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# Mobility Monitor

## Summary Report

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# Sustainable Mobility

The automotive industry stands on the brink of a new era, as the electrification of vehicles transforms the way we drive. It is not just new technology that is enabling this new era. Concerns about climate change and the environment are top of mind for citizens around the globe. These concerns are helping to drive significant market and policy developments in the United States — from major automakers rolling out new waves of electric vehicles for mainstream consumers, to the Biden administration’s call for 500,000 new EV chargers on the nation’s roads by 2030.

EVBox Group seeks to play a pivotal role in this new transportation paradigm. As part of this strategy, [a study](#) was carried out in 2020 in six European countries, in order to arrive at an accurate description and understanding of the market for electric driving.

In February 2021, a similar study was carried out in the U.S. This report describes the results of that study. Just like in the European study, we targeted the general population, potential drivers of electric vehicles, and current EV drivers. The five building blocks we focused on in this research are (1) profiling current and potential drivers of electric cars, (2) environmental considerations that trigger (potential) electric drivers, (3) consumers’ perceptions of barriers to electric driving, (4) charging infrastructure, (5) the current state of (fast) charging,\* and (6) workplace charging\* in the U.S.

\*to be released in Q2 2021 [on EVBox’s newsroom](#).

## About the EVBox Mobility Monitor

This market research was executed by [Ipsos](#) at the request of EVBox. The survey was conducted in the United States among 2,002 residents including 100 EV drivers.

EV drivers constitute hybrid, PHEV, and BEV drivers. Potential EV drivers are respondents who indicated they would either definitely or most likely invest in an EV when purchasing their next car.

For more information regarding specific numbers, feel free to reach out to [Katelyn Hojeibane](#) at EVBox.

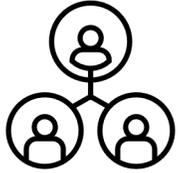
## About EVBox Group

Founded in 2010, EVBox Group empowers forward-thinking businesses to build a sustainable future by providing flexible and scalable electric vehicle charging solutions. With its extensive portfolio of residential, commercial and fast [EVBox](#) charging stations, as well as services and scalable charging management software engineered by [Everon](#), EVBox Group ensures that electric mobility is accessible to everyone.

EVBox Group is a leader in R&D, with facilities across Europe and North America developing groundbreaking electric vehicle charging technology. With offices across the globe, including Amsterdam, Bordeaux, Munich, and Libertyville, Ill., and strong foundations in dozens of markets, EVBox Group is working to shape a sustainable future of transportation.

In 2021, EVBox Group will become a public company listed on the New York Stock Exchange via a business combination with TPG Pace Beneficial Finance (NYSE: TPGY) and initial investors BlackRock, Inclusive Capital, Neuberger Berman Funds, and Wellington Management.

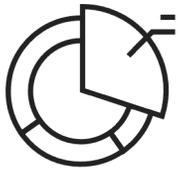
# How we conducted this research



## Target group

General population, potential EV drivers and EV drivers in the United States

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## Sample

Sample size

General population sample: n=2002

Total share of EV drivers within the general population is 0.6%.

Total share of potential EV drivers within the general population is 37%.

Definitions

Potential EV drivers are a subset from the general population; those who currently do not drive an electric/plug-in hybrid car, but say they would *probably* or *certainly* opt for an electric/plug-in hybrid car in the future.

EV drivers are those who currently drive an electric/plug-in hybrid car (hybrid, PEV and/or BEV).

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## Fieldwork

The surveys were conducted by means of an online questionnaire.

Respondents were selected from the Ipsos i-Say Panels.

Fieldwork was carried out between February 15 and February 23, 2021.

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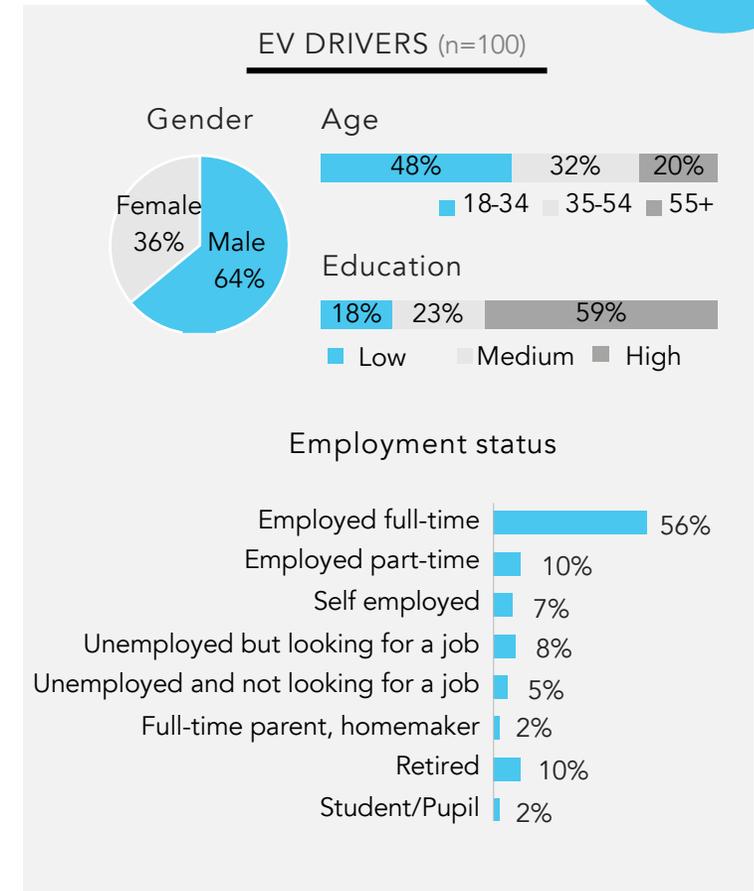
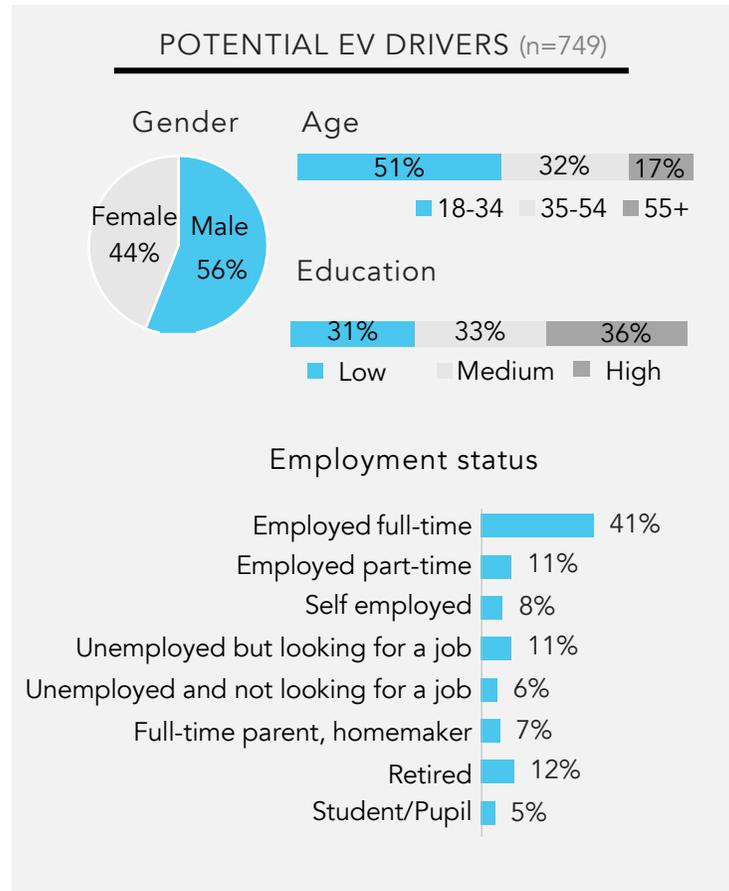
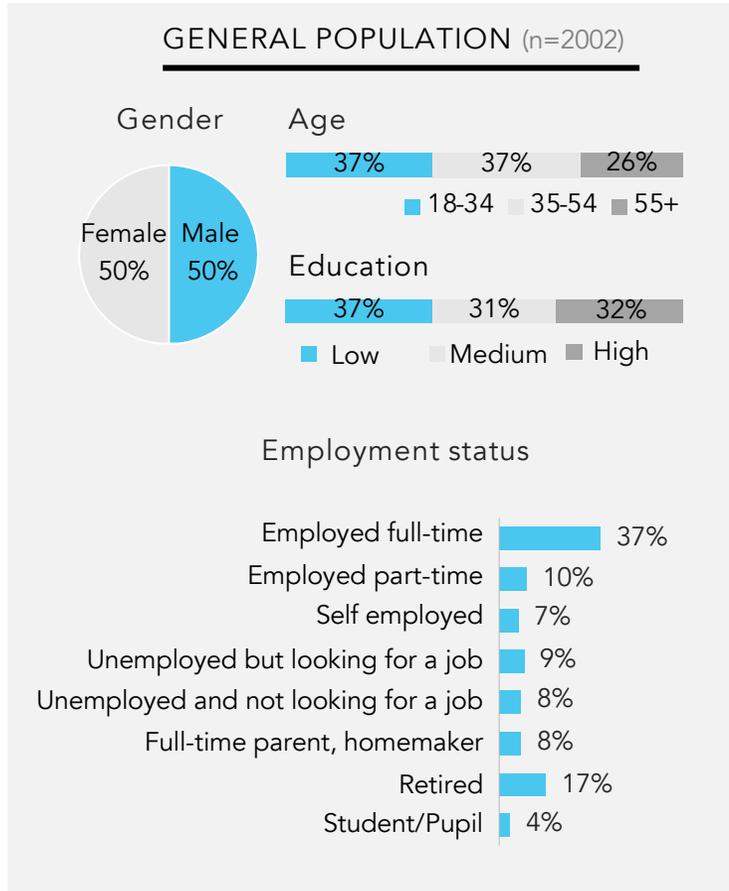
## Representativeness

The general population sample matches the profile of the target population on the variables of age, gender, region, and education. Weighting was applied for small corrections with very high efficiency (99.5%), reflecting the accuracy of the sampling procedures.

