Title

On-line Questionnaire for a Multi-State Survey of Consumer Valuation of Zero Emissions Vehicles

Permalink

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Acknowledgement

Welcome

Thank you for participating in this study by the University of California, Davis (UC Davis) Institute of Transportation Studies.

Purpose of this Research

You will assess new ways to power our cars and trucks. Your answers will inform consumers, automobile makers, energy providers, and policymakers.

Household Participation

We encourage you to ask any other household members to answer this questionnaire with you.

Security of Your Information

Your information will be kept confidential. No identifying information will be kept as part of any record. You will not be identifiable in the results. All data are maintained on a secure computer.

Your Rights

You may withdraw from this study at any time. If you would like to know more about your rights as a study participant, consult UC Davis' Institutional Review Board (IRB) at this URL: Experimental Research Subject's Bill of Rights

Further questions can be directed to the Survey Administrator, at knkurani@ucdavis.edu

Completing Your Questionnaire

On average, the questionnaire takes about 25 minutes to complete. Hopefully, you find it interesting enough to take your time. A progress bar will show your progress. There are five main sections:

Your Household's Vehicles Daily Travel and Parking New Ways to Power Our Cars and Trucks Beliefs and Opinions Describe Your Household

We recommend you do not take this survey on your phone as the small screen makes it more difficult.

Section A: Section 1: Your Household Vehicles

Right now, many Americans are not traveling every day as we used to do because of stay-at-home requirements and social distancing. While completing your questionnaire, think ahead to the "new" normal life you look forward to when we are able to freely move about again.

Note: Your "household" is you and all the adults with whom you currently live and make financial decisions such as vehicle purchases as well as any of your children living with you.

A1. **doWhichBrowser(757566, , , ['SQ001', 'SQ002', 'SQ003', 'SQ004']);**

Browser

Engine

OS

Device

A2. **How many cars, trucks, vans, and sport utility vehicles does your household currently own or lease, that are driven at least once per week?**
(Do not include motorcycles, recreational vehicles, or motor homes.)

0 ☐

1 ☐

2 ☐

3 ☐

4 or more ☐

A3. **Of the vehicles in the first question, how many did your household buy or lease as a *used* vehicle since January 2012?**

0 ☐

1 ☐

2 ☐

3 ☐

4 or more ☐

I'm not sure, but at least 1 ☐

A4. **Of the vehicles in the first question, how many did your household buy or lease as a *new* vehicle since January 2012?**

0	☐
1	☐
2	☐
3	☐
4 or more	☐
I'm not sure, but at least 1	☐

A5. **Are there other vehicles you no longer own or lease that your household acquired as new vehicles after January 2012?**

No	☐
Yes	☐

A6. **Do you or does another member of your household drive for ridesharing services such as Uber or Lyft?**

No	☐
Yes	☐

A7. **Do you or this other household member use a car that is owned or leased by your household to drive for ridesharing services?**

No	☐
Yes	☐

Section B: Screener Setup

B1.

B2.

B3.   Y

B4.

Section C: Section 1: {if(numvehicles.NAOK == 1, 'Your', 'First')} Vehicle

C1.

Of the vehicle that your household acquired as a new vehicle since January 2012, please use the drop down menus to enter the model year, make, and model of the one your household most recently acquired. If information for your vehicle does not appear in the drop-down menus, select "Enter Manually" to type in your description.

Example:
Year = 2016
Make = HondaModel = Accord

$(document).on('ready pjax:complete', function() { var sqids = ['SQ001', 'SQ002', 'SQ003', 'SQ004', 'SQ005', 'SQ006', 'SQ007', 'SQ008']; var config = { minYear: 2012, saveMSRP: 'SQ009', saveGVWR: 'SQ010', ignoreMakes: ["Aston Martin", "Bentley", "Bugatti", "Ferrari", "Lamborghini", "Lotus", "Maserati", "Maybach", "McLaren", "Rolls-Royce", "Roush Performance", "RUF",], }; var select = new VehicleSelectFE(757566, , , sqids, config); });

Year										
Make										
Model										
Options										
ID										
Type										
MPG										
Body										
MSRP										
GVWR										

C2.

Of the 0 vehicle you own, please use the drop down menus to enter the model year, make, and model for the one you most recently acquired. If information for your vehicle does not appear in the drop-down menus, select "Enter Manually" to type in your description.

Example:
Year = 2016
Make = HondaModel = Accord

$(document).on('ready pjax:complete', function() { var sqids = ['SQ001', 'SQ002', 'SQ003', 'SQ004', 'SQ005', 'SQ006', 'SQ007', 'SQ008']; var config = { saveMSRP: 'SQ009', saveGVWR: 'SQ010', ignoreMakes: ["Aston Martin", "Bentley", "Bugatti", "Ferrari", "Lamborghini", "Lotus", "Maserati", "Maybach", "McLaren", "Rolls-Royce", "Roush Performance", "RUF",], }; var select = new VehicleSelectFE(757566, , , sqids, config); });

Year	
Make	
Model	
Options	
ID	
Type	
MPG	
Body	
MSRP	
GVWR	

C3.

Please use the drop down menus to enter the model year, make, and model of your vehicle. If information for your vehicle does not appear in the drop-down menus, select "Enter Manually" to type in your description.

Example:
Year = 2016
Make = HondaModel = Accord

$(document).on('ready pjax:complete', function() { var sqids = ['SQ001', 'SQ002', 'SQ003', 'SQ004', 'SQ005', 'SQ006', 'SQ007', 'SQ008']; var config = { saveMSRP: 'SQ009', saveGVWR: 'SQ010', ignoreMakes: ["Aston Martin", "Bentley", "Bugatti", "Ferrari", "Lamborghini", "Lotus", "Maserati", "Maybach", "McLaren", "Rolls-Royce", "Roush Performance", "RUF",], }; var select = new VehicleSelectFE(757566, , , sqids, config); });

Year	
Make	
Model	
Options	
ID	
Type	
MPG	
Body	
MSRP	
GVWR	

C4. **Is this vehicle used when the person in your household who drives for rideshare services is doing so?**

No ☐

Yes ☐

C5. **To the best of your recollection, when did your household acquire this vehicle?**

$(document).on('ready pjax:complete', function() { var years = []; for(var i = new Date().getFullYear(); i >= 1990; i--) { years.push(i); } doDropdown(757566, , , '001', years); });

Year | | | | | | | | |

C6. **Did you buy or lease this vehicle?**

Bought, either paid in full or financed. ☐

Leased ☐

First leased, then bought ☐

Neither, it was a gift or prize ☐

Other, please describe: ▼

Other, please describe:

C7. **How do you refuel your ?**

Gasoline ☐

Diesel (including biodiesel) ☐

Ethanol ☐

Plug-in to charge with Electricity ☐

Natural Gas ☐

Hydrogen ☐

I don't know ☐

Other, please describe ▼

Other, please describe

Section D: Section 1: Second Vehicle

D1.

