strongly Agree; 62% of Republicans say they Agree or Strongly Agree.
 - electric utility providers should offer discounts to charge plug-in electric vehicles at times when electricity demand is low: 77% of Democrats say they Agree or Strongly Agree; 59% of Republicans say they Agree or Strongly Agree.

ELECTRIC VEHICLES: Understanding and Interest

For this survey, CR defined plug-in electric vehicles (EVs) as "vehicles that are electric only" and do not use gasoline. Hybrids like Toyota's Prius or Prius Prime, for example, use both gasoline and electric power, and for the purposes of this survey are not EVs.

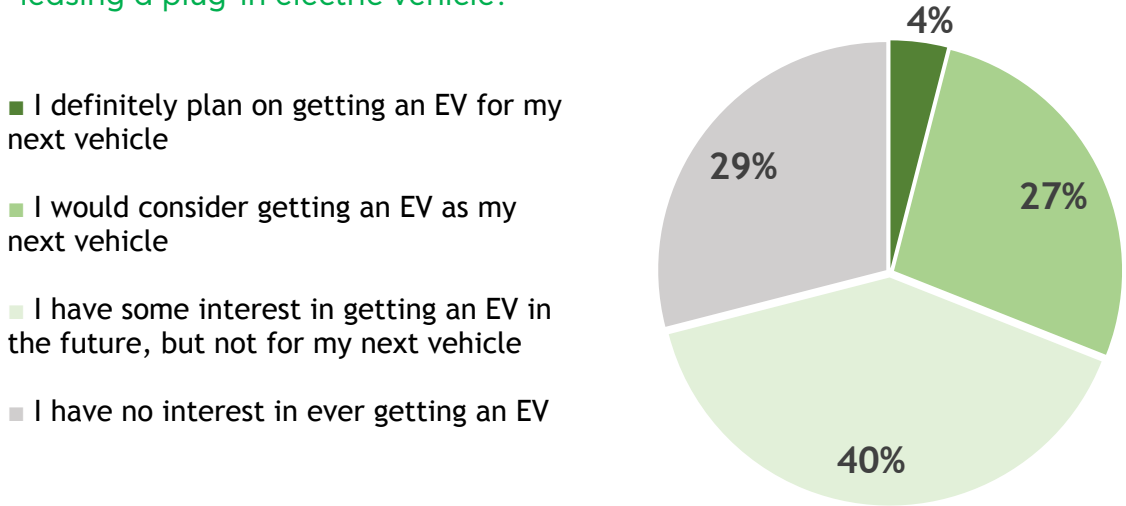
We had drivers characterize their EV knowledge. Nearly all say they have heard of them (only 2% haven't). However, the majority (68%) say they don't know much about them.

Which of the following best describes your knowledge of plug-in electric vehicles?



Despite this lack of knowledge, drivers are generally interested in electric vehicles. 71% of drivers have at least some interest in getting an EV, with 31% saying they would consider getting, or would definitely get, an EV the next time they purchase a vehicle.

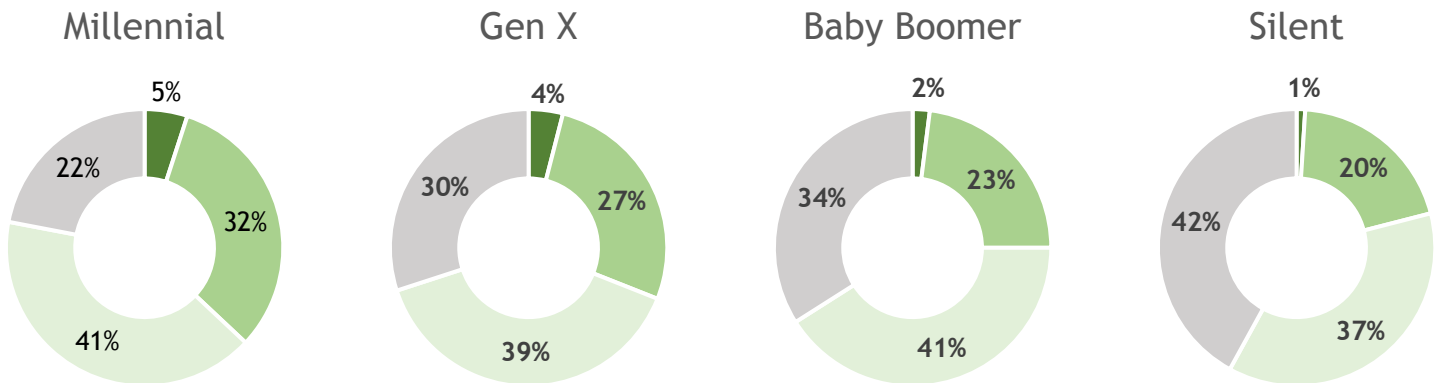
Which of the following statements best describes your thoughts on buying or leasing a plug-in electric vehicle?