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# Profiles

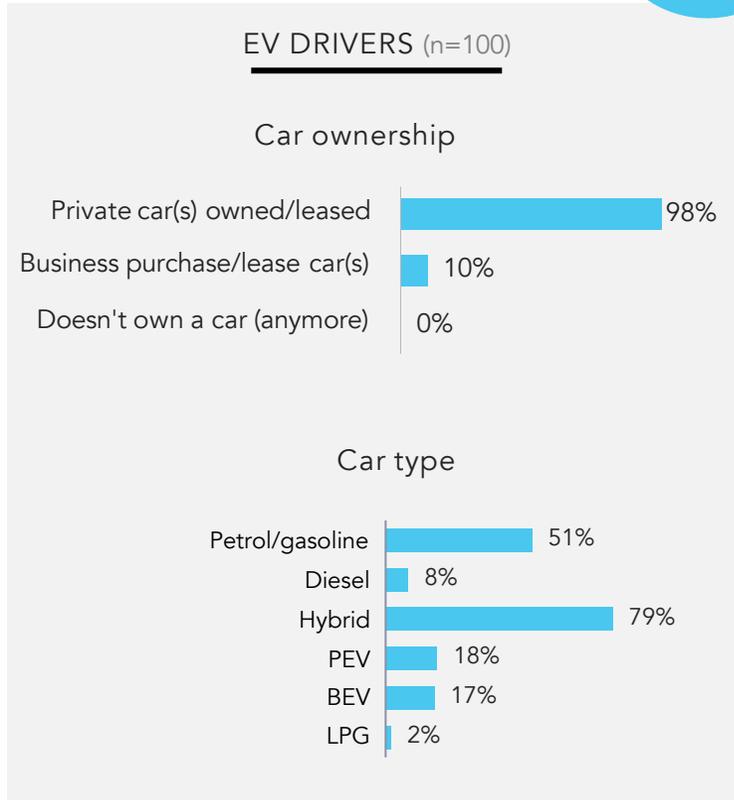
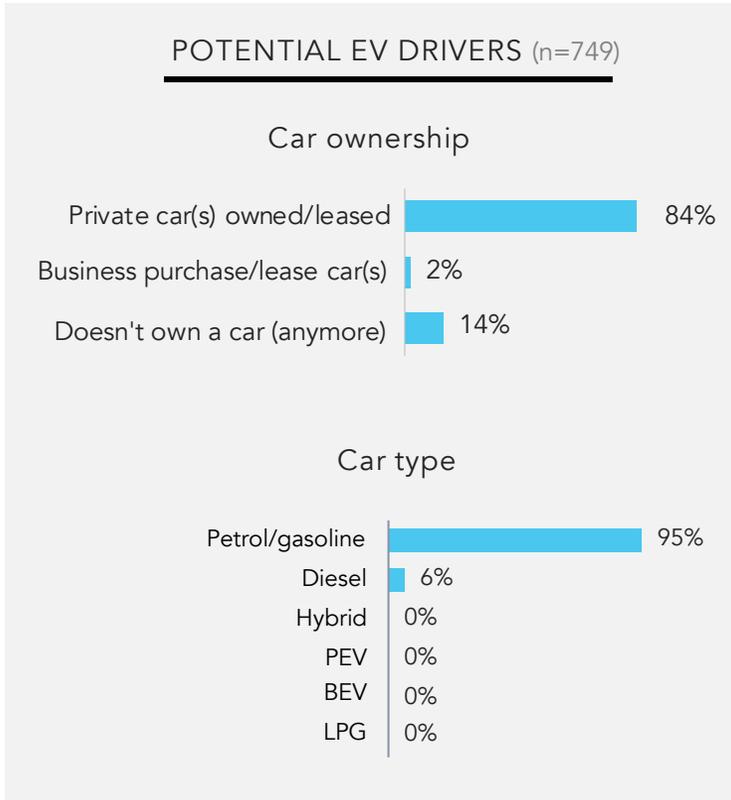
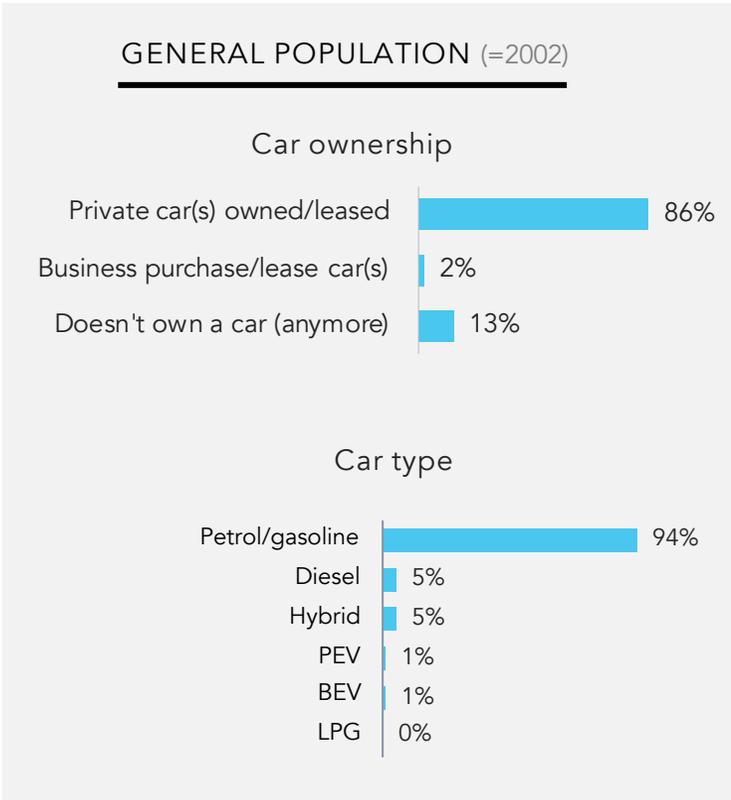
# Profiles



- Current EV drivers are predominantly male, between 18 and 34 years of age, highly educated and working full-time.
- Compared to the general population, potential EV drivers are relatively young (half is between 18-34) – just like current EV drivers. Compared to EV drivers, they resemble the general population more closely on education and employment status.

• Base: General population (n=2002), Potential EV drivers (n=749), EV drivers (n=100)