Not including the vehicle you just described, please describe the household vehicle that is driven most often. Use the drop down menus to enter the model year, make, and model. If information for your vehicle does not appear in the drop-down menus, select "Enter Manually" to type in your description.
Example:
Year = 2016
Make = FordModel = F150

$(document).on('ready pjax:complete', function() { var sqids = ['SQ001', 'SQ002', 'SQ003', 'SQ004', 'SQ005', 'SQ006', 'SQ007', 'SQ008']; var config = { saveMSRP: 'SQ009', saveGVWR: 'SQ010', ignoreMakes: ["Aston Martin", "Bentley", "Bugatti", "Ferrari", "Lamborghini", "Lotus", "Maserati", "Maybach", "McLaren", "Rolls-Royce", "Roush Performance", "RUF",], }; var select = new VehicleSelectFE(757566, , , sqids, config); });

Year											
Make											
Model											
Options											
ID											
Type											
MPG											
Body											
MSRP											
GVWR											

D2. **To the best of your recollection, in what year did your household acquire this vehicle?**

D3. **Was this vehicle new or used when your household acquired it?**

New ☐

Used ☐

D4. **Did you buy or lease this vehicle?**

Bought, either paid in full or financed. ☐

Leased ☐

First leased, then bought ☐

Neither, it was a gift or prize ☐

Other, please describe: ▼

Other, please describe:

☐

D5. **How do you refuel your ?**

Gasoline ☐

Diesel (including biodiesel) ☐

Ethanol ☐

Plug-in to charge with Electricity ☐

Natural Gas ☐

Hydrogen ☐

I don't know ☐

Other (Please specify): ▼

Other (Please specify):

☐

Section E: Vehicle Setup

E1.

E2.	N
E3.	N
E4.	N
E5.	N
E6.	
E7.	N
E8.	N
E9.	N
E10.	N
E11.	
E12.	
E13.	
E14.	
E15.	
E16.	
E17.	
E18.	
E19.	
E20.	
E21.	
E22.	
E23.	
E24.	
E25.	
E26.	
E27.	
E28.	

Section F: Section 1: Vehicle Choice

F1. **Of the vehicles you just described, which one do you personally drive most often? Select one only.**

{firstvehicle} ☐

{secondvehicle} ☐

Section G: carmain Setup

G1.

G2.	N
G3.	N
G4.	N
G5.	N

Section H: Section 1: Gasoline / Diesel / Ethanol

H1. **On average, how much does your household spend on fuel for your per week or per month? Remember, please think ahead to the "new" normal life you look forward to when we are able to freely move about again.**

```
$(document).on('ready pjax:complete', function() { var frequency =
["Week", "Month"]; makeMoneyField(757566, , , '001', 'xxx');
doDropdown(757566, , , '002', frequency); numericInputOnly(757566, , ,
'SQ001'); });
```

Amount [   ]

per [   ]

H2. **You've said that you spend $0 on fuel for your per month. If this is correct, type 'Yes' in the box below, otherwise, please go back and correct the amount.**

[   ]

H3. **How accurate are your estimates for how much your household spends on fuel for your ?**

Highly accurate; I know exactly how much we spend ☐

Accurate; I might be off by 10% ☐

Sort of accurate; I might be off by 25% ☐

Not very accurate; I might be off by 50% or more ☐

I have no idea what we spend ☐

Section I: Section 1: Electric

I1. **On average, how much does your household spend on electricity for your per week or per month? Remember, please think ahead to the "new" normal life you look forward to when we are able to freely move about again.**

$(document).on('ready pjax:complete', function() { var frequency = ["Week", "Month"]; makeMoneyField(757566, , , '001', 'xxx'); doDropdown(757566, , , '002', frequency); numericInputOnly(757566, , , 'SQ001'); });

Amount ⬚⬚⬚⬚⬚⬚⬚⬚⬚

per ⬚⬚⬚⬚⬚⬚⬚⬚⬚

I2. **You've said that you spend $0 on electricity for your per month. If this is correct, type 'Yes' in the box below, otherwise, please go back and correct the amount.**

⬚

I3. **How much charging of your has been free?**

Grab the slider at the far right and move it to the point on the scale that matches your answer.

$(document).on('ready pjax:complete', function() { var config = { callout:true, min: 0, max: 100, step: 1, suffix: '%', }; doSlider(757566, , , config); });

|None|All ⬚⬚⬚⬚⬚⬚⬚⬚

I4. **How accurate do you think your estimates are for how much your household spends on electricity for your ?**

Highly accurate; I know exactly how much we spend. ☐

Accurate; I may be off by 10%. ☐

Sort of accurate; I may be off by 25%. ☐

Not very accurate; I may be off by 50% or more. ☐

I have no idea what we spend. ☐

Section J: Section 1: Plug-in Hybrid

J1. Including both gasoline and electricity, on average, how much does your household spend to "fuel" your with electricity and gasoline per week or per month? Remember, please think ahead to the "new" normal life you look forward to when we are able to freely move about again.

$(document).on('ready pjax:complete', function() { var frequency = ["Week", "Month"]; makeMoneyField(757566, , , '001', 'xxx'); doDropdown(757566, , , '002', frequency); numericInputOnly(757566, , , 'SQ001'); });

Amount [   ]

per [   ]

J2. You've said that you spend $0 on gasoline and electricity for your per month. If this is correct, type 'Yes' in the box below, otherwise, please go back and correct the amount.

[   ]

J3. How much charging of your has been free?