Consumer Interest and Knowledge of EVs: 2020 Survey Results

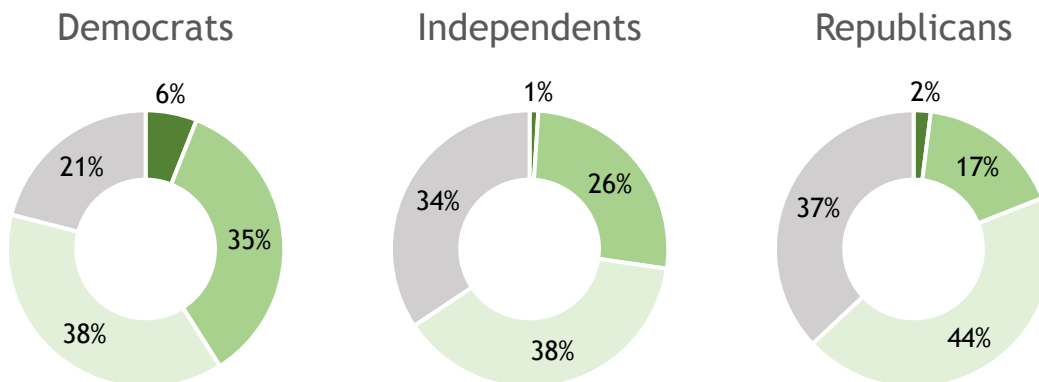
We found EV interest varies by age. 37% of Millennials (born 1982-1997) say they either will definitely get, or will consider getting, an EV for their next purchase. Interest among Gen X (1966-1981) is lower, at 31% who plan on or will consider an EV for their next vehicle; 25% of Baby Boomers (1946-1965) responded this way, as did 21% of the Silent Generation (1928-1946). The biggest generational differences are among people who “have no interest in ever getting an EV.” 22% of Millennials responded this way, 30% of Gen X, 34% of Baby Boomers, and over 40% of people in the Silent Generation.

Which of the following statements best describes your thoughts on buying or leasing a plug-in electric vehicle?



- I definitely plan on getting an EV for my next vehicle
- I would consider getting an EV as my next vehicle
- I have some interest in getting an EV in the future, but not for my next vehicle
- I have no interest in ever getting an EV

Interest also varied by political affiliation. Democrats are more likely than Republicans to say they would consider purchasing an EV for their next vehicle. Still, most Democrats (79%) and Republicans (63%) say they at least have some interest in electric vehicles.



NOTE: Due to rounding, figures in some graphs may sum to more or less than 100%.