# Profile (2)

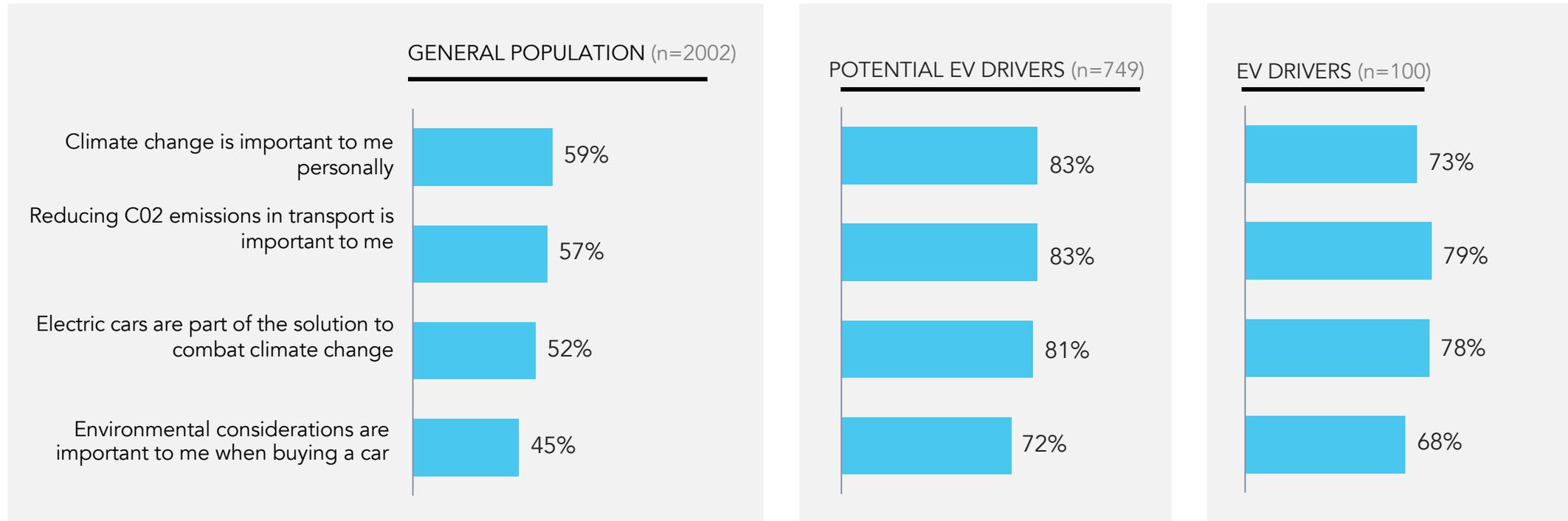


- The vast majority of US citizens owns or leases a private car. Petrol/gasoline is by far the most common type of vehicle. 13% of US citizens currently don't own a car.
- Compared to the general population, a relatively high share of EV drivers has a business car.
- Most EV drivers have multiple cars. Hybrid cars are the most common type of vehicles among EV drivers.

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# Sentiment

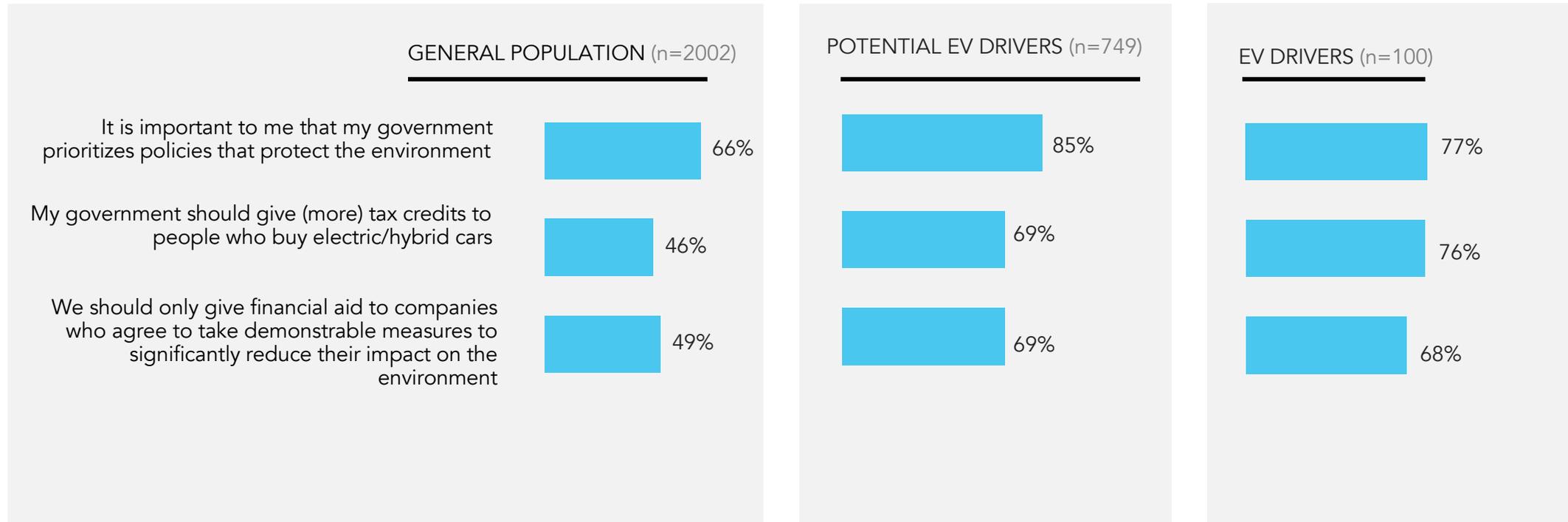
## Climate change is an important topic for (potential) EV drivers. They see electric driving as part of the solution and take environmental considerations into account when buying a car.



- Climate change is personally important for most people in the general population (59%) as well, but among (potential) EV drivers this share is substantially higher.
- Potential EV drivers attribute more importance to climate change (83%) than current EV drivers (73%).
- It's especially highly educated potential EV-drivers that say environmental considerations are important when buying a car (81%). Lower educated potential EV drivers agree far less (64%). There are no significant differences between men and women, nor between age groups.

- Please let us know how much you agree with the following statements – % (strongly) agree shown  
Base: General population (n=2002), Potential EV drivers (n=749), EV drivers (n=100)

## Most (potential) EV drivers think the US government should play an active role in protecting the environment, e.g., by tax credits for EVs or only aiding companies with demonstrable measures of reducing their environmental impact.



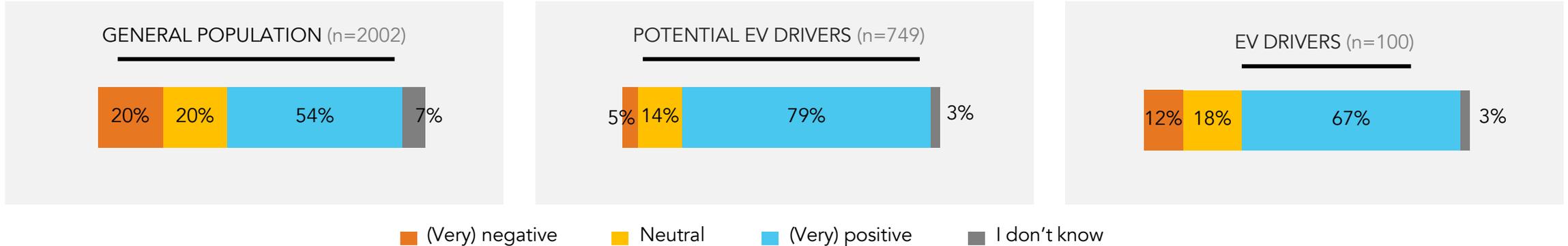
- 2 in 3 US citizens say their government should prioritize policies that protect the environment. They are more divided in their view on whether the government should give (more) tax credits for EVs or only support companies who take demonstrable measures to significantly reduce their environmental impact.

- Please let us know how much you agree with the following statements – % (strongly) agree shown  
Base: General population (n=2002), Potential EV drivers (n=749), EV drivers (n=100)

# Paris Agreement and Biden's energy push

# (Potential) EV drivers have a more favorable view towards the Paris Agreement than the general population.

View on the 'Paris Agreement' (after reading the text below)



Text shown to respondents:

The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 parties at COP 21 in Paris, on December 12, 2015, and entered into force on November 4, 2016. The US re-entered to the agreement on January 20, 2021 under President Joseph R. Biden. The Paris Agreement sets out a global framework to avoid dangerous climate change by limiting global warming and strengthen countries' ability to deal with the impacts of climate change.

- Just over half (54%) of the general population has a (very) positive view towards the Paris Agreement. Among (potential) EV drivers, this is substantially more.
- Higher educated potential EV drivers have a significantly more positive attitude towards the Paris Agreement (85%) than potential EV drivers with a low (73%) or intermediate (77%) education.

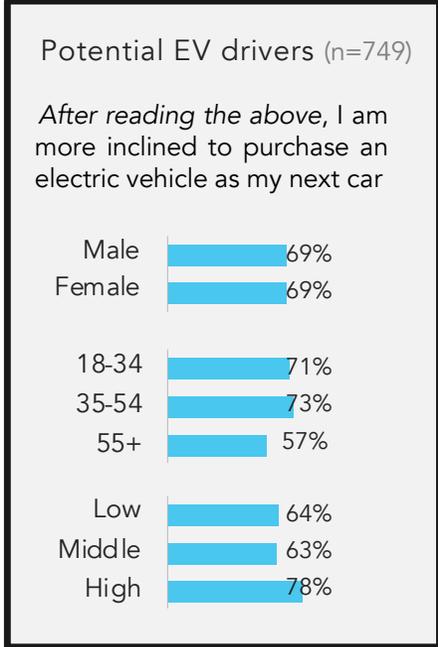
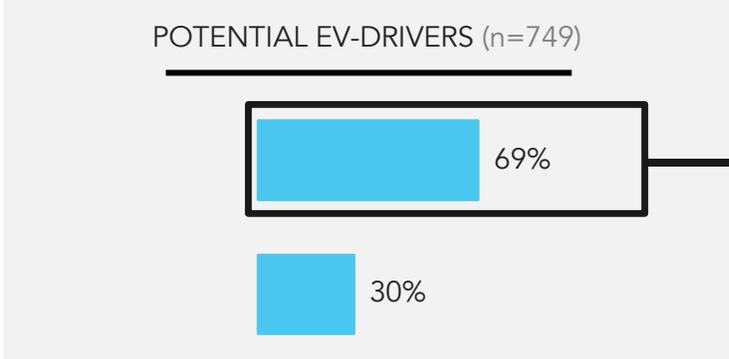
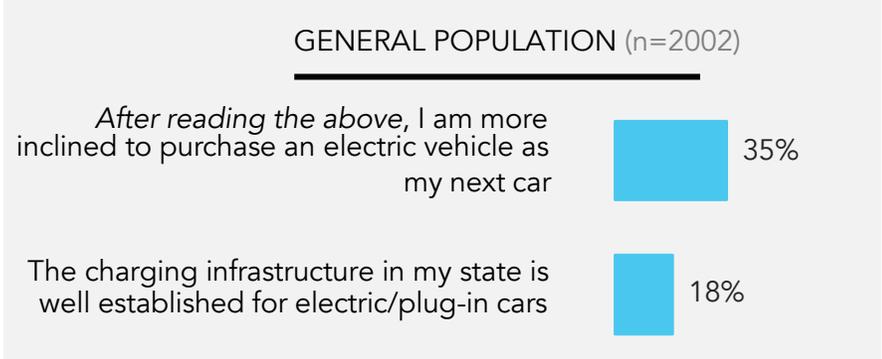
Now that you have read this, how would you describe your view about the 'Paris Agreement'?

