

UC Davis Electric Vehicle Charging Survey 2025.06.27

Thanks for your interest in taking part in this important research on electric vehicle charging experiences. Before you begin, please take a moment to read the information below. Click "next" at the bottom of the page to continue the survey.

Introduction and Purpose

You are being invited to join a research study conducted by the Institute of Transportation Studies, University of California, Davis.

The purpose of this study is to learn more about current and past electric vehicle owners' experiences using electric vehicle charging stations. We hope to use this research to inform the development of charging infrastructure and ultimately to improve drivers charging experiences.

If you agree to be in this research, you will be asked to complete a survey. You will be asked questions about your households, where you live, how you get around, and your views about new transportation technologies. It will take about 10-15 minutes to complete the survey.

There is no direct benefit to you from taking part in this study. We hope that the research will inform efforts in California and the US to develop and improve electric vehicle charging.

The risks of this research are minimal. You do not have to answer any of the questions you do not want to answer and can leave the survey at any time. Some questions require a response because they are important in informing California transportation policy.

Confidentiality

As with all research, there is a chance that confidentiality could be compromised; however, we are taking precautions to minimize this risk. Your responses to the survey will not include information that directly identifies you. All survey data will be handled as confidentially as possible. However, individuals from UC Davis who oversee research may access your data during audits or other monitoring activities.

To minimize the risks of breach of confidentiality, we will store survey data on a secure password protected encrypted cloud based storage.

Rights

Taking part in research is completely voluntary. You are free to decline to take part in the project. You can decline to answer any questions and you can stop taking part in the project at any time.

Whether or not you choose to take part, or answer any question, or stop taking part in the project, there will be no penalty to you or loss of benefits to which you are otherwise entitled.

Questions

If you have any questions about this research, please feel free to contact the investigator at [530-754-4408](tel:530-754-4408) or shardman@ucdavis.edu

If you have any questions about your rights or treatment as a research participant in this study, please contact the UC Davis, Institutional Review Board by phone: [916-703-9158](tel:916-703-9158) or by email: HS-IRBEducation@ucdavis.edu.

If you agree to take part in the research, select the next button below to continue to take the survey

There are 129 questions in this survey.

Previous Survey Setup (hidden)

```
[oldcarmain]
{TOKEN:ATTRIBUTE_2} {TOKEN:ATTRIBUTE_3} {TOKEN:ATTRIBUTE_4}
```

```
[oldcarmaintype]
{TOKEN:ATTRIBUTE_5}
```

```
[oldcarmainfastcharge]
{TOKEN:ATTRIBUTE_5 == "EV" or (TOKEN:ATTRIBUTE_4 == "Outlander PHEV" and
intval(TOKEN:ATTRIBUTE_2) >= 2023)}
```

Household Vehicle Information

For this section, "household" means everyone who lives at your address with you. This may include family, partners, children, friends, and roommates. Vehicles refer to cars, trucks, or

SUVs.

[data]

Please write your answer(s) here:

Browser

Engine

OS

Device

[G00Q06]

Do you, or a member of your household, still own or lease your {oldcarmain}?

*

Choose one of the following answers

Please choose **only one** of the following:

Yes

No

[G01Q08]

When did you stop owning or leasing this vehicle?

*

Only answer this question if the following conditions are met:

G00Q06.NAOK == "AO02"

Please write your answer(s) here:

Year

Month

[G00Q01]

How many vehicles do you currently have in your household?

*

Choose one of the following answers

Please choose **only one** of the following:

- None
- 1
- 2
- 3
- 4
- 5 or more

[G00Q02]

How many of these are battery electric, plug-in hybrid, or fuel cell vehicles?

*

Only answer this question if the following conditions are met:

G00Q01.NAOK == "AO02" or G00Q01.NAOK == "AO03" or G00Q01.NAOK == "AO04" or
G00Q01.NAOK == "AO05" or G00Q01.NAOK == "AO06"

Choose one of the following answers

Please choose **only one** of the following:

- None
- 1
- 2
- 3
- 4
- 5 or more

[G00Q03]

How many of these are gasoline, conventional hybrid, or diesel vehicles? Do not count plug-in hybrid vehicles here.