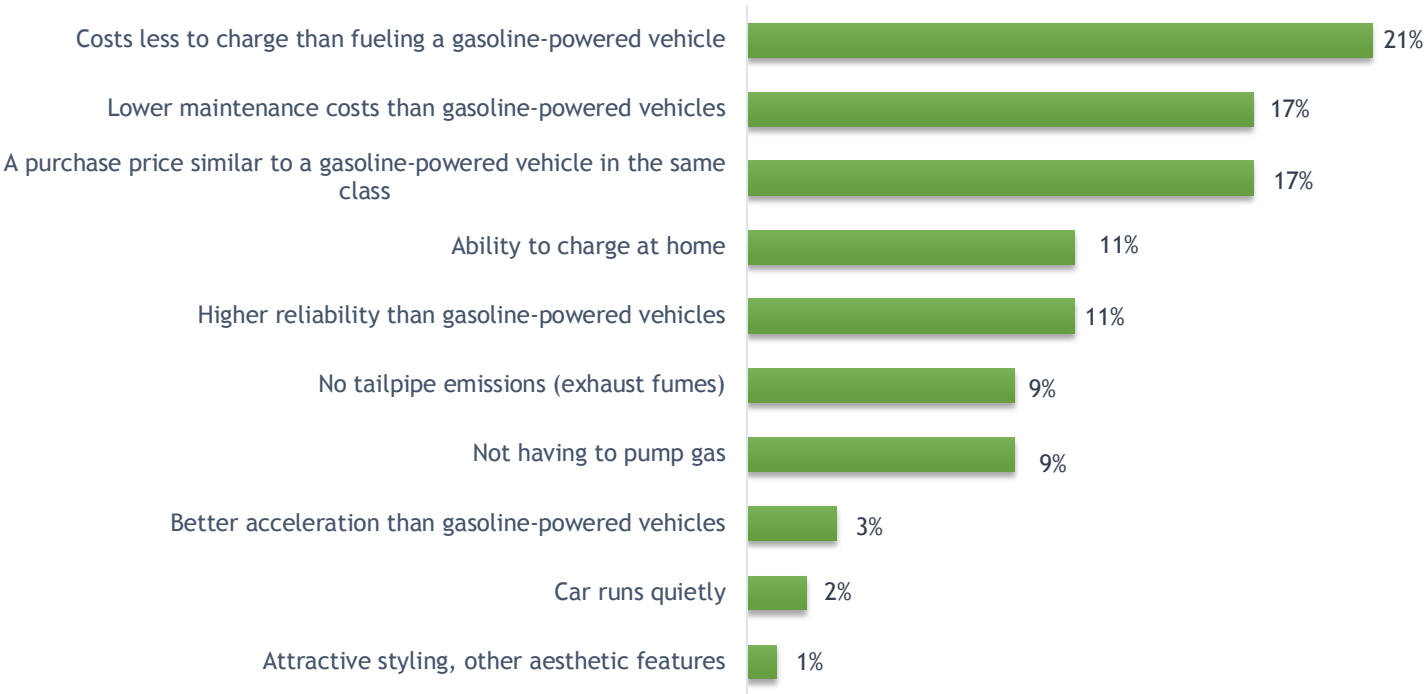
ELECTRIC VEHICLES: Attitudes and Barriers

We asked drivers “How far would an EV would have to be able to travel between charges for you to consider purchasing or leasing one?”

About half of U.S. drivers said they would consider purchasing an electric vehicle if it could drive at least 300 miles on a single charge. About half said their single-charge threshold was over 300 miles, with 24% saying 300 to less than 400 miles would be adequate, and another 25% saying an EV would have to travel over 400 miles on a single charge for them to consider purchasing one.



We asked drivers to choose from a list of attributes which would most encourage them to purchase a plug-in electric vehicle.