Grab the slider at the far right and move it to the point on the scale that matches your answer.

$(document).on('ready pjax:complete', function() { var config = { callout:true, min: 0, max: 100, step: 1, suffix: '%', }; doSlider(757566, , , config); });

|None|All [   ]

J4. How accurate do you think your estimates are for your household's combined spending on gasoline and electricity for your ?

Highly accurate; I know exactly how much we spend ☐

Accurate; I might be off by 10% ☐

Sort of accurate; I might be off by 25% ☐

Not very accurate; I might be off by 50% or more ☐

I have no idea what we spend ☐

Section J: Section 1: Plug-in Hybrid

Section K: Section 1: Natural Gas

K1. **On average, how much does your household spend on natural gas for your per week or per month? Remember, please think ahead to the "new" normal life you look forward to when we are able to freely move about again.**

$(document).on('ready pjax:complete', function() { var frequency = ["Week", "Month"]; makeMoneyField(757566, , , '001', 'xxx'); doDropdown(757566, , , '002', frequency); numericInputOnly(757566, , , 'SQ001'); });

Amount

per

K2. **You've said that you spend $0 on natural gas for your per month. If this is correct, type 'Yes' in the box below, otherwise, please go back and correct the amount.**

K3. **How accurate do you think your estimates are for how much your household spends on natural gas for your ?**

Highly accurate; I know exactly how much we spend ☐

Accurate; I might be off by 10% ☐

Sort of accurate; I might be off by 25% ☐

Not very accurate; I might be off by 50% or more ☐

I have no idea what we spend ☐

Section L: Section 1: Hydrogen

L1. On average, how much does your household spend on hydrogen for your per week or per month? Remember, please think ahead to the "new" normal life you look forward to when we are able to freely move about again.

$(document).on('ready pjax:complete', function() { var frequency = ["Week", "Month"]; makeMoneyField(757566, , , '001', 'xxx'); doDropdown(757566, , , '002', frequency); numericInputOnly(757566, , , 'SQ001'); });

Amount ☐☐☐☐☐☐☐☐☐

per ☐☐☐☐☐☐☐☐☐

L2. You've said that you spend $0 on hydrogen for your per month. If this is correct, type 'Yes' in the box below, otherwise, please go back and correct the amount.

L3. How accurate do you think your estimates are for how much your household spends on hydrogen for your ?

Highly accurate; I know exactly how much we spend ☐

Accurate; I might be off by 10% ☐

Sort of accurate; I might be off by 25% ☐

Not very accurate; I might be off by 50% or more ☐

I have no idea what we spend ☐

Section M: Section 1: Cost of Fuel

M1. **You've told us your household has 0 vehicles it drives at least once a week. On average, how much does your household spend in total for all fuels for all these vehicles?** *Enter amount per week or per month.* **Remember, please think ahead to the "new" normal life you look forward to when we are able to freely move about again.**

$(document).on('ready pjax:complete', function() { var frequency = ["Week", "Month"]; makeMoneyField(757566, , , '001', 'xxx'); doDropdown(757566, , , '002', frequency); numericInputOnly(757566, , , 'SQ001'); });

Amount | | | | | | | | |
per | | | | | | | | |

M2. **You've said that you spend $0 to fuel all your household vehicles per month. If this is correct, type 'Yes' in the box below, otherwise, please go back and correct the amount.**

M3. **How accurate do you think your estimates are for how much your household spends to fuel the 0 vehicles it drives at least once per week?**

Highly accurate; I know exactly how much we spend. ☐

Accurate; I may be off by 10%. ☐

Sort of accurate; I may be off by 25%. ☐

Not very accurate; I may be off by 50% or more. ☐

I have no idea what we spend. ☐

Section N: Section 1: Replacement Fuels

N1. **If for any reason we could no longer use gasoline and diesel to fuel our vehicles, what do you think would likely replace them?** *Choose up to three.* **$(document).on('ready pjax:complete', function() { exclusiveOptions(757566, , , ["007", "008"]); limitOptions(, 3); moveOptionsToEnd(757566, , , ["SQ007", "SQ008", "other"]); });**

Electricity ☐

Hydrogen ☐

Natural Gas ☐

Ethanol ☐

Bio-Diesel ☐

Propane ☐

None ☐

I have no idea ☐

Other ▼

Other

[   ]

Section O: Section 1: Replacement Fuels 2

O1. **Of the replacements for gasoline and diesel you just selected, which one do you think is most likely?** *Choose one answer.*

Electricity ☐

Hydrogen ☐

Natural Gas ☐

Ethanol ☐

Bio-Diesel ☐

Propane ☐

None ☐

I have no idea ☐

{s1p11q1_other} ☐

O2. **Which statement best explains why you chose as the most likely replacement for gasoline and diesel?** *Select only one reason.*

It is cheapest for drivers ☐

It is safest for drivers ☐

It is the best for the environment ☐

It doesn't need to be imported from foreign countries ☐

It has already proven to be effective ☐

It will require the least amount of change for drivers and fuel providers ☐

It is the most abundant in the United States ☐

I don't know ☐

Other, please describe: ▼

Other, please describe:

[ ]

Section P: Section 2: Daily Travel and Parking

As a reminder, please answer while thinking about either your past normal daily life or the version of your normal daily life you image when we are able to move about freely.