*

Only answer this question if the following conditions are met:

G00Q01.NAOK == "AO02" or G00Q01.NAOK == "AO03" or G00Q01.NAOK == "AO04" or
G00Q01.NAOK == "AO05" or G00Q01.NAOK == "AO06"

Choose one of the following answers

Please choose **only one** of the following:

- None
- 1
- 2
- 3
- 4
- 5 or more

Household Vehicle Setup (hidden)

```
[numvehicles]
{if(!is_empty(G00Q01.NAOK), intval(ltrim(G00Q01.NAOK, "AO")) - 1, 0)}
```

```
[numpevs]
{if(!is_empty(G00Q02.NAOK), intval(ltrim(G00Q02.NAOK, "AO")) - 1, 0)}
```

```
[numices]
{if(!is_empty(G00Q03.NAOK), intval(ltrim(G00Q03.NAOK, "AO")) - 1, 0)}
```

```
[hasoldcarmain]
{G00Q06.NAOK == "AO01"}
```

```
[numpevstoask]
{intval(numpevs) - intval(if(hasoldcarmain, 1, 0))}
```

Household Vehicle Information

Please tell us about the **electric vehicles** you currently own starting with the newest one. This includes battery electric, plug-in hybrid, and fuel cell vehicles

[G02Q04]

{if(hasoldcarmain.NAOK, join("Not including your ", oldcarmain, " what is your newest electric vehicle?"), "What is your newest electric vehicle?")} This includes battery electric, plug-in hybrid, and fuel cell vehicles

*

Please write your answer(s) here:

Year

Make

Model

Option

Id

Type

MPG

Class

[G02Q09]

Did you purchase or lease this car?

*

Choose one of the following answers

Please choose **only one** of the following:

- Purchased new
- Purchased used
- Leased New
- Leased Used

[G02Q10]

When did you {if(G02Q09.NAOK == "AO03" OR G02Q09.NAOK == "AO04", "lease", "purchase")} this car?

*

Please write your answer(s) here:

Month

Year

Household Vehicle Information

[G03Q05]

{if(hasoldcarmain.NAOK, join("Not including your ", oldcarmain, " what is your second newest electric vehicle?"), "What is your second newest electric vehicle?")} This includes battery electric, plug-in hybrid, and fuel cell vehicles

*

Please write your answer(s) here:

Year

Make

Model

Option

Id

Type

MPG

Class

[G03Q11]

Did you purchase or lease this car?

*

Choose one of the following answers

Please choose **only one** of the following:

- Purchased new
- Purchased used
- Leased New
- Leased Used

[G02Q12]

When did you {if(G03Q11.NAOK == "AO03" OR G03Q11.NAOK == "AO04", "lease", "purchase")} this car?

*

Please write your answer(s) here:

Month

Year

Household Vehicle Information

[G04Q13]

{if(hasoldcarmain.NAOK, join("Not including your ", oldcarmain, " what is your third newest electric vehicle?"), "What is your third newest electric vehicle?")} This includes battery electric, plug-in hybrid, and fuel cell vehicles

*

Only answer this question if the following conditions are met:

$\text{intval}(\text{numpevstoask.NAOK}) > 2$

Please write your answer(s) here:

Year

Make

Model

Option

Id

Type

MPG

Class

[G04Q14]

{if(hasoldcarmain.NAOK, join("Not including your ", oldcarmain, " what is your fourth newest electric vehicle?"), "What is your fourth newest electric vehicle?")} This includes battery electric, plug-in hybrid, and fuel cell vehicles

*

Only answer this question if the following conditions are met:

$\text{intval}(\text{numpevstoask.NAOK}) > 3$

Please write your answer(s) here:

Year

Make

Model

Option

Id

Type

MPG

Class

[G04Q15]

{if(hasoldcarmain.NAOK, join("Not including your ", oldcarmain, " what is your fifth newest electric vehicle?"), "What is your fifth newest electric vehicle?")} This includes battery electric, plug-in hybrid, and fuel cell vehicles

*

Only answer this question if the following conditions are met:

intval(numpevstoask.NAOK) > 4

Please write your answer(s) here:

Year

Make

Model

Option

Id

Type

MPG

Class

Household Vehicle Information

Please tell us about the **gasoline, hybrid, or diesel vehicles** you currently own starting with the newest vehicle.

[G05Q16]

What is your newest gasoline, hybrid, or diesel vehicle?