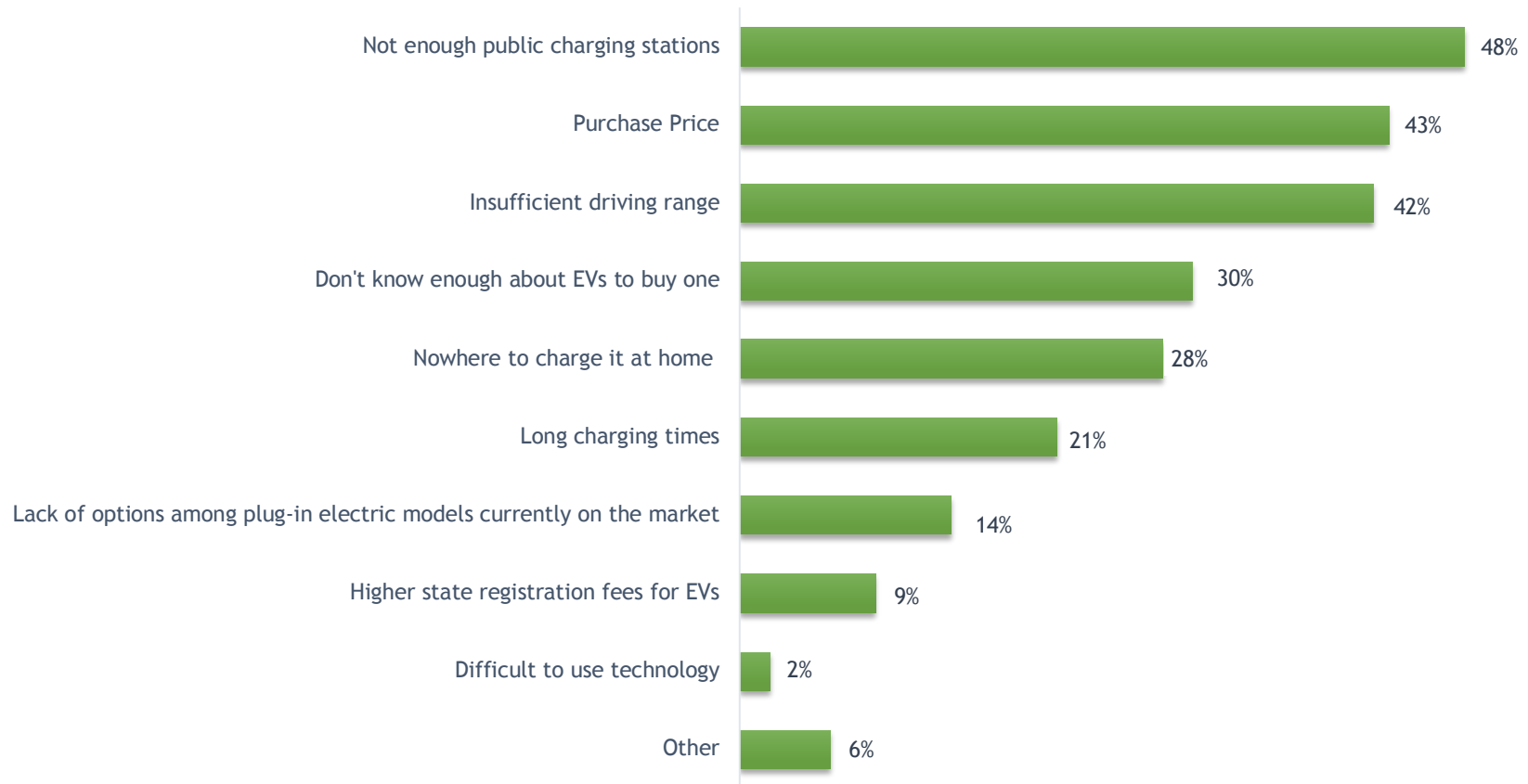


Base: Respondents with valid driver's licenses.
NOTE: Due to rounding, figures in some graphs may sum to more or less than 100%.

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We asked all drivers except the 4% who definitely plan to buy or lease an electric vehicle next which, if any, of a set of attributes are holding them back. Respondents could select up to three choices.

Of the following attributes, which, if any, are holding you back from purchasing or leasing a plug-in electric vehicle for your next vehicle?