P1. **In your day-to-day travel, do you drive on roads that have high occupancy lanes (also called HOV lanes, commuter lanes, or diamond lanes)?**

No ☐

Yes, but I am generally not able to use those lanes ☐

Yes, and I use those lanes ☐

Q1. **Over the course of a seven-day week, how many days does anyone in your household drive a car?**

0 ☐

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

6 ☐

7 ☐

Q2. **Over the course of a seven-day week, how many days do you personally drive a car?**

0 ☐

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

6 ☐

7 ☐

Q3. **From weekday-to-weekday, how much does the distance you drive vary? The difference in the distance I drive between my shortest and longest weekday is:**

no more than one or two miles ☐

between two and ten miles ☐

between 11 and 20 miles ☐

more than 20 miles ☐

Q4. **Do you commute to a workplace?**

Yes ☐

No ☐

Q5. **Consider the days you commute to a workplace. On how many of these days do you drive or ride at least part of the way in a vehicle owned or leased by your household?**

Every commute day ☐

Almost every commute day ☐

On half of my commute days ☐

Some of my commute days ☐

A few of my commute days ☐

Never ☐

Section R: Commute Setup

R1. **N**

Section S: Section 2: Page 3

S1. **At home, where have you usually parked your over the last year?**

Fully enclosed garage (attached to your home or freestanding) ☐

Carport (Covered, but not fully enclosed) or covered driveway to my residence ☐

Uncovered driveway to my residence ☐

On the street ☐

Parking lot or garage - unassigned space ☐

Parking lot or garage - assigned space ☐

Other ▼

Other

```


```

S2. **At home, where have you usually parked your   over the last year?**

Fully enclosed garage (attached to your home or freestanding) ☐

Carport (Covered, but not fully enclosed) or covered driveway to my residence ☐

Uncovered driveway to my residence ☐

On the street ☐

Parking lot or garage - unassigned space ☐

Parking lot or garage - assigned space ☐

Other ▼

Other

[blank box]

Section T: Section 2: Page 4

T1. **Given where you park at home, do you have reliable access to any of the following to supply electricity to your vehicle?** *Examples are shown on the right.*

$(document).on('ready pjax:complete', function() { exclusiveOptions(757566, , , ['004', '005']); insertImageAfter(757566, , , '001', '/phev/img/its/charge1.png'); insertImageAfter(757566, , , '002', '/phev/img/its/charge2.png'); insertImageAfter(757566, , , '003', '/phev/img/its/charge3.png'); });

A regular electrical outlet (110-volt). These are used for most home electrical appliances. ☐

A high power electrical outlet (220 to 240-volt). These are typically used for electric clothes dryers, electric stoves, electric furnaces and air conditioners. ☐

A piece of Electric Vehicle Supply Equipment (EVSE) designed specifically for charging an electric vehicle. ☐

None of the above ☐

I don't know. ☐

T2. **Does the device designed specifically for charging an electric vehicle belong to your household or could your household reliably use it whenever you wanted?**

Yes, it belongs to my household. ☐

No but my household can use it when we want. ☐

No and my household couldn't use it even if we wanted. ☐

T3. **Does your household have the authority to install a new electrical outlet near one of your home parking spots? Or would you have to first get approval from another person or group?**

My household could make such an installation on its own authority. ☐

My household would need permission ☐

Section U: Section 2: Page 5

U1. **Does your household pay a monthly electricity bill?**

Yes, we pay a monthly electricity bill. ☐

No. ☐

U2. **Which of the following best describes your situation?**

We don't pay for electricity at all. ☐

We settle our electricity bill with our electric utility once a year. ☐

Other. Please describe: ▼

Other. Please describe:

☐

U3. **How much was your household's last electricity bill? (Exclude natural gas if you pay for electricity and natural gas on the same bill.)** *Round to the nearest dollar.*

```
$(document).on('ready pjax:complete', function() {
makeMoneyField(757566, , ); });
```

U4. **How did you know the above answer about your electricity bill?**

I knew this off the top of my head. ☐

I had to look at the bill or ask someone in my household. ☐

I made a rough guess. ☐

Section V: Section 3: New Ways To Power Our Cars And Trucks

V1.
```
$(document).on('ready pjax:complete', function() { $('#question').hide();
});
```

ICE

BEV

HEV

PHEV

FCEV

V2. **Are you familiar enough with these types of vehicles to make a decision about whether one would be right for your household?**

Grab the slider at the right and move it to the point on the scale that matches your answer.

$(document).on('ready pjax:complete', function() { var config = { idk: false, callout: true, step: 0.1, } if(!loadOrderSamePage(757566, , , 85520)) { randomizeMultiNumerical(757566, , , "001"); saveOrder(757566, , , 85520); } doSlider(757566, , , config); });

Gasoline|No|Yes										
Battery Electric|No|Yes										
Hybrid|No|Yes										
Plug-in Hybrid Electric|No|Yes										
Hydrogen Fuel Cell Electric|No|Yes										

Section W: Section 3: Page 2

$(document).on('ready pjax:complete', function() { var qids = [{s3p2q1_SQ001.qid}, {s3p2q9_SQ001.qid}, {s3p2q2_SQ001.qid}, {s3p2q10_SQ001.qid}, {s3p2q3_SQ001.qid}, {s3p2q11_SQ001.qid}, {s3p2q4_SQ001.qid}, {s3p2q12_SQ001.qid},]; var order = [{order_SQ002.NAOK}, {order_SQ002.NAOK}, {order_SQ003.NAOK}, {order_SQ003.NAOK}, {order_SQ004.NAOK}, {order_SQ004.NAOK}, {order_SQ005.NAOK}, {order_SQ005.NAOK},]; loadOrderPage({SID}, {GID}, qids, order); });

W1. **Can you name a battery electric vehicle that is being sold in the US?**

$(document).on('ready pjax:complete', function() { yesNoMakeModel(757566, ,); });

Checkbox										
Make										
Model										

W2. **Can you name another battery electric vehicle?**

$(document).on('ready pjax:complete', function() { yesNoMakeModel(757566, ,); });

Checkbox										
Make										
Model										

W3. **Can you name a hybrid vehicle that is being sold in the US?**

```
$(document).on('ready pjax:complete', function() {
yesNoMakeModel(757566, , ); });
```

Checkbox

Make

Model

W4. **Can you name another hybrid vehicle?**

```
$(document).on('ready pjax:complete', function() {
yesNoMakeModel(757566, , ); });
```

Checkbox

Make

Model

W5. **Can you name a plug-in hybrid electric vehicle that is being sold in the US?**

```
$(document).on('ready pjax:complete', function() {
yesNoMakeModel(757566, , ); });
```

Checkbox

Make

Model

W6. **Can you name another plug-in hybrid electric vehicle?**

```
$(document).on('ready pjax:complete', function() {
yesNoMakeModel(757566, , ); });
```

Checkbox

Make

Model

W7. **Can you name a hydrogen fuel cell electric vehicle that is being sold in the US?**

$(document).on('ready pjax:complete', function() { yesNoMakeModel(757566, ,); });