*

Please write your answer(s) here:

Year

Make

Model

Option

Id

Type

MPG

Class

[G05Q17]

Did you purchase or lease this car?

*

Choose one of the following answers

Please choose **only one** of the following:

- Purchased new
- Purchased used
- Leased New
- Leased Used

[G05Q18]

When did you {if(G05Q17.NAOK == "AO03" OR G05Q17.NAOK == "AO04", "lease", "purchase")} this car?

*

Please write your answer(s) here:

Month

Year

Household Vehicle Information

[G06Q19]

What is your second newest gasoline, hybrid, or diesel vehicle?

*

Please write your answer(s) here:

Year

Make

Model

Option

Id

Type

MPG

Class

[G06Q20]

Did you purchase or lease this car?

*

Choose one of the following answers

Please choose **only one** of the following:

- Purchased new
- Purchased used
- Leased New
- Leased Used

[G06Q21]

When did you {if(G06Q20.NAOK == "AO03" OR G06Q20.NAOK == "AO04", "lease", "purchase")} this car?

*

Please write your answer(s) here:

Month

Year

Household Vehicle Information

[G07Q22]

What is your third newest gasoline, hybrid, or diesel vehicle?

*

Only answer this question if the following conditions are met:

$\text{intval}(\text{numices.NAOK}) > 2$

Please write your answer(s) here:

Year

Make

Model

Option

Id

Type

MPG

Class

[G07Q23]

What is your fourth newest gasoline, hybrid, or diesel vehicle?

*

Only answer this question if the following conditions are met:

$\text{intval}(\text{numices.NAOK}) > 3$

Please write your answer(s) here:

Year

Make

Model

Option

Id

Type

MPG

Class

[G07Q24]

What is your fifth newest gasoline, hybrid, or diesel vehicle?

*

Only answer this question if the following conditions are met:

$\text{intval}(\text{numices.NAOK}) > 4$

Please write your answer(s) here:

Year

Make

Model

Option

Id

Type

MPG

Class

Your Ownership of Electric Vehicles

[G09Q26]

Since owning the {oldcarmain} have you had any other electric vehicles? This includes battery electric, plug-in hybrid, and fuel cell vehicles

*

Choose one of the following answers

Please choose **only one** of the following:

- No, I haven't owned an electric vehicle since then
- Yes, I have owned an electric vehicle since then, but I no longer own it
- Other

[G09Q27]

What was the most recent electric car you or someone in your household owned?

*

Only answer this question if the following conditions are met:

G09Q26.NAOK == "AO02"

Please write your answer(s) here:

Year

Make

Model

Option

Id

Type

MPG

Class

[G09Q28]

When did you stop owning or leasing this vehicle?

*

Only answer this question if the following conditions are met:

G09Q26.NAOK == "AO02"

Please write your answer(s) here:

Year

Month

[G09Q29]

As far as we can tell you once owned a electric vehicle and no longer own one. In your own words why did you stop owning an electric vehicle?

Please write your answer here:

Vehicle Setup (hidden)

[pev1]

{G02Q04_SQ001} {G02Q04_SQ002} {G02Q04_SQ003}

[pev2]
{G03Q05_SQ001} {G03Q05_SQ002} {G03Q05_SQ003}

[pev3]
{G04Q13_SQ001} {G04Q13_SQ002} {G04Q13_SQ003}

[pev4]
{G04Q14_SQ001} {G04Q14_SQ002} {G04Q14_SQ003}

[pev5]
{G04Q15_SQ001} {G04Q15_SQ002} {G04Q15_SQ003}

[ice1]
{G05Q16_SQ001} {G05Q16_SQ002} {G05Q16_SQ003}

[ice2]
{G06Q19_SQ001} {G06Q19_SQ002} {G06Q19_SQ003}

[ice3]
{G07Q22_SQ001} {G07Q22_SQ002} {G07Q22_SQ003}

[ice4]
{G07Q23_SQ001} {G07Q23_SQ002} {G07Q23_SQ003}

[ice5]
{G07Q24_SQ001} {G07Q24_SQ002} {G07Q24_SQ003}

[pevrecent]
{G09Q27_SQ001} {G09Q27_SQ002} {G09Q27_SQ003}

[pevrecentfastcharge]
{G09Q27_SQ006.NAOK == "EV" or (G09Q27_SQ003.NAOK == "Outlander PHEV" and
intval(G09Q27_SQ001.NAOK) >= 2023)}