Base: General population (n=2002), Potential EV drivers (n=749), EV drivers (n=100)

# Biden’s clean energy plans strengthen potential EV drivers in their inclination to opt for an EV. That said, the majority thinks the charging infrastructure in their state is not well established for electric/plug-in cars yet.

## Biden’s clean energy push

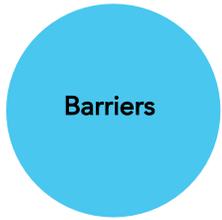
*Text shown to respondents:*  
Part of President Biden’s clean energy push and campaign is to create or expand tax incentives for clean energy, including restoring the full federal tax credit for electric vehicle purchases. The federal electric vehicle tax credit program provides a tax credit as high as \$7,500, depending on the vehicle you choose and your individual tax circumstances. Except for models from Tesla and GM, you can claim the tax credit on the purchase of all mainstream electric vehicles and plug-in hybrids.



- Biden’s plans especially strengthen the inclination to opt for an EV among people under age 55 and those with a high education. No differences between men and women.

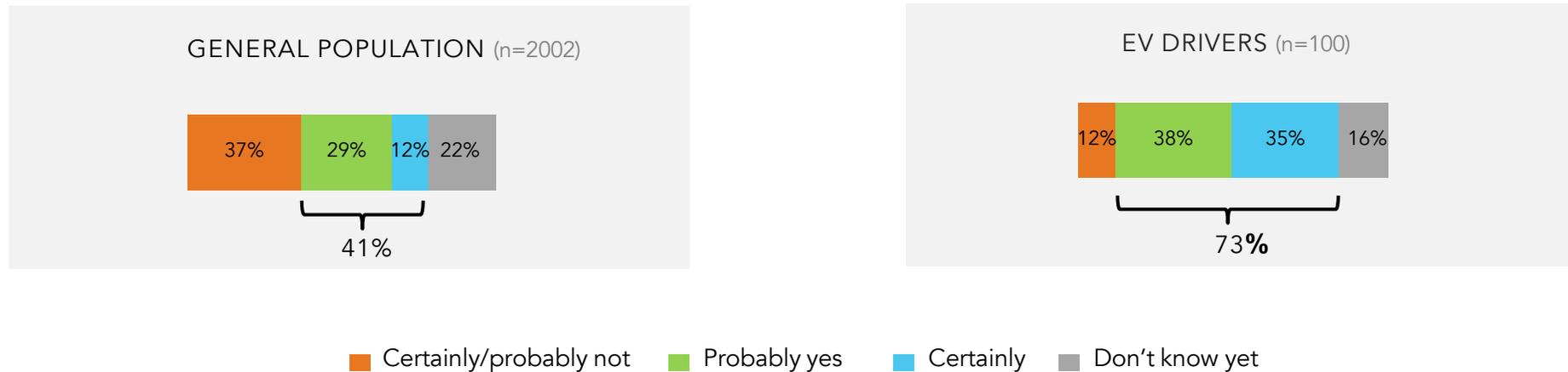
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# Barriers to electric driving



# 4 in 10 US citizens say they consider opting for an EV. Nearly 3 in 4 current EV drivers would (probably) opt again for an EV.

Opt (again) for an electric/ plug-in hybrid car

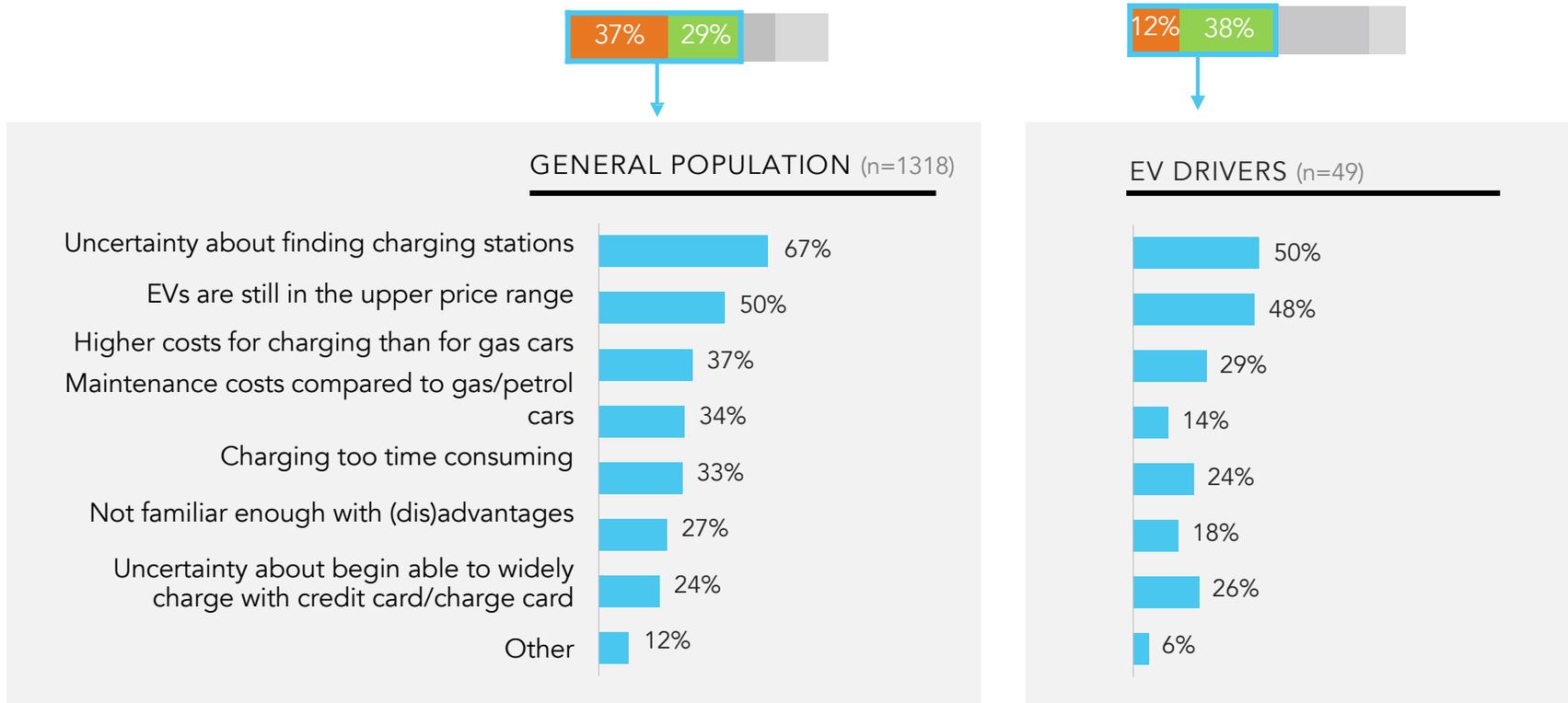


- To what extent would you (again) opt for an electric/plug-in hybrid car?  
Base: General population (n=2002), EV drivers (n=100)

# Uncertainty about charging stations is the main barrier to opt (again) for an EV, both among current EV drivers and the general population. Perceptions of high prices is another reason keeping drivers from going electric (again).