Checkbox

Make

Model

W8. **Can you name another hydrogen fuel cell electric vehicle?**

$(document).on('ready pjax:complete', function() { yesNoMakeModel(757566, ,); });

Checkbox

Make

Model

W9. **Have you seen any electric vehicle charging spots in the parking garages and lots you use?**

Yes. I've seen them at several places. ☐

Yes. I've seen them at a few places. ☐

Yes. I've seen them at one place. ☐

No. I haven't seen any. ☐

I'm not sure whether I've seen any or not. ☐

W10. **Is one of these places you've seen electric vehicle charging your workplace?**

Yes ☐

No ☐

I'm not sure ☐

W11. **How much driving experience do you have in these types of vehicles? Please click the slider at the far right and move it to the point on the line that matches your answer.**

$(document).on('ready pjax:complete', function() { var config = { idk: false, callout: true, step: 0.1, }; var sqids = ["SQ001", "SQ002", "SQ003", "SQ004"]; var order = [, , ,]; loadOrder(757566, , , sqids, order); doSlider(757566, , , config); });

Battery electric|I have never driven one|I have extensive driving experience

Hybrid|I have never driven one|I have extensive driving experience

Plug-in hybrid electric|I have never driven one|I have extensive driving experience

Hydrogen fuel cell electric|I have never driven one|I have extensive driving experience

W12. **From what you understand, which of these vehicles are fueled with gasoline and which are plugged in to charge with electricity?**

	Only fueled with gasoline	Only plugged in to charge with electricity	Both fueled with gasoline and plugged in to charge with electricity	I don't know
Gasoline	☐	☐	☐	☐
Battery electric	☐	☐	☐	☐
Hybrid	☐	☐	☐	☐
Plug-in hybrid electric	☐	☐	☐	☐

X1. **Battery electric cars and trucks are powered only by batteries that must be plugged in to recharge. How much do you agree or disagree with each of the following statements about battery electric vehicles?**

Please click the slider at the far right and move it to the point on the line that matches your answer along the scale of Strongly Disagree to Strongly Agree.

$(document).on('ready pjax:complete', function() { var config = { idk: false, callout: true, step: 0.1, }; doSlider(757566, , , config); });

My household would be able to plug in a battery electric vehicle to charge at home|Strongly Disagree|Strongly Agree

There are enough places to charge battery electric vehicles|Strongly Disagree|Strongly Agree

It takes too long to charge battery electric vehicles|Strongly Disagree|Strongly Agree

Battery electric vehicles do not travel far enough before needing to be charged|Strongly Disagree|Strongly Agree

Battery electric vehicles cost more to buy than gasoline vehicles.|Strongly Disagree|Strongly Agree

Gasoline powered cars are safer than battery electric vehicles.|Strongly Disagree|Strongly Agree

Gasoline powered cars are more reliable than battery electric vehicles.|Strongly Disagree|Strongly Agree

Battery electric vehicles are less damaging to the environment than gasoline powered vehicles.|Strongly Disagree|Strongly Agree

Battery electric vehicle technology is ready for mass automotive markets.|Strongly Disagree|Strongly Agree

X2. **Hydrogen fuel cell cars and trucks are powered by an electric motor, but are refueled with hydrogen at a station--something like going to a gasoline station. How much do you agree or disagree with each of the following statements about cars and trucks that are powered by a hydrogen fuel cell?**

Please click the slider at the far right and move it to the point on the line that matches your answer along the scale of Strongly Disagree to Strongly Agree.

$(document).on('ready pjax:complete', function() { var config = { idk: false, callout: true, step: 0.1, } doSlider(757566, , , config); });

There are enough places for drivers to refuel their cars and trucks with hydrogen.|Strongly Disagree|Strongly Agree

Hydrogen fuel cell vehicles take too long to refuel.|Strongly Disagree| Strongly Agree

Hydrogen fuel cell vehicles do not travel far enough without needing to be refueled.|Strongly Disagree|Strongly Agree

Hydrogen fuel cell vehicles cost more than gasoline cars.|Strongly Disagree|Strongly Agree

Gasoline vehicles are safer than hydrogen fuel cell vehicles.|Strongly Disagree|Strongly Agree

Gasoline vehicles are more reliable than hydrogen fuel cell vehicles.|Strongly Disagree|Strongly Agree

Hydrogen fuel cell vehicles are less damaging to the environment than gasoline powered vehicles.|Strongly Disagree|Strongly Agree

Hydrogen fuel cell vehicle technology is ready for mass automotive markets.|Strongly Disagree|Strongly Agree

X3. Plug-in hybrid electric cars and trucks run on electricity and gasoline; you can both plug them in to charge their batteries and refuel them at a gasoline station. How much do you agree or disagree with each of the following statements about plug-in hybrid electric vehicles?

Please click the slider at the far right and move it to the point on the line that matches your answer along the scale of Strongly Disagree to Strongly Agree.

$(document).on('ready pjax:complete', function() { var config = { idk: false, callout: true, step: 0.1, }; doSlider(757566, , , config); });

My household would be able to plug in a plug-in hybrid electric vehicle to charge at home|Strongly Disagree|Strongly Agree	
There are enough places to charge plug-in hybrid electric vehicles|Strongly Disagree|Strongly Agree	
It takes too long to charge plug-in hybrid electric vehicles|Strongly Disagree|Strongly Agree	
Plug-in hybrid electric vehicles do not travel far enough before needing to be charged|Strongly Disagree|Strongly Agree	
Plug-in hybrid electric vehicles cost more to buy than gasoline vehicles.|Strongly Disagree|Strongly Agree	
Gasoline powered cars are safer than plug-in hybrid electric vehicles.|Strongly Disagree|Strongly Agree	
Gasoline powered cars are more reliable than plug-in hybrid electric vehicles.|Strongly Disagree|Strongly Agree	
Plug-in hybrid electric vehicles are less damaging to the environment than gasoline powered vehicles.|Strongly Disagree|Strongly Agree	
Plug-in hybrid electric vehicle technology is ready for mass automotive markets.|Strongly Disagree|Strongly Agree	

Section Y: Section 3: Page 4

Y1. As far as you are aware, is each of the following offering incentives to consumers to buy and drive vehicles powered by alternatives to gasoline and diesel? *Please respond to all.*