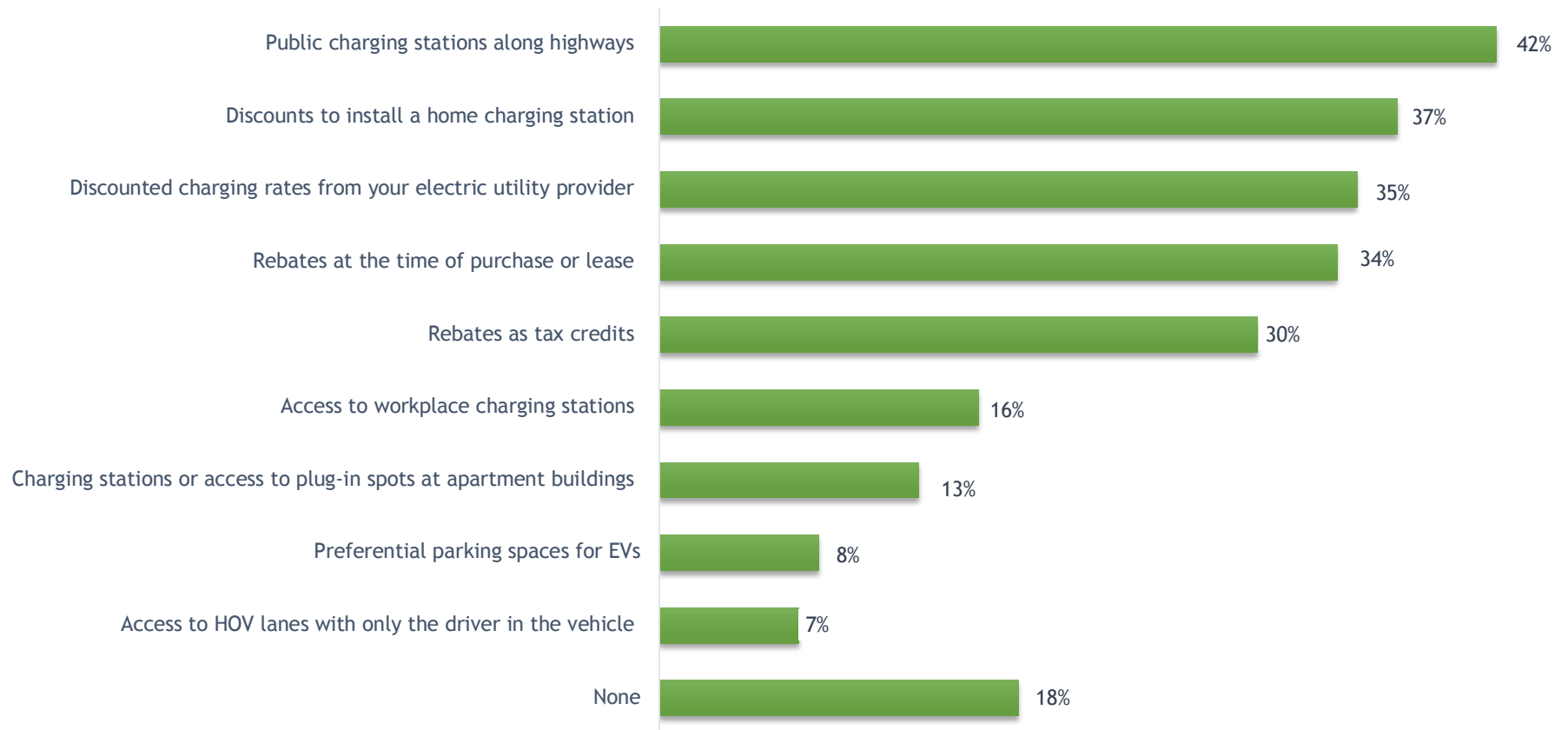


Base: Respondents with valid driver's licenses who do not "definitely" plan to get a plug-in EV for their next vehicle purchase.

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We asked all drivers which, if any, of a set of state or federal policies, would most likely encourage them to purchase an EV. Respondents were asked to select their top three choices.

Of the following state or federal policies, which, if enacted, would most likely increase your interest in purchasing or leasing a plug-in electric vehicle?