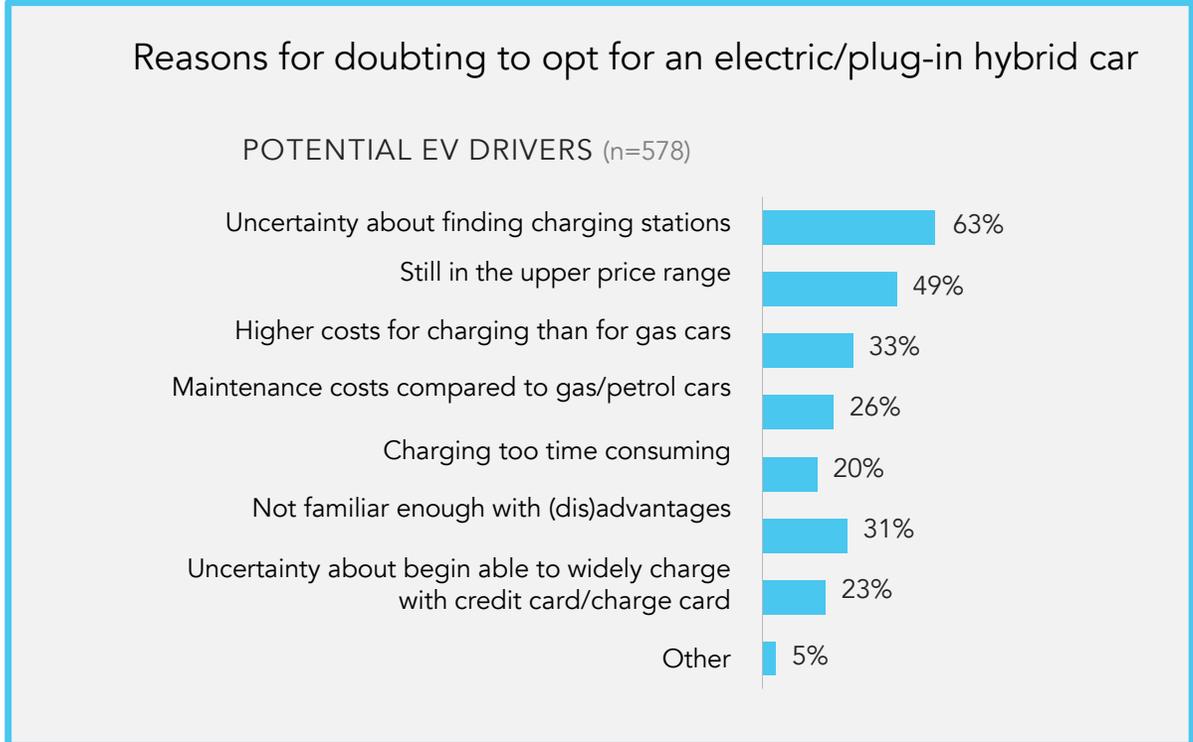
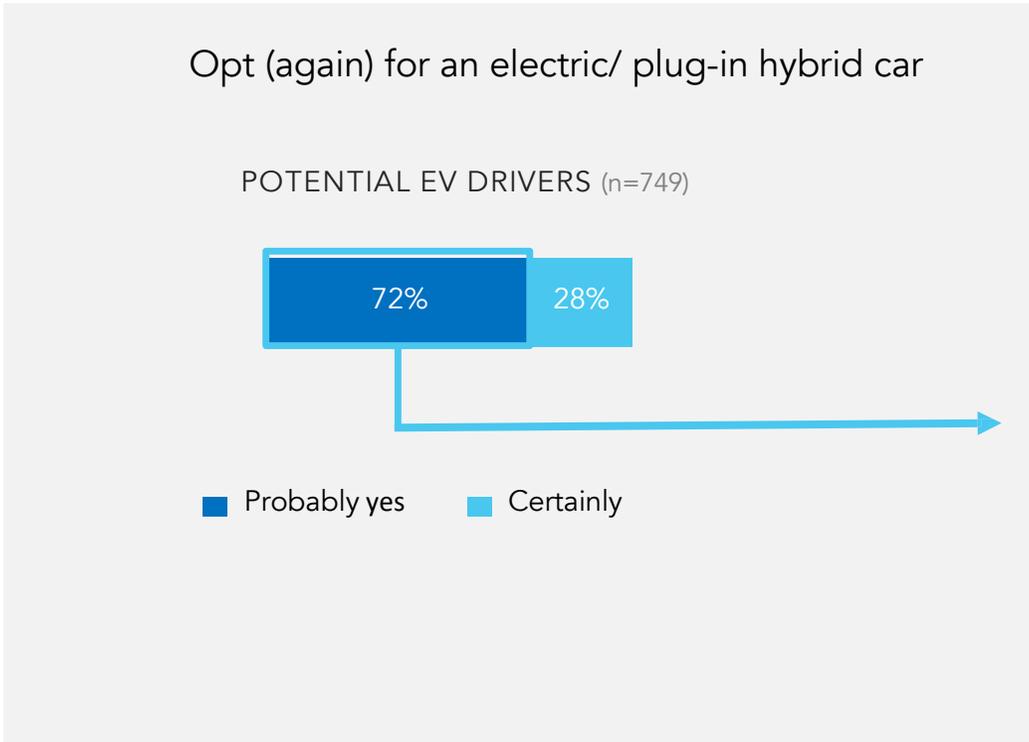
Reasons for not opting/doubting to opt for an electric/plug-in hybrid car

Opt (again) for an electric/ plug-in hybrid car



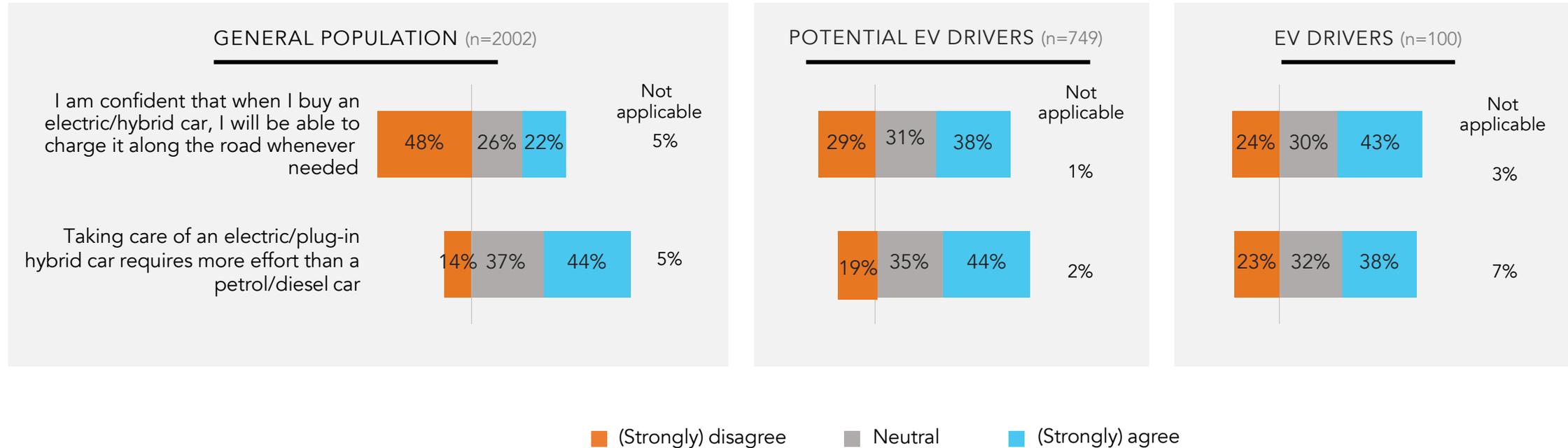
- What are the reasons you would not / What reasons make you doubt to opt for an electric/plug-in hybrid car?  
Base: General population (n=1318), EV drivers (n=49) who say they would certainly not/probably not/probably opt for an electric/plug-in hybrid car

### 3 in 10 potential EV drivers are certain about going electric in the future, and 7 in 10 haven't made a final decision yet. Uncertainty about charging is the main reason for their doubts – followed by price perceptions.



- To what extent would you (again) opt for an electric/plug-in hybrid car? Base: Potential EV drivers (n=749)  
What reasons make you doubt to opt for an electric/plug-in hybrid car? Base: Potential EV drivers who say they would probably opt for an electric/plug-in hybrid car (n=578)

# Roughly half of the general population isn't confident about finding charging possibilities along the road whenever needed, if they were to drive an EV.