[pev1type]
{G02Q04_SQ006}

[pev2type]
{G03Q05_SQ006}

[pev3type]
{G04Q13_SQ006}

[pev4type]
{G04Q14_SQ006}

[pev5type]
{G04Q15_SQ006}

[ice1type]
{G05Q16_SQ006}

[ice2type]
{G06Q19_SQ006}

[ice3type]
{G07Q22_SQ006}

[ice4type]
{G07Q23_SQ006}

[ice5type]
{G07Q24_SQ006}

[numbevs]

```
{countif('EV', pev1type.NAOK, pev2type.NAOK, pev3type.NAOK, pev4type.NAOK, pev5type.NAOK)}
```

[numphevs]

```
{countif('Plug-in Hybrid', pev1type.NAOK, pev2type.NAOK, pev3type.NAOK, pev4type.NAOK, pev5type.NAOK, ice1type.NAOK, ice2type.NAOK, ice3type.NAOK, ice4type.NAOK, ice5type.NAOK)}
```

[pev1fastcharge]

```
{G02Q04_SQ006.NAOK == "EV" or (G02Q04_SQ003.NAOK == "Outlander PHEV" and intval(G02Q04_SQ001.NAOK) >= 2023)}
```

[pev2fastcharge]

```
{G03Q05_SQ006.NAOK == "EV" or (G03Q05_SQ003.NAOK == "Outlander PHEV" and intval(G03Q05_SQ001.NAOK) >= 2023)}
```

[pev3fastcharge]

```
{G04Q13_SQ006.NAOK == "EV" or (G04Q13_SQ003.NAOK == "Outlander PHEV" and intval(G04Q13_SQ001.NAOK) >= 2023)}
```

[pev4fastcharge]

```
{G04Q14_SQ006.NAOK == "EV" or (G04Q14_SQ003.NAOK == "Outlander PHEV" and intval(G04Q14_SQ001.NAOK) >= 2023)}
```

[pev5fastcharge]

{G04Q15_SQ006.NAOK == "EV" or (G04Q15_SQ003.NAOK == "Outlander PHEV" and
intval(G04Q15_SQ001.NAOK) >= 2023)}

[ice1fastcharge]

{G05Q16_SQ006.NAOK == "EV" or (G05Q16_SQ003.NAOK == "Outlander PHEV" and
intval(G05Q16_SQ001.NAOK) >= 2023)}

[ice2fastcharge]

{G06Q19_SQ006.NAOK == "EV" or (G06Q19_SQ003.NAOK == "Outlander PHEV" and
intval(G06Q19_SQ001.NAOK) >= 2023)}

[ice3fastcharge]

{G07Q22_SQ006.NAOK == "EV" or (G07Q22_SQ003.NAOK == "Outlander PHEV" and
intval(G07Q22_SQ001.NAOK) >= 2023)}

[ice4fastcharge]

{G07Q23_SQ006.NAOK == "EV" or (G07Q23_SQ003.NAOK == "Outlander PHEV" and
intval(G07Q23_SQ001.NAOK) >= 2023)}

[ice5fastcharge]

{G07Q24_SQ006.NAOK == "EV" or (G07Q24_SQ003.NAOK == "Outlander PHEV" and
intval(G07Q24_SQ001.NAOK) >= 2023)}

[fastcharge]

{count(pev1fastcharge.NAOK, pev2fastcharge.NAOK, pev3fastcharge.NAOK, pev4fastcharge.NAOK, pev5fastcharge.NAOK, ice1fastcharge.NAOK, ice2fastcharge.NAOK, ice3fastcharge.NAOK, ice4fastcharge.NAOK, ice5fastcharge.NAOK) > 0}

Your Ownership of Electric Vehicles

[G10Q30]

Which of the below vehicles replaced your {oldcarmain}?

*

Only answer this question if the following conditions are met:

! hasoldcarmain.NAOK and intval(numvehicles.NAOK) > 0

Choose one of the following answers

Please choose **only one** of the following:

{pev1}

{pev2}

{pev3}

{pev4}

{pev5}

{ice1}

{ice2}

{ice3}

{ice4}

{ice5}

Other

[G10Q31]

What do you use your vehicles for?