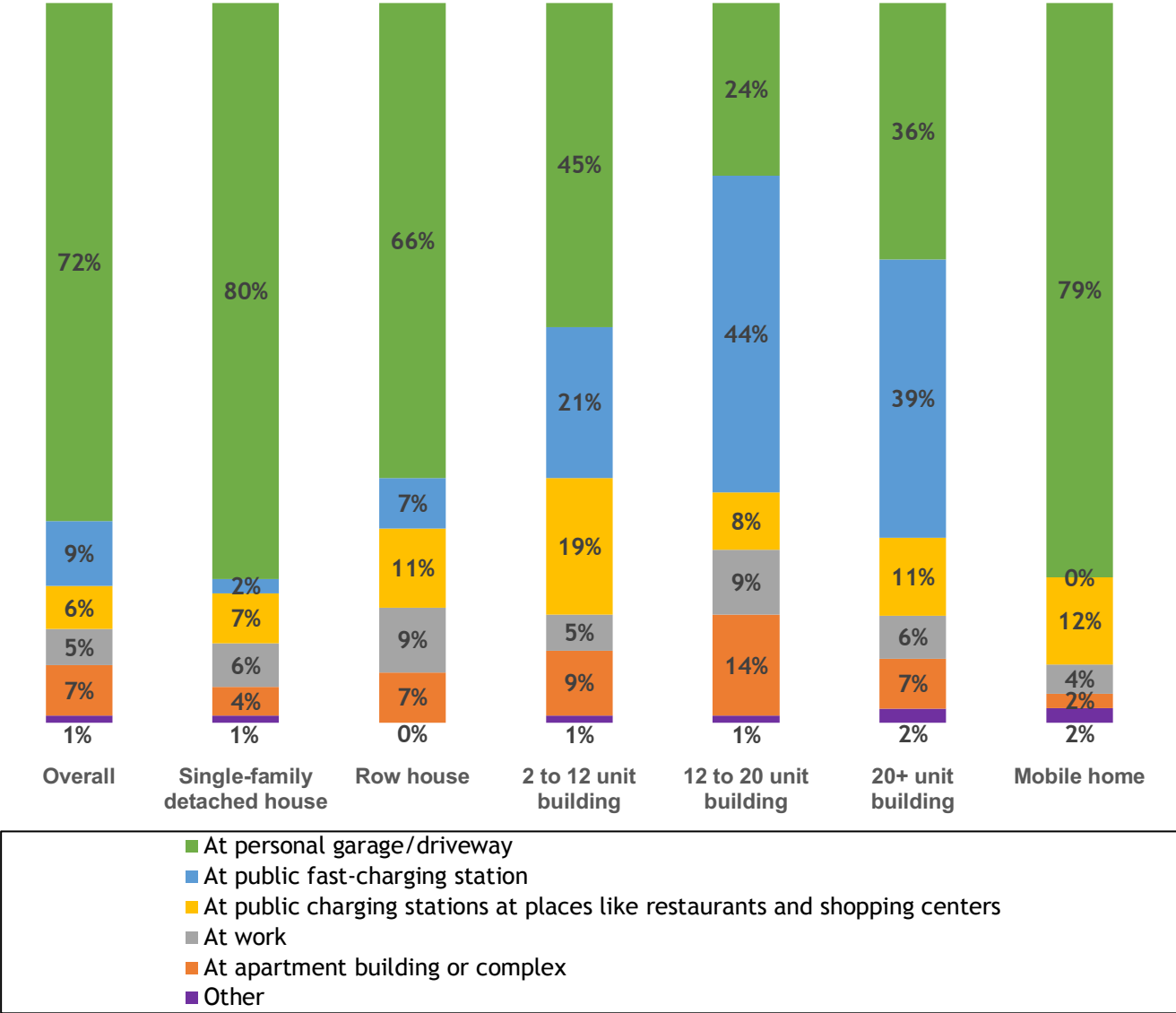


Base: Respondents with valid driver's license.

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We also asked drivers where, out of a list of public and private charging options, they think they would do most of their charging if they were to own an EV. The vast majority (71%) said they would charge an EV in their private driveway or garage; the next-most-common response, at just 9%, was "At public fast-charging stations in my community" (equivalent to gas stations).

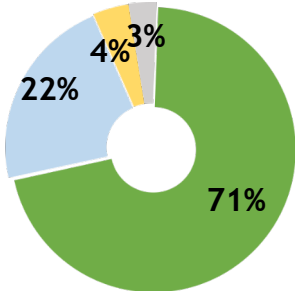
Responses to this question varied significantly by living situation, likely by whether or not a home *has* a private driveway or garage. More than half of people who live in single-family houses, mobile homes, and multi-family houses say that they would charge a vehicle in the driveway or garage. This is lower among people who live in apartments (though not non-existent probably because some apartment complexes have private garages or parking spots). However, people who live in apartments are also not likely to say they would charge a vehicle at a charger provided by their apartment building. These options may not exist in their apartment complex. In fact, the most common response among people who live in larger apartment buildings (with more than 12 housing units) is public fast-charging stations.



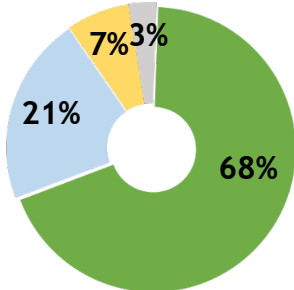
ELECTRIC VEHICLES: Policies and Incentives

We asked U.S. drivers about federal and state policies related to electric vehicle use, and programs that might incentivize drivers to switch to an electric vehicle.

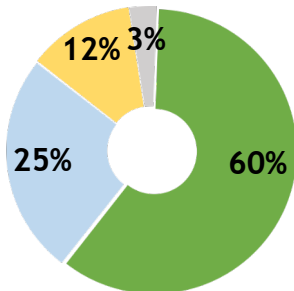
Strongly agree / agree Neither agree nor disagree Disagree / Strongly disagree Unsure



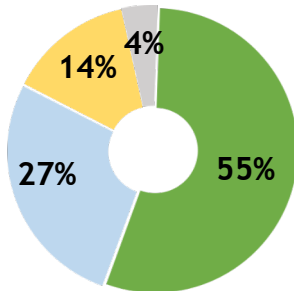
Statement: Automakers should make a variety of vehicle types (like sedans, minivans, SUVs and pickups) available as plug-in electric models



Statement: Electric utility providers should offer discounts to charge EVs at times when electricity demand is low.



Statement: Incentives and tax rebates for plug-in EVs should be available to all consumers, including high income.