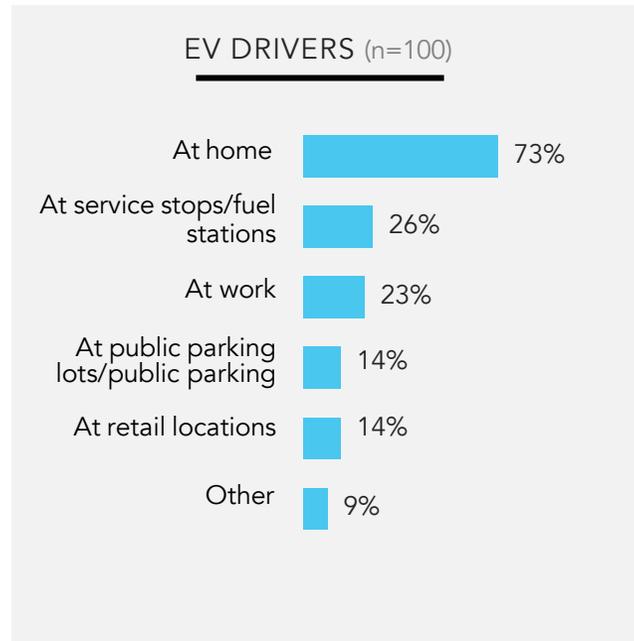
Please let us know how much you agree with the following statements – % (strongly) agree shown  
Base: General population (n=2002), Potential EV drivers (n=749), EV drivers (n=100)

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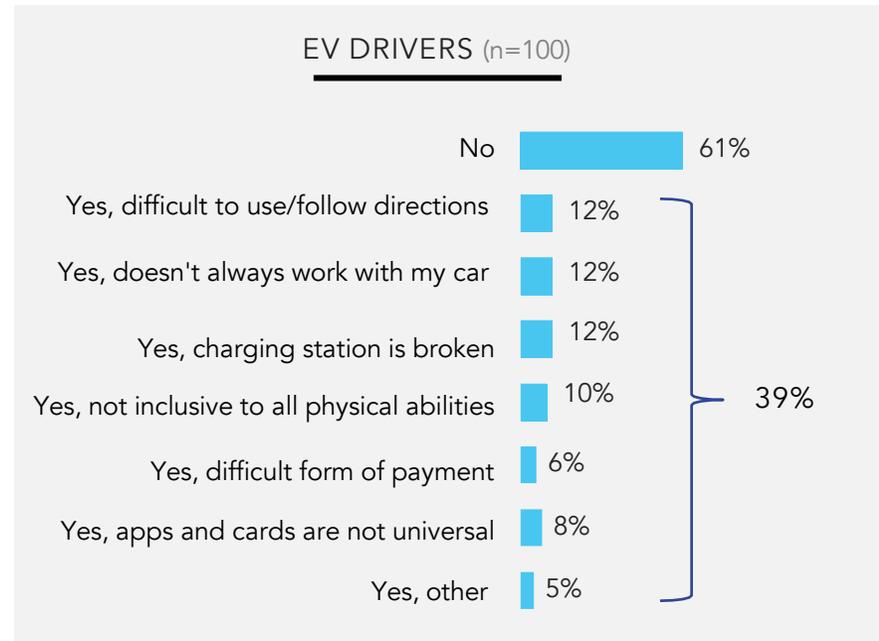
# EV charging infrastructure

# By far the most common location for charging EVs is at home. 4 in 10 EV drivers sometimes experience problems with charging outside of their homes.

Location of charging



Problems with charging outside of home



Where do you charge your electric/plug-in hybrid car(s) currently? Base: EV drivers (n=100)

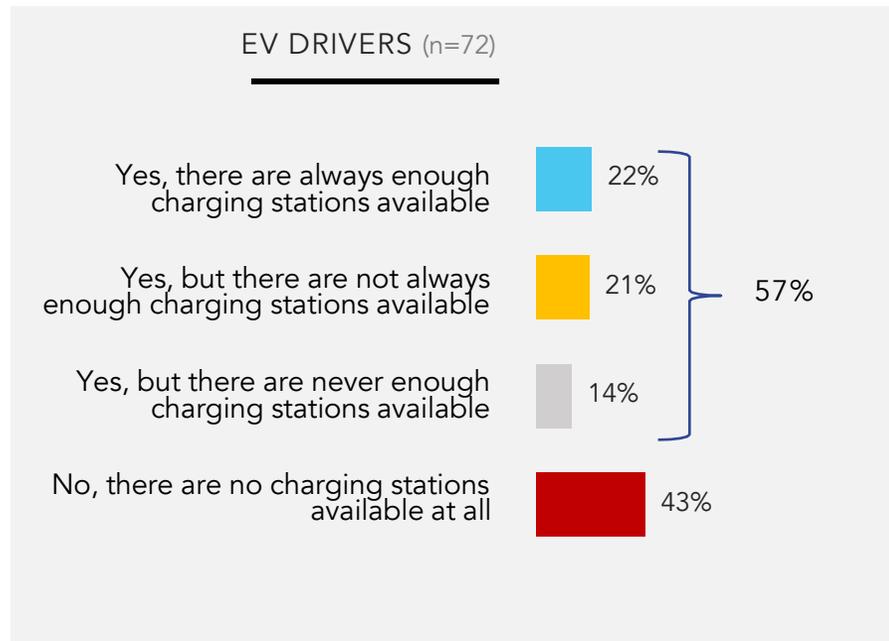
Do you experience any problems when charging your electric/plug-in hybrid car(s) outside of your home? Base: EV drivers (n=100)

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# Workplace charging

# Just over half of the EV drivers who go to work have charging stations there. But for many, there are not always enough charging stations available.

## Charging possibilities at work

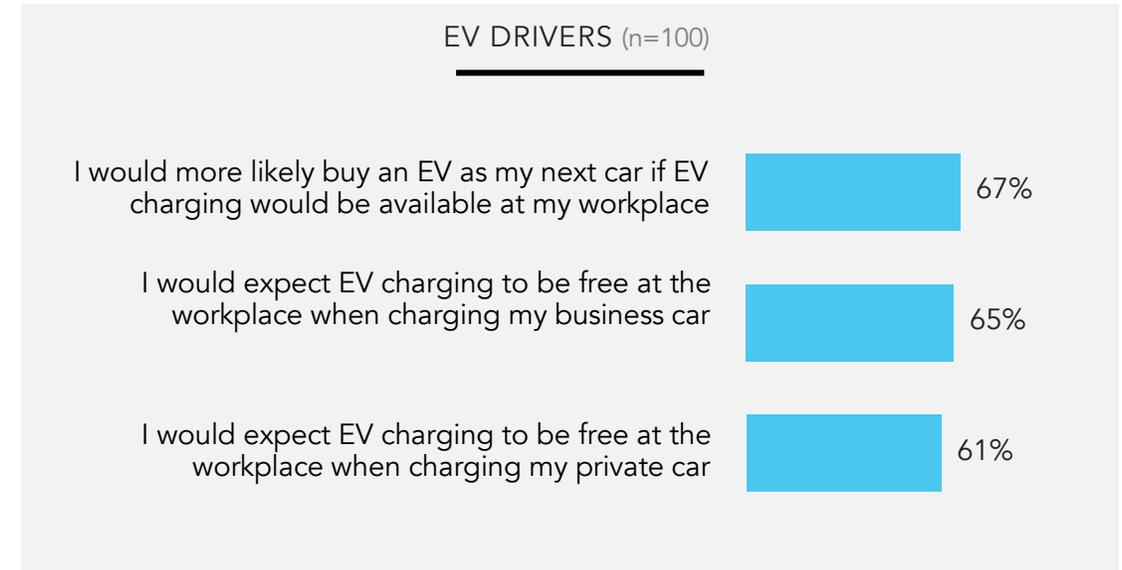
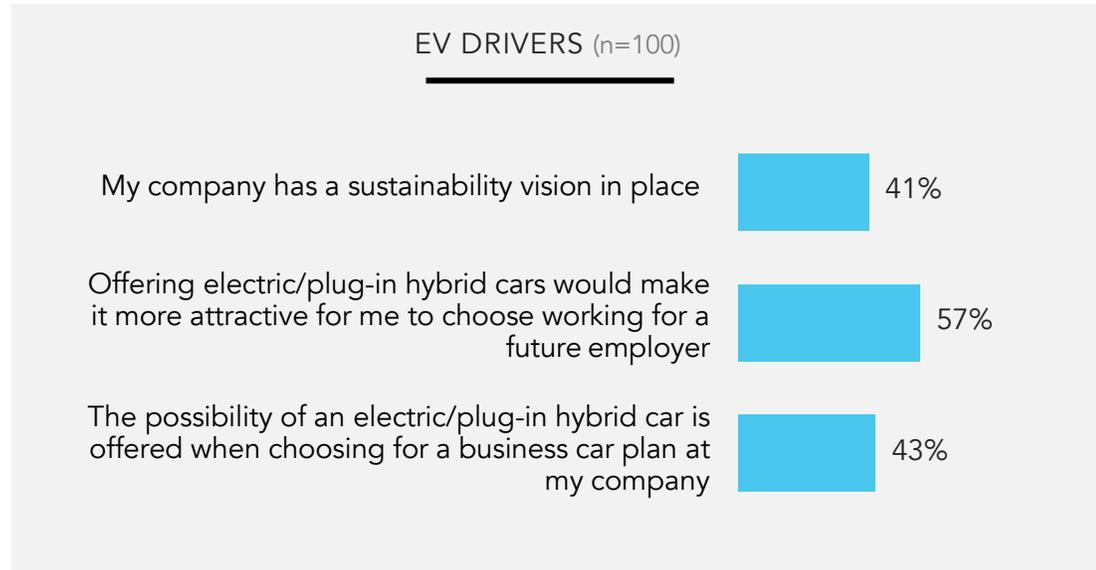


Note: n=28 respondents indicated that charging at work is not applicable for them (e.g. because they are unemployed/retired). They are not counted in calculating the percentages of the graph above.