*

Only answer this question if the following conditions are met:

$\text{intval}(\text{numvehicles.NAOK}) > 0$

Select all that apply

Please choose **all** that apply:

- For commuting
- For private use (other than commuting)
- For use as a company or business vehicle
- For ride hailing or gig economy work (e.g. Uber or Lyft, DoorDash, etc.)
- Other:

Your Vehicle Use

[G11Q32]

In the last 365 days (or the most recent year you remember), estimate how many miles each of the following household vehicles was driven. If a vehicle has been owned for less than 1 year, estimate its annual mileage. If you no longer own the car estimate how many miles you used to drive in a year.

*

	Annual Mileage	Plus or Minus
{oldcarmain}	<input type="text"/>	<input type="text"/>
{pev1}	<input type="text"/>	<input type="text"/>
{pev2}	<input type="text"/>	<input type="text"/>
{pev3}	<input type="text"/>	<input type="text"/>
{pev4}	<input type="text"/>	<input type="text"/>
{pev5}	<input type="text"/>	<input type="text"/>
{ice1}	<input type="text"/>	<input type="text"/>
{ice2}	<input type="text"/>	<input type="text"/>
{ice3}	<input type="text"/>	<input type="text"/>
{ice4}	<input type="text"/>	<input type="text"/>
{ice5}	<input type="text"/>	<input type="text"/>
{pevrecent}	<input type="text"/>	<input type="text"/>

Your electric vehicle charging

In this section we want to understand more about how you charge an electric vehicle and your experiences using different chargers.

[G12Q33]

Which of the following places for electric vehicle charging could you use to charge an electric vehicle?

*

Select all that apply

Please choose **all** that apply:

- Charging at home
- Charging at work/commute location
- Public* slow (level 1 or level 2) charging
- Public* DC fast (level 3) charging (including Superchargers)

Other:

*Public refers to charging not at home or at a work/commute location

[G12Q34]

What type of charging do you have at home?

*

Only answer this question if the following conditions are met:

G12Q33_SQ001 == "Y"

Select all that apply

Please choose **all** that apply:

A 240 V (level 2) electric vehicle charger

A 240 V (level 2) dryer plug

A 120 V (level 1) standard outlet

A 120 V (level 1) electric vehicle charger

Other:

[G14Q114]

How much did this home charger cost you to install? Include all equipment and installation costs

Only answer this question if the following conditions are met:

G12Q34_SQ001.NAOK == "Y" or G12Q34_SQ004.NAOK == "Y"

Please write your answer here:

[G14Q115]

When did you get your home charger?

*

Only answer this question if the following conditions are met:

G12Q34_SQ001.NAOK == "Y" or G12Q34_SQ004.NAOK == "Y"

Choose one of the following answers

Please choose **only one** of the following:

- Before 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017
- 2018
- 2019
- 2020
- 2021
- 2022
- 2023
- 2024
- 2025

[G12Q35]

Which of the following charging have you used?

*

Select all that apply

Please choose **all** that apply:

- Charging at home
- Charging at work/commute location
- Public* slow (level 1 or level 2) charging
- Public* DC fast (level 3) charging (including Superchargers)
- None of the above

Other:

*Public refers to charging not at home or at a work/commute location

Your electric vehicle charging

[G13Q36]

In the past week, how many times have you charged at these locations? Please report the week as it occurred even if the past week was not typical. You can share more information about this week below.

Please choose the appropriate response for each item:

	0	1	2	3	4	5	6	7 or more
Home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public L1 or L2 charging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public DC fast charging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

[G13Q37]

Please share any information about the past week of charging you think may be relevant. This could include any unusual charging situations, (e.g. you were on a road trip, your regular charger was broken, etc.)

Please write your answer here:

Your experience using public fast charging

[G14Q39]

In a typical month, how often do you use public DC fast chargers? (this includes fast chargers from Tesla, ChargePoint, Electrify America, EVgo chargers and others)

*

Only answer this question if the following conditions are met:

[fastcharge.NAOK](#)

Choose one of the following answers

Please choose **only one** of the following:

- None of my EVs are fast charging capable
- Never
- Less than once per month
- 1 time per month
- 2 times per month
- 3 times per month
- 4 times per month
- 5 times per month
- More than 6 times a month
- I don't remember

[G14Q40]

When you owned an electric vehicle, how often did you use public DC fast chargers in a typical month? (this includes fast chargers from Tesla, ChargePoint, Electrify America, EVgo chargers and others)

*

Only answer this question if the following conditions are met:

! [fastcharge.NAOK](#)

Choose one of the following answers

Please choose **only one** of the following:

- None of my EVs were fast charging capable
- Never
- Less than once per month
- 1 time per month
- 2 times per month
- 3 times per month
- 4 times per month
- 5 times per month
- More than 6 times a month
- I don't remember

[G14Q41]

We would like to know more about experiences with public DC fast charging. Can you recall your last public fast charging session?