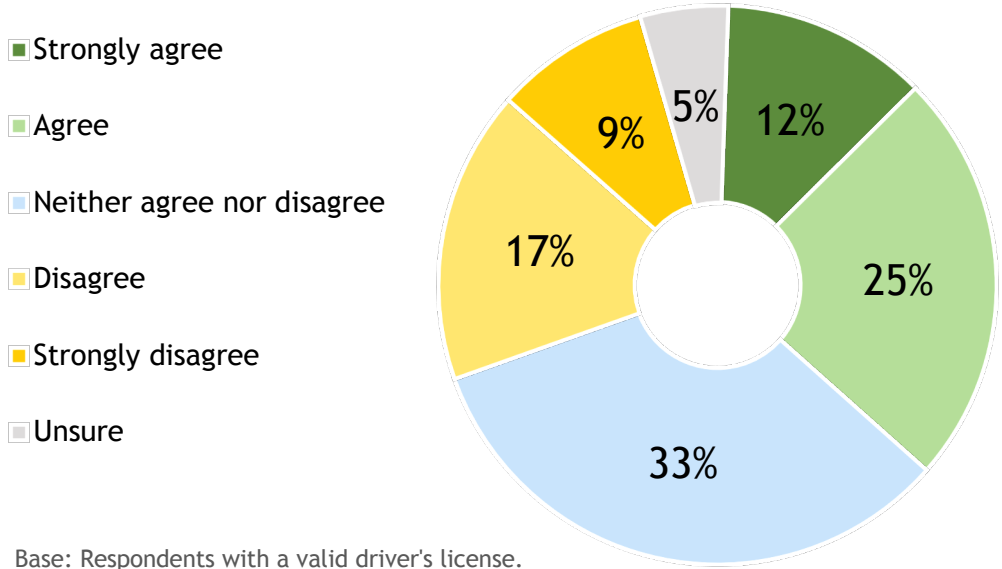


Statement: My state should invest money to increase the availability of plug-in EV charging stations.

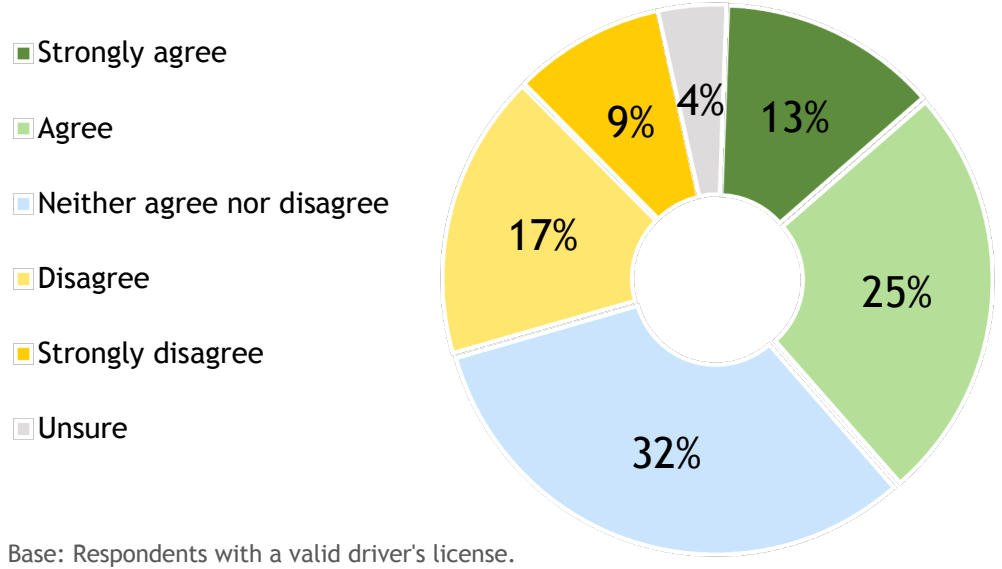
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We also asked whether a state government or the federal government should require automakers to offer electric vehicles. Just over a third of respondents support these policies, about a third are neutral on the subject, and about a quarter say they disagree.