$(document).on('ready pjax:complete', function() { showIfYes(757566, , , "002", "003"); showIfYes(757566, , , "004", "005"); showIfYes(757566, , , "007", "008"); });

	Yes	No	I'm Not Sure
The federal government	☐	☐	☐
State governments	☐	☐	☐
My state government	☐	☐	☐

	Yes	No	I'm Not Sure
City governments	☐	☐	☐
My city government	☐	☐	☐
Air quality districts or other regional government agencies	☐	☐	☐
Electric utilities	☐	☐	☐
My electric utility	☐	☐	☐
Vehicle manufacturers	☐	☐	☐
Vehicle dealerships	☐	☐	☐
Oil companies	☐	☐	☐
Other businesses	☐	☐	☐

Section Z: Section 3: Page 5

Z1. **Should governments offer incentives to consumers to buy and drive vehicles that run on electricity or hydrogen?**

Yes, but only electricity ☐

Yes, but only hydrogen ☐

Yes, both electricity and hydrogen ☐

No, neither one ☐

I'm not sure ☐

Z2. **Have you recently seen or heard about battery electric vehicles, plug-in hybrid electric vehicles or fuel cell electric vehicles through any of these in your area?**

	Yes	No
Ride and drive events where people may see and test drive vehicles	☐	☐
Television advertising	☐	☐
Radio advertising	☐	☐
Billboards or other roadside signs	☐	☐

	Yes	No
Social media advertising on platforms such as Facebook, Twitter, Instagram, Snapchat, Linkedin, Pinterest, Youtube, or others	☐	☐
Print media advertising such as magazines and newspapers	☐	☐
Taxis or cars used by Uber or Lyft drivers	☐	☐

Z3. **Of all the cars you see on the road or in parking lots and garages, how many do you recognize as battery electric vehicles, plug-in hybrid electric vehicles, or hydrogen fuel cell electric vehicles?**

I would not recognize any such vehicle ☐

I would recognize a few such vehicles ☐

I would recognize many such vehicles ☐

I would recognize most such vehicles ☐

I would recognize all such vehicles ☐

Z4. **Have you previously searched for information about purchasing or leasing electric vehicles?**

Yes ☐

No ☐

Z5. **Where did you look for such information?**

Family member ☐

Friends ☐

Co-workers ☐

A stranger driving an electric vehicle ☐

Electric vehicle driver clubs or other groups ☐

Car manufacturers ☐

Car dealerships/salespeople ☐

Electric utility ☐

Electric car charger manufacturers ☐

Air Quality District ☐

City Government ☐

State Government ☐

Federal Government ☐

Car reviews ☐

Non-profit organizations ☐

Other, please describe: ▼

Other, please describe:

[ ]

Z6. **Do any of the family members you spoke to have their own electric vehicle?**

Yes ☐

No ☐

Z7. **Do any of the friends you spoke to have their electric vehicle?**

Yes ☐

No ☐

Z8. **Do any of the coworkers you spoke to have their own electric vehicle?**

Yes ☐

No ☐

Section AA: Section 3: Page 6

AA1. **Battery electric vehicles (BEVs) run only on electricity; they plug-in to charge their batteries. Have you considered buying a BEV for your household? Select one.**

I (we) have not--and would not--consider buying a BEV. ☐

I (we) have not considered buying a BEV, but maybe some day we will. ☐

The idea has occurred, but no real steps have been taken to shop for a BEV. ☐

Started to gather information about BEVs, but haven't really gotten serious yet. ☐

Shopped for BEVs, including a visit to at least one dealership to test drive. ☐

I (we) already have, or have had, a BEV. ☐

AA2. **Have you made a decision about a BEV? Select one.**

I (we) decided against a BEV. ☐

I (we) haven't decided yet. ☐

AA3. **Why did you decide against a BEV? Please provide a short answer in the box provided.**

```



```

AA4. **Is there anyone you personally know who owns a BEV? Select one.**

I'm not sure ☐

No ☐

Yes ☐

AA5. **Have you spoken to this person, or these people, about their BEV?**

Yes ☐

No ☐

AA6. **Have those conversations changed your thoughts or feelings about BEVs?**

No ☐

Yes, they have made me more favorable toward BEVs ☐

Yes, they have made me less favorable toward BEVs ☐

AA7. **Plug-in hybrid vehicles (PHEVs) run on electricity and gasoline; you can both plug them in to charge their batteries and refuel them at a gasoline station. Have you considered buying a PHEV for your household? Select one.**

I (we) have not--and would not consider buying a PHEV. ☐

I (we) have not considered a PHEV, but maybe some day we will. ☐

The idea has occurred, but no real steps have been taken to shop for a PHEV. ☐

Started to gather some information about PHEVs, but haven't really gotten serious yet. ☐

Shopped for PHEVs, including a visit to at least one dealership to test drive. ☐

I (we) already have, or have had, a PHEV. ☐

AA8. **Have you made a decision about a PHEV? Select one.**

I (we) decided against a PHEV. ☐

I (we) haven't decided yet. ☐

AA9. **Why did you decide against a PHEV?**

[   ]

AA10. **Is there anyone you personally know who owns a PHEV? Select one.**

I'm not sure ☐

No ☐

Yes ☐

AA11. **Have you spoken to this person, or these people, about their PHEV?**

Yes ☐

No ☐

AA12. **Have those conversations, changed your thoughts or feelings about PHEVs?**

No ☐

Yes, they have made me more favorable toward PHEVs ☐

Yes, they have made me less favorable toward PHEVs ☐

AA13. **Has your workplace provided any information or incentive to workers regarding vehicles that run on electricity--BEVs or PHEVs?**

I'm not sure ☐

No ☐

Yes ☐

AA14. **What does your workplace do to inform or incentivize workers regarding BEVs or PHEVs?**

Reserve specific parking locations for BEVs and PHEVs ☐

Install charging for BEVs and PHEVs ☐

Provide a means for workers to manage their use of vehicle charging ☐

Host a ride-and-drive event with BEVs and PHEVs ☐

Provide information about BEVs, PHEVs, charging, incentives, or other related topics ☐

Pays a monetary incentive to employees who buy a BEV or PHEV ☐

Other, please briefly describe: ▼

Other, please briefly describe:

[   ]

AA15. Hydrogen fuel cell electric vehicles are powered by an electric motor. Electricity is created on the vehicle using hydrogen (refueled at a fuel station much like a gasoline station) and oxygen (from the air). Have you considered buying a vehicle powered by hydrogen for your household?
Select one only that best describes your level of consideration.