*

Only answer this question if the following conditions are met:

G14Q39.NAOK == "AO03" or G14Q39.NAOK == "AO04" or G14Q39.NAOK == "AO05" or
G14Q39.NAOK == "AO06" or G14Q39.NAOK == "AO07" or G14Q39.NAOK == "AO08" or
G14Q39.NAOK == "AO09" or G14Q40.NAOK == "AO03" or G14Q40.NAOK == "AO04" or
G14Q40.NAOK == "AO05" or G14Q40.NAOK == "AO06" or G14Q40.NAOK == "AO07" or
G14Q40.NAOK == "AO08" or G14Q40.NAOK == "AO09"

Choose one of the following answers

Please choose **only one** of the following:

Yes

No

Other

[G14Q42]

When was the last time you used a public DC Fast Charger?

*

Only answer this question if the following conditions are met:

G14Q41.NAOK == "AO01"

Please write your answer here:

[G14Q43]

What vehicle did you charge the last time you charged at a public DC fast charger?

*

Only answer this question if the following conditions are met:

G14Q41.NAOK == "AO01"

Choose one of the following answers

Please choose **only one** of the following:

- {if(oldcarmainfastcharge.NAOK, oldcarmain)}
- {if(pevrecentfastcharge.NAOK, pevrecent)}
- {if(pev1fastcharge.NAOK, pev1)}
- {if(pev2fastcharge.NAOK, pev2)}
- {if(pev3fastcharge.NAOK, pev3)}
- {if(pev4fastcharge.NAOK, pev4)}
- {if(pev5fastcharge.NAOK, pev5)}
- {if(ice1fastcharge.NAOK, ice1)}
- {if(ice2fastcharge.NAOK, ice2)}
- {if(ice3fastcharge.NAOK, ice3)}
- {if(ice4fastcharge.NAOK, ice4)}
- {if(ice5fastcharge.NAOK, ice5)}
- Other

[G16Q119]

What brand of public DC fast charger did you use? (e.g. Tesla, ChargePoint, Electrify America, EVgo)

Enter the brand. Check the box if you're not sure.

Please write your answer(s) here:

Brand

No Idea

Charging Setup (hidden)

[rememberscharging]
{G14Q41.NAOK == "AO01"}

Your experience using public fast charging

We would like to learn more about your session on {date("n-j-Y", strtotime(G14Q42.NAOK))} at a public DC fast charger.

This includes using DC fast charging from Tesla, ChargePoint, Electrify America, EVgo, and others. Our hope is that this information can help inform how to improve public charging.

[G15Q44]

How long did you charge your vehicle for during this session?

Enter the number of hours and/or minutes. Check the box if you don't remember.

Please write your answer(s) here:

Hours

Minutes

I don't remember

[G15Q45]

How long did you have to wait before a charger was available?

Enter the number of hours and/or minutes. Check the box if you don't remember.

Please write your answer(s) here:

Hours

Minutes

I don't remember

[G15Q46]

How much did this session cost you?

Only include the total out of pocket cost to you, this can be \$0 if you have free charging or charging credits

Enter the cost. Check the box if you don't remember.

Please write your answer(s) here:

\$

I don't remember

[G15Q47]

How many kWh did you get?

Enter the number of kWh. Check the box if you don't remember.

Please write your answer(s) here:

kWh

I don't remember

[G15Q48]

What was the remaining percent of charge of your battery when you started this session?

Enter the percent. Check the box if you don't remember.

Please write your answer(s) here:

%

I don't remember

[G18Q116]

Why did this session cost you \$0? This could include having free charging from when you bought the car, free charging credits, promotional credits, etc.