Does your employer offer possibilities to charge your electric/plug-in hybrid car at work? If so, are there usually sufficient charging stations available?

Base: EV drivers (n=100)

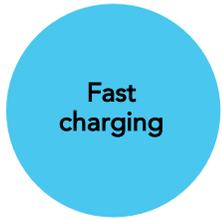
## Offering electric/plug-in hybrid cars makes employers more attractive for many EV drivers. Most would expect charging to be free at work.



- Please let us know how much you agree with the following statements – % (strongly) agree shown  
Base: EV drivers (n=100)

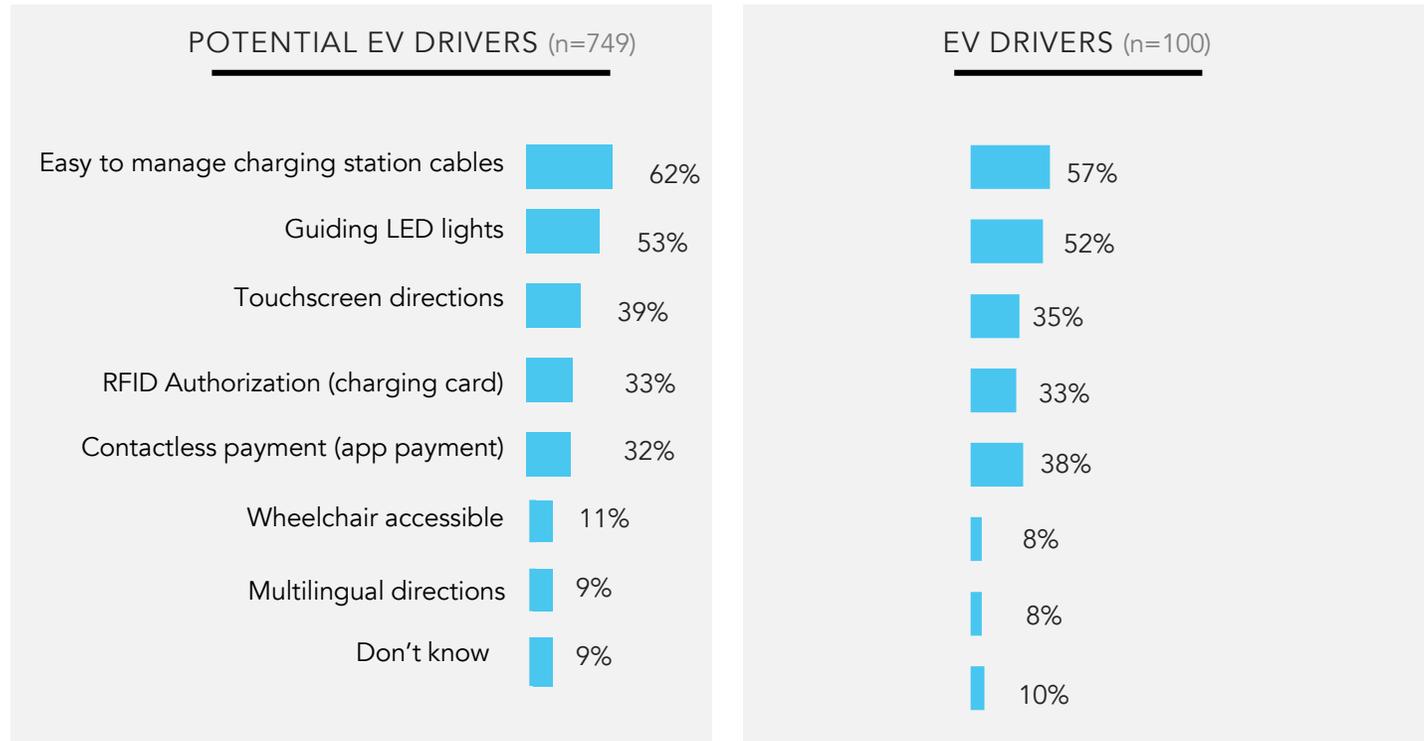
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# Fast charging

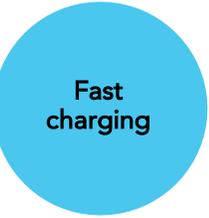


# Easily manageable station cables are seen as the #1 most useful aspect of fast charging stations, followed by guiding LED lights.

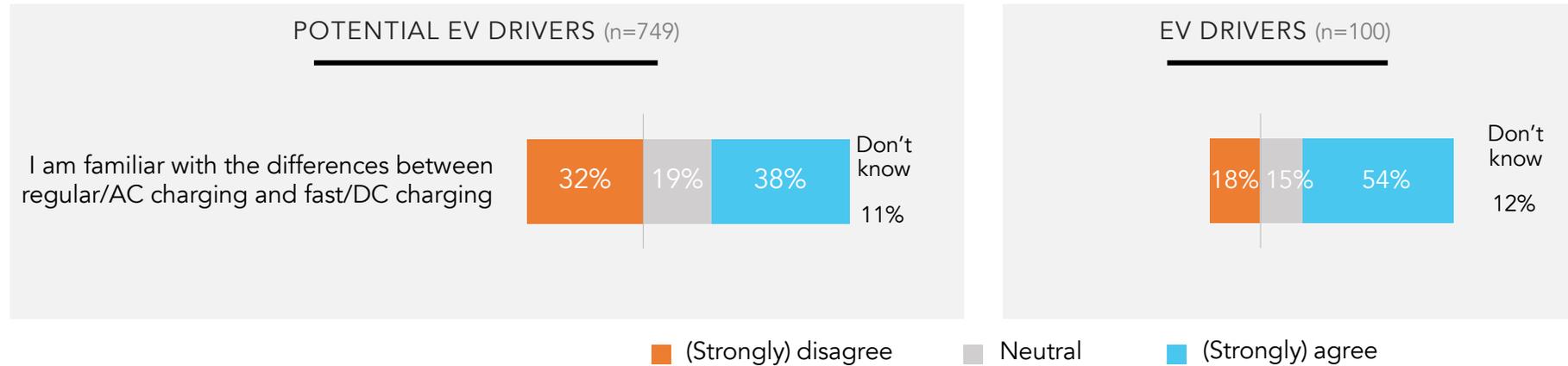
Most useful aspects of charging stations (Top 3)



Choose three aspects of a fast charging station that you would find most useful  
Base: Potential EV drivers (n=749), EV drivers (n=100)



# Just over half of all EV drivers are familiar with the differences between regular/AC charging and fast/DC charging. Among potential EV drivers, familiarity is lower.

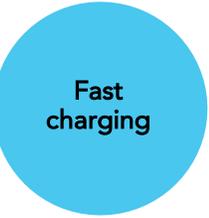


Explanation text shown to respondents (after asking the question about familiarity with both charging options):

- Regular/AC chargers are most suitable for locations where you are likely to spend a lot of time. This allows for your car to fully charge while you are not using it. With the regular/AC charger you can charge your car between 12 and to 25 miles in 1 hour, depending on the charger wattage.
- Fast/DC chargers are most suitable for anywhere that you want to charge most of your car battery in a short amount of time. With the fast/DC charger you can charge your car between 84 and 334 miles in 1 hour, depending on the charger wattage.

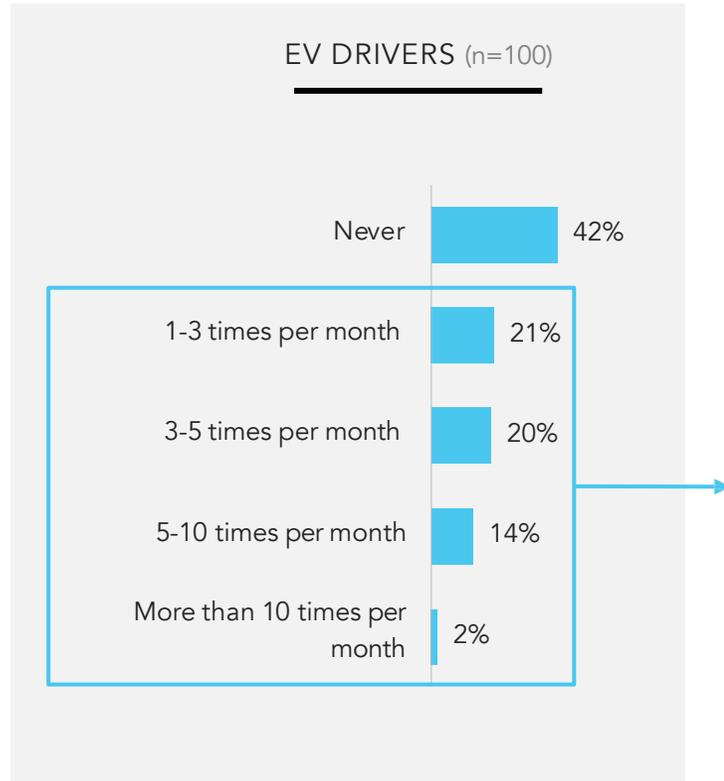
Please let us know how much you agree with the following statement