I (we) have not—and would not—consider buying a vehicle that runs on hydrogen ☐

I (we) have not considered buying a vehicle that runs on hydrogen—but maybe some day we will ☐

The idea has occurred, but no real steps have been taken to shop for one ☐

Started to gather some information, but haven't really gotten serious yet ☐

Shopped for a hydrogen vehicle, including a visit to at least one dealership to test drive ☐

I (we) already have, or have had, a vehicle powered by hydrogen ☐

AA16. Did you decide against a vehicle that runs on hydrogen or have you not made a decision yet?

I (we) decided against a vehicle that runs on hydrogen. ☐

I (we) haven't yet made a decision whether to get one or not. ☐

AA17. Why did you decide against a vehicle that runs on hydrogen? Please provide a short answer in the box provided.

[   ]

AA18. **Is there anyone you personally know who owns a vehicle that runs on hydrogen? Select one.**

I'm not sure ☐

No ☐

Yes ☐

AA19. **Have you spoken to this person, or these people, about vehicles that run on hydrogen?**

No ☐

Yes ☐

AA20. **Have those conversations informed your thoughts or feelings about vehicles that run on hydrogen?**

No ☐

Yes, they have made me more favorable toward vehicles that run on hydrogen ☐

Yes, they have made me less favorable toward vehicles that run on hydrogen ☐

AA21. **Has your workplace provided any information or incentive to workers regarding vehicles that run on hydrogen?**

I'm not sure ☐

No ☐

Yes ☐

AA22. **What does your workplace do to inform or incentivize workers regarding vehicles that run on hydrogen?**

Reserve specific parking locations for vehicles that run on hydrogen ☐

Host a ride-and-drive event with vehicles that run on hydrogen ☐

Provide information about vehicles, fueling stations, incentives, or other topics ☐

Pays a monetary incentive to employees who drive vehicles that run on hydrogen ☐

Other, please briefly describe: ▼

Other, please briefly describe:

[ ]

AB1. **Which statement best summarizes your household's plans for its next vehicle?**

Already picked out our next vehicle ☐

Discussed a few different vehicles, but have not made a decision yet ☐

Haven't really thought about it at all ☐

Don't plan on buying another vehicle ☐

AB2. **How likely is it your household's next car or truck will be used or new?**

$(document).on('ready pjax:complete', function() { var config = { callout: true, step: 0.1, idk:false, }; doSlider(757566, , , config); });

|Certainly used|Equally likely to be used or new|Certainly new ☐

AB3. **How soon do you believe your household will buy or lease its next vehicle?**

Within the next 6 months ☐

Between 6 months and 1 year from now ☐

Between 1 and 2 years from now ☐

Between 2 and 5 years from now ☐

More than 5 years from now ☐

No idea really ☐

AB4. **Which is most likely regarding the purchase of your household's next vehicle? $(document).on('ready pjax:complete', function() { hideBasedOnPrevQuestion(757566, , , ['A2'], "0", 1); });**

Will replace our {firstvehicle} ☐

Will replace our {secondvehicle} ☐

The next new vehicle would replace another existing household vehicle ☐

The next new vehicle would not replace an existing vehicle; it would be added to the vehicles I (we) already have. ☐

I don't know ☐

AB5. **Whether you plan to acquire any more vehicles or not, can you imagine why your household would consider a vehicle that runs on electricity?** **$(document).on('ready pjax:complete', function() { atMostX(, 3); exclusiveOptions(757566, , , ['001']); $('#vmsg__default').remove(); });**

I can't imagine why my household would consider a vehicle that runs on electricity. ☐

To save money ☐

To reduce the effect on air quality of my (our) driving ☐

To reduce the effect on climate change of my (our) driving ☐

To reduce the money I/we pay to oil companies and other oil producing nations ☐

To reduce the amount of oil that is imported to the United States ☐

I like new technology ☐

To impress family, friends, or peers ☐

To charge car at home instead of going to gas station ☐

It would be fun to drive ☐

Other, please describe: ▼

Other, please describe:

[   ]

AB6. **Whether you plan to acquire any more vehicles or not, can you imagine why your household would consider a vehicle that runs on hydrogen?** **$(document).on('ready pjax:complete', function() { $('#vmsg__default').remove(); atMostX(, 3); exclusiveOptions(757566, , , ['001']); });**

I can't imagine why my household would consider a vehicle that runs on hydrogen. ☐

To save money ☐

To reduce the effect on air quality of my (our) driving ☐

To reduce the effect on climate change of my (our) driving ☐

To reduce the money I/we pay to oil companies and other oil producing nations ☐

To reduce the amount of oil that is imported to the United States ☐

I like new technology ☐

To impress family, friends, or peers ☐

It would be fun to drive ☐

Other, please describe: ▼

Other, please describe:

[ ]

Section AC: Section 4: Page 1

AC1. **We'd like to use a specific make and model for your vehicle design game. If you don't plan on ever getting another vehicle or if you are really unsure what your next vehicle might be, you can select to re-design one of your current vehicles. Which vehicle would you like to use?**

```
$(document).on('ready pjax:complete', function() {
hideEmptyRadios(757566, , ); });
```

I'd like to use my {firstvehicle.NAOK} ☐

{if(numvehicles.NAOK > 1, join("I'd like to use my ", secondvehicle.NAOK), "")} ☐

I'd like to choose a new vehicle ☐

AC2. Please select a make and model that represents a likely next vehicle for your household.

Some new cars and trucks that may be available in the near future aren't offered here. We have no real price or performance information to show you. If there is a vehicle coming out soon that you are interested in for your household, pick an available vehicle that is similar.