Only answer this question if the following conditions are met:

`! is_empty(G15Q46_SQ001.NAOK) and intval(G15Q46_SQ001.NAOK) == 0`

Please write your answer here:

Your experience using public fast charging

[G16Q49]

On the map below please tell us where you charged on {date("n-j-Y", strptime(G14Q42.NAOK))}.

You can either type in the address or you can drop a marker on the map in the correct location.

*

Please write your answer(s) here:

Type

Address

Dropped Lat

Dropped Lng

Dragged Lat

Dragged Lng

Your experience using public fast charging

[G17Q50]

For this charging session where did you go while you charged?

*

Select all that apply

Please choose **all** that apply:

- Nowhere/stayed with my car
- Restroom
- Café, restaurant, or bar
- Place of work or study
- Retail or clothing store
- Grocery store
- Department store/big box store
- Medical or dental facility
- Place of religion
- Cinema/theatre/entertainment venue
- Walked around

Other:

[G17Q51]

In your own words, what did you do while you charged?

Please write your answer here:

[G17Q52]

Other than recharging, did you purchase or spend any money on anything while you charged?

*

Choose one of the following answers

Please choose **only one** of the following:

Yes

No

Other

[G17Q53]

How many stores, restaurants, or places where you can spend money did you visit?

*

Choose one of the following answers

Please choose **only one** of the following:

0

1

2

3

4

5 or more

[G17Q54]

What was the primary reason you visited this charging location?

*

Choose one of the following answers

Please choose **only one** of the following:

- To charge my EV
- To do the activities I listed above
- Both charge my EV and do the activities

Other

[G17Q55]

Why did you use a public charger on this occasion?

*

Select all that apply

Please choose **all** that apply:

- I was on a long trip
- This is my normal/routine way of charging
- The opportunity to charge arose and I took it

Other:

Charging Setup (hidden)

[numplacesspent]

{if(!is_empty(G17Q53.NAOK), intval(ltrim(G17Q53.NAOK, "AO")) - 1, 0)}

Your experience using public fast charging

Thinking about the 1st store you went to while you charged

[G18Q56]

What was the name of the store?

Enter the name. Check the box if you prefer not to answer.

Please write your answer(s) here:

Name

Prefer not to answer

[G18Q57]

What was the type of store?

*

Select all that apply

Please choose **all** that apply:

- Café, restaurant, or bar
- Place of work or study
- Retail or clothing store
- Grocery store
- Department store/big box store
- Medical or dental facility
- Cinema/theatre/entertainment venue

Other:

[G18Q58]

What did you purchase?

Enter what you purchased. Check the box if you prefer not to answer.

Please write your answer(s) here:

Purchase

Prefer not to answer

[G18Q59]

How much did you spend?

Enter how much you spent. Check the box if you prefer not to answer.

Please write your answer(s) here:

\$

Prefer not to answer

Your experience using public fast charging

Thinking about the 2nd store you went to while you charged

[G19Q60]

What was the name of the store?

Enter the name. Check the box if you prefer not to answer.

Please write your answer(s) here:

Name

Prefer not to answer

[G19Q61]

What was the type of store?

*

Select all that apply

Please choose **all** that apply:

- Café, restaurant, or bar
- Place of work or study
- Retail or clothing store
- Grocery store
- Department store/big box store
- Medical or dental facility
- Cinema/theatre/entertainment venue

Other:

[G19Q62]

What did you purchase?

Enter what you purchased. Check the box if you prefer not to answer.

Please write your answer(s) here:

Purchase

Prefer not to answer

[G19Q63]

How much did you spend?

Enter how much you spent. Check the box if you prefer not to answer.

Please write your answer(s) here:

\$

Prefer not to answer

Your experience using public fast charging

[G20Q64]

Thinking about all stores you went to:

How much did you spend in total? (note do not include the cost of EV charging)

Only answer this question if the following conditions are met:

$\text{intval}(\text{numplacesspent.NAOK}) > 2$

Enter how much you spent. Check the box if you prefer not to answer.

Please write your answer(s) here:

\$

Prefer not to answer

[G20Q65]

How would you rate the available amenities (restrooms, food, retail, etc.) around this DC fast charging location?

Choose one of the following answers

Please choose **only one** of the following:

- Very good
- Good
- Neither good nor poor
- Poor
- Very poor

Your experience using public fast charging

[G21Q66]

When you charge in public, how often do you consider the availability of amenities (restrooms, food, retail, etc.) around the DC fast charging location?