Statement: **My state should require automakers to offer plug-in EV options.**



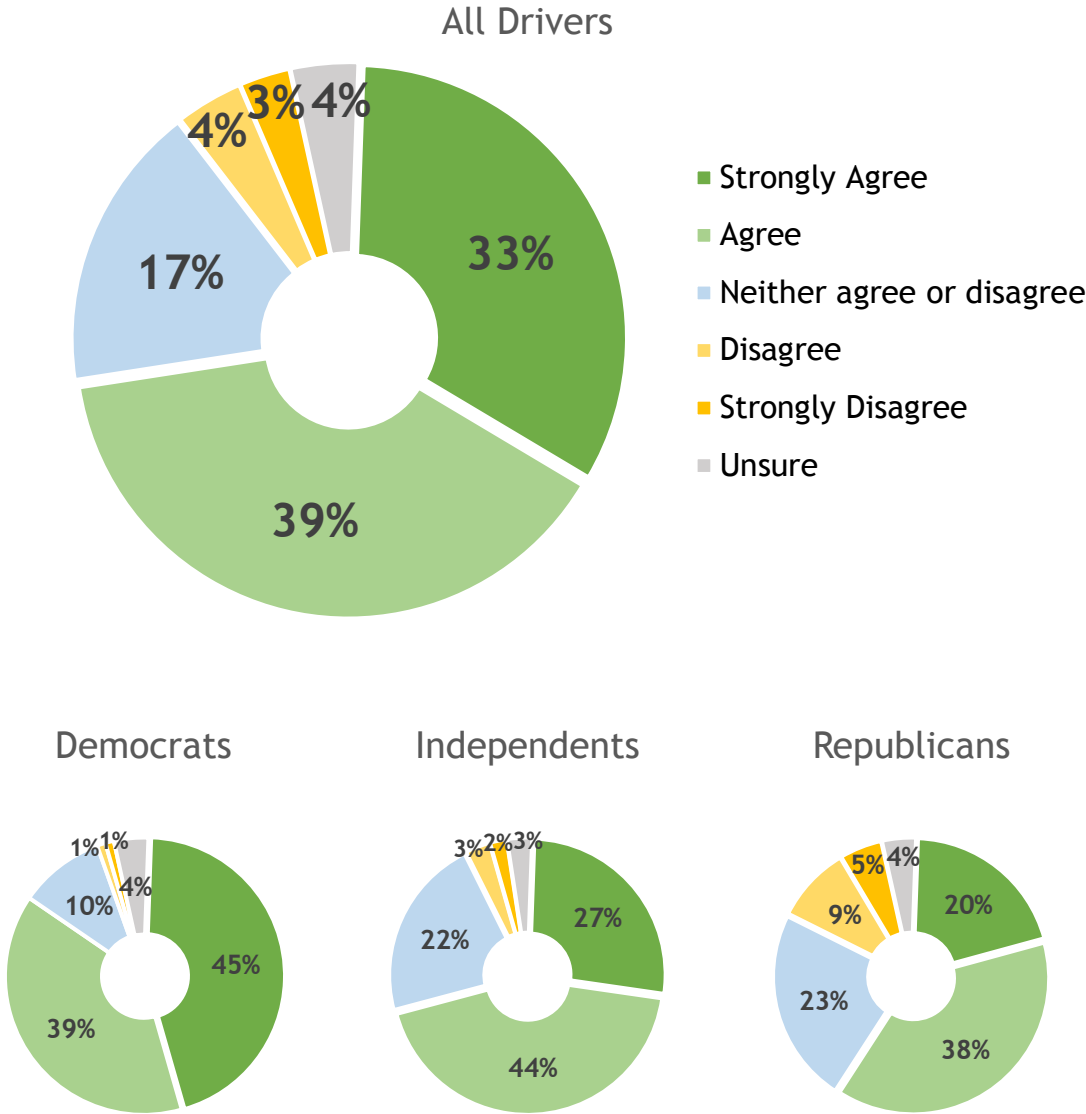
Statement: **The federal government should require automakers to offer plug-in EV options.**



Consumer Interest and Knowledge of EVs: 2020 Survey Results

Americans with drivers' licenses were asked if they agreed, disagreed, or were unsure about whether increased electric vehicle use would help reduce air or climate pollution. 72% said they agree (Agree + Strongly Agree) with only 7% saying they disagree (Disagree + Strongly Disagree). Opinions on this differ based on political affiliation. 84% of people who identify as a Democrat said they agreed; 58% of Republicans agreed. 71% of drivers who identified as Independent or Other agreed.

Statement: **Widespread electric vehicle use will help reduce air or climate pollution.**



NOTE: Due to rounding, figures in some graphs may sum to more or less than 100%.

SURVEY METHODOLOGY

This nationally-representative survey of 3,879 adults residing in the U.S. was conducted by phone (n=121) and Internet (n=3,758) by NORC from July 29 through August 12, 2020. It was fielded through NORC's AmeriSpeak Panel, a nationally representative probability-based panel, in both English (n=3,809) and Spanish (n=70). Questions about electric vehicles were asked of the 3,392 who have valid driver's licenses. Panelists were initially offered the cash equivalent of \$2 for taking the survey regardless of which section they qualified for. This was increased to \$5 on August 11 to boost engagement toward the end of the field period. These data were weighted separately for each section to provide nationally-representative estimates of the U.S. adult population based on sex, age, education, race/ethnicity, census region, housing tenure, and telephone status.

After weighting, the Electric Vehicles national sample (licensed drivers) is:

- 51% female
- Median age of 47
- 23% have a household income of less than \$30,000 per year; 27% make at least \$30,000 and less than \$60,000; 27% make at least \$60,000 and less than \$100,000; and 22% have an annual household income of \$100,000 or more.
- 34% have a bachelor's degree or above
- 72% are white, non-Hispanic