Base: Potential EV drivers (n=749), EV drivers (n=100)

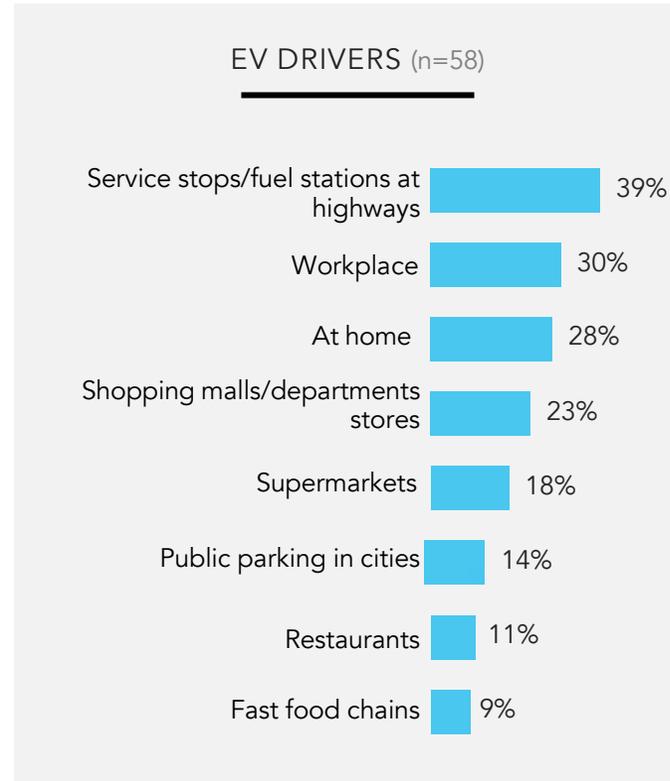


# More than half of EV drivers already use fast charging. They use this at various locations, such as service stops/fuel stations, at the workplace, or at home.

Frequency of using fast/DC charging

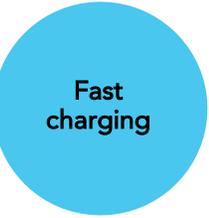


Location of using fast/DC charging



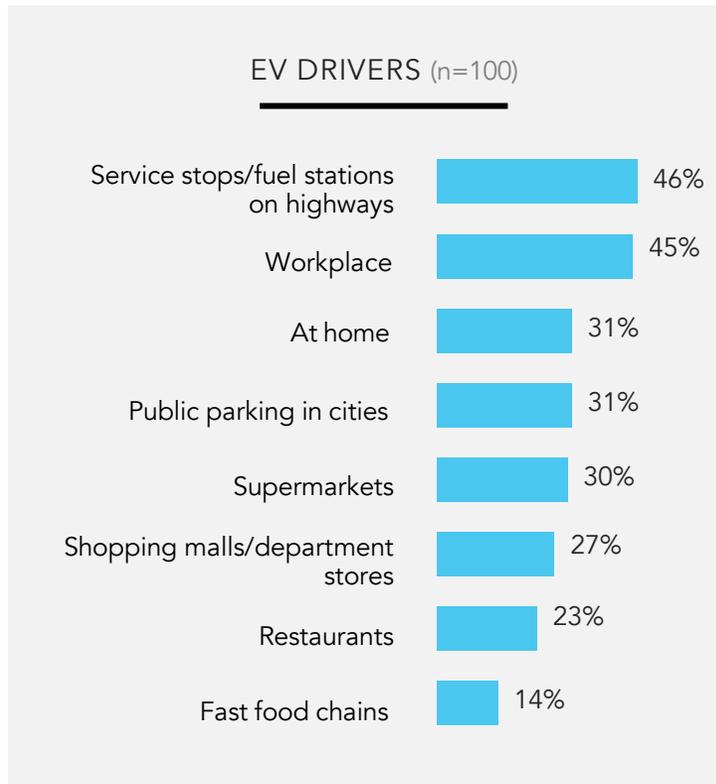
How often do you use fast/DC charging? Base: EV drivers (n=100)

Where do you primarily use fast/DC fast charging? Base: EV drivers who use fast charging (n=58)

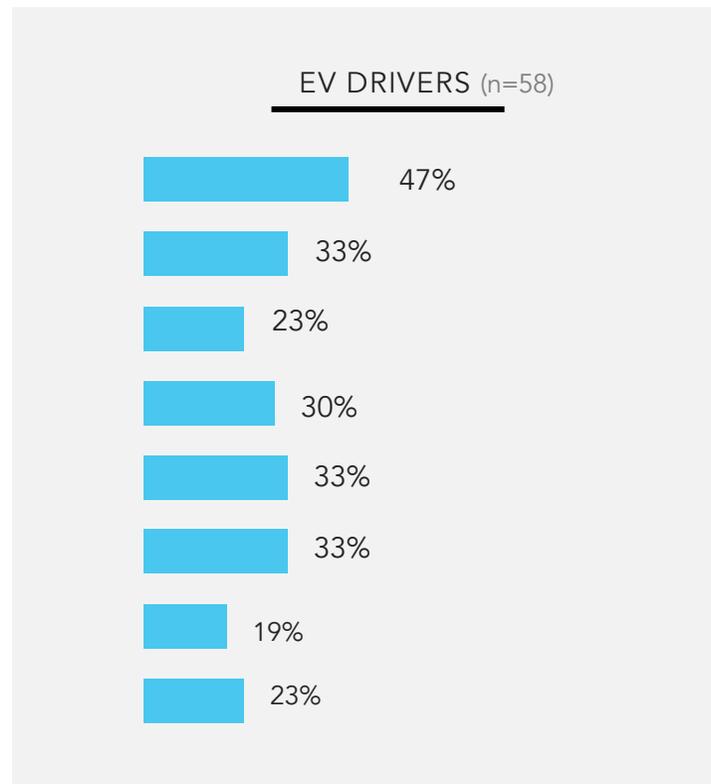


# EV drivers would like to see more chargers (both regular and fast) at various places especially at service stops and fuel stations along the highway

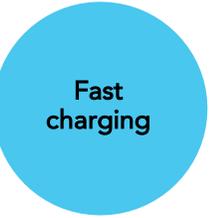
Where like to see (more) regular/AC chargers (top 3)



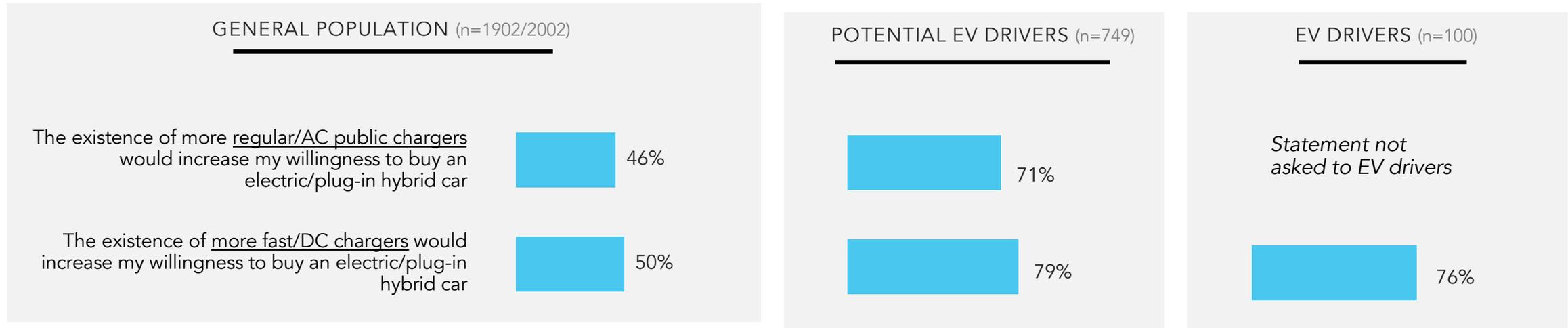
Where like to see (more) fast/DC chargers (top 3)



Where would you like to see (more) regular/AC chargers? (Max 3) Base: EV drivers (n=100)  
C02. Where would you like to see (more) regular/AC chargers? (Max 3) Base: EV drivers (n=100)



# Potential EV drivers say that more chargers (both regular and fast) would increase their willingness to buy an EV.



# Thank you.

This report summarizes extensive market research conducted by [Ipsos](#) for EVBox.

We hope that it provides helpful context for the accompanying press release.

Questions? Please contact Katelyn Hojeibane at EVBox: [katelyn.hojeibane@evbox.com](mailto:katelyn.hojeibane@evbox.com).