*

Only answer this question if the following conditions are met:

rememberscharging.NAOK

Choose one of the following answers

Please choose **only one** of the following:

- Never (0% of the time)
- Rarely (about 25% of the time)
- Sometimes (about 50% of the time)
- Often (about 75% of the time)
- Always (100% of the time)

[G21Q67]

What amenities would you like to see at public DC fast charging stations?

Only answer this question if the following conditions are met:

rememberscharging.NAOK

Please write your answer here:

[G21Q68]

Overall, how would you describe your experiences using public DC Fast Charging?

Please write your answer here:

Information about your household

[G22Q69]

On the map below please tell us your home location. This will help us understand more about where current or past electric vehicle owners live and where they charge in relation to their location.

You can either type in your address or you can drop a marker on the map in the correct location.

Please write your answer(s) here:

Type

Address

Dropped Lat

Dropped Lng

Dragged Lat

Dragged Lng

Information about your household

[G23Q70]

How many adults are there in your household?

Choose one of the following answers

Please choose **only one** of the following:

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 or more

[G23Q71]

How many children are there in your household?

Choose one of the following answers

Please choose **only one** of the following:

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 or more

[G23Q72]

Please enter information below about yourself

Age

Gender

Do you drive?

You

[G23Q73]

What is the highest-level of education you have completed?

*

Choose one of the following answers

Please choose **only one** of the following:

- Grade 8 or less
- Some high school
- High School Graduate or GED
- College Graduate
- Masters, Doctorate, or Professional Degree
- Prefer not to say

[G23Q74]

What is your race or ethnicity?

*

Select all that apply

Please choose **all** that apply:

- Asian
- American Indian or Alaska Native
- Black/African American
- Hispanic or Latino/Latina/Latinx
- Middle Eastern/North African
- Native Hawaiian/Other Pacific Islander
- White/Caucasian
- Prefer not to say

Other:

[G23Q75]

My household's pre-taxed income for the past tax year was in the following range:

*

Choose one of the following answers

Please choose **only one** of the following:

- Less than \$50,000
- \$50,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 to \$199,999
- \$200,000 to \$249,999
- \$250,000 to \$299,999
- \$300,000 to \$349,999
- \$350,000 to \$399,999
- \$400,000 to \$449,999
- \$450,000 to \$499,999
- \$500,000 or more
- I prefer not to answer

[G23Q76]

Do you own or rent your home?

*

Choose one of the following answers

Please choose **only one** of the following:

Own

Rent

Prefer not to say

Other

[G23Q77]

How would you describe your home?

*

Choose one of the following answers

Please choose **only one** of the following:

Detached house/single family home

Attached house (townhouse, duplex, triplex)

Apartment or condo

Mobile home

Prefer not to say

Other

[G23Q78]

What is your employment status?

*

Select all that apply

Please choose **all** that apply:

- Employed full-time (35 hours or more per week)
- Employed part-time (less than 35 hours per week)
- Retired
- Full-time student
- Part-time student
- Self-employed
- Seasonal work
- Do no work for pay
- Prefer not to say

Thank you for taking this survey

Thank you for taking this short survey. Your input is important in understanding and improving the experiences for electric vehicle drivers.

[G24Q80]

As a follow-up to this survey, we will recruit a small number of electric vehicle owners for a study where they will describe their experience with DC fast chargers by filling out a short survey each time they visit a charger. The study will last for 10 charging sessions or up to 4 months. Participants would receive a \$20 incentive at the start of the study and a \$60 incentive upon returning their survey. Would you like to be considered to participate in this study?

*

Choose one of the following answers

Please choose **only one** of the following:

Yes

No

[G24Q81]

Are you willing to be contacted for future surveys on issues related to transportation?

*

Choose one of the following answers

Please choose **only one** of the following:

Yes

No

[G24Q82]

Please enter your email: (It will be used only by for the answers marked "yes"™ above)

*

Only answer this question if the following conditions are met:

G24Q80.NAOK == "AO01" or G24Q81.NAOK == "AO01"

Please write your answer(s) here:

Email

Confirm

[G01Q118]

Thank you for taking the time to respond to this survey, if you have anything else to share, please use the box below. You are also one of the first people to take this survey if you experienced any issues please let us know.

Please write your answer here:

Submit your survey.

Thank you for completing this survey.