A good vehicle to represent our possible next new vehicle is a:

```
$(document).on('ready pjax:complete', function() { var sqids = ['SQ001',
'SQ002', 'SQ003', 'SQ004', 'SQ005', 'SQ006', 'SQ007', 'SQ008']; var
config = { limitYear: 2020, saveMSRP: 'SQ009', saveGVWR: 'SQ010',
ignoreMakes: [ "Aston Martin", "Bentley", "Ferrari", "Lamborghini",
"Maserati", "McLaren", "Rolls-Royce", ], }; var select = new
VehicleSelectFE(757566, , , sqids, config); });
```

Year									
Make									
Model									
Options									
ID									
Type									
MPG									
Body									
MSRP									
GVWR									

Section AD: Design Games Vehicle Setup

AD1.

AD2.

AD3.

AD4.

AD5.

AD6.

AD7.

AD8.

AD9.

AD10.

Section AE: Section 4: Page 2

AE1. About how much do you think the total purchase price is for a ? Round off to the nearest $1,000.

$(document).on('ready pjax:complete', function() { makeMoneyFieldWithCommas('757566', '', '', '001', 'xxx,x00'); checkboxDisablesInput(757566, , , 'SQ002', ["SQ001"], "I really don't know how much we will spend"); });

NoIdea

AE2. The vehicle you selected is fueled with . Is this what you intended?

Yes ☐

No ☐

AE3. How did you intend for this vehicle to be fueled?

Only fill at a gasoline or diesel station ☐

Plug-in to charge with electricity ☐

Both fill at a gasoline station and plug-in to charge with electricity ☐

Fill at a hydrogen station ☐

Section AF: Design Games Setup

AF1. N

This brief guide outlines some of the vehicle options that will be offered to you. Some are available in cars and trucks you can buy or lease today, others are not yet available. For now, assume that you could buy or lease any vehicles you design.

Vehicle Type Fuel or Charge? Brief Description Gasoline Fuel with gasoline. Similar to the gasoline vehicles on the road today. Hybrid (HEV) Fuel with gasoline. An electric motor and battery assist the gasoline engine, producing either higher fuel economy, faster acceleration, or both. The battery does not plug in to charge but is charged by braking, coasting, and the gasoline engine. You only refuel the vehicle with gasoline. Battery Electric Vehicle (BEV) Charge with electricity An electric motor and battery provide all the energy for driving. Options for how far you can drive between charging vary from 75 to 400 miles. The battery charges by plugging the car into an electrical outlet or charging station. Charging time varies from twenty minutes to several hours. Plug-in Hybrid Electric Vehicle (PHEV) Fuel with gasoline and charge with electricity Includes an electric motor and gasoline engine. The vehicle uses electricity stored in a battery to drive between 10 to 80 miles. If you driver farther than that without charging, the vehicle switches to run on gasoline. A PHEV can drive without ever being plugged in to charge its battery but before it can return to running on electricity the battery of a PHEV must be charged by plugging into an electrical outlet or charging station. Fuel Cell Vehicle (FCV) Fuel with hydrogen An electric motor powers the car; a device on the vehicle called a fuel cell uses hydrogen to make the electricity. Available driving distance between fueling with hydrogen ranges from 200 to 400 miles. An FCV can be refueled in a few minutes at a hydrogen refueling station—much like a gasoline station.

Charging Plug-in Hybrid Electric Vehicles and Battery Electric Vehicles

Charging times for Plug-in Hybrid Electric Vehicles and Battery Electric Vehicles range from less than 20 minutes to 20 hours or more, based mostly on the charging speed an electrical outlet can provide, the size of the vehicle battery, and how close to "empty" the battery is when you plug in the car. Bigger batteries mean longer distances before you must charge, but if you do drive farther, that bigger battery will take longer to charge. The chart below describes the main "Levels" of charging. Note, almost no Plug-in Hybrid Electric Vehicles can charge at the fastest speed, while nearly all Battery Electric Vehicles can.

Charging Level Plug Type Charging Speed Typical places you'll find this Level 1 The typical outlet you have in your home to plug in appliances, lights, phone chargers, and such. Add between 2 and 5 miles of driving range for every hour the car is plugged in. Anywhere one can find a typical household outlet: most likely at home, possibly at a workplace. Since you have to run an electrical cord from your car to the outlet, it has to be near where you park. 2 If you have an electric oven, electric water heater, or air conditioning in your residence, you most likely have this higher power electrical service in your home, too. If you have a plug for this level of electric power, it doesn't look like outlets throughout your home. Add between 10 and 20 miles of driving range for every hour the car is plugged in.

If you have these higher power electrical outlets at your home, you might plug your car into one of them.

Alternatively, you might install a new piece of Electric Vehicle Supply Equipment or "EVSE" to charge your car. You'll also find these EVSEs at workplaces and public charging at malls, shopping centers, parking garages and other places.

DC Fast Charging

(Don't ask why they didn't just call it Level 3.)

A whole different thing than what you have at home. 60 to 80 miles of range in 20 minutes (or 120 to 240 miles for every hour the car is plugged in). You may even find faster charging depending on the location and which Battery Electric Vehicle you drive. Found at "public" locations either along major travel routes and at popular destinations.

More Information

When making your vehicle designs, you may find you want more information. The link below will open a description of HEVs, PHEVs, and EVs written by the US Department of Energy in a new window:
http://www.afdc.energy.gov/uploads/publication/hybrid_plugin_ev.pdf

https://www.caranddriver.com/features/a27127697/plug-in-hybrid-2019/

Okay! Now you're ready to design a vehicle for your household. You'll do so three times. Each time you will be shown the car or truck you just selected and have the opportunity to play with the prices and capabilities of plug-in hybrid electric, battery electric, and fuel cell electric versions of that vehicle. Assume everything else is the same as a gasoline or diesel version. For example, an electric has the same body, interior size, amenities and other options as the gasoline .

Many people finance their vehicle purchases or lease instead of buying. Because so many things affect finance and lease costs, we can't accurately estimate your monthly payments. We only show you an estimate of the total initial price of the vehicles you design.

Section AI: Section 4: Game 1

AI1. **Game 1**

As you explore, you can see the effect of different designs on the total purchase price at the bottom of each column. When you've designed a vehicle that matches your wishes and your budget, confirm your selection by checking the box at the bottom in the column of the vehicle you want.

table{ border:2.5px solid #333; border-spacing: 2px; border-collapse: collapse; } table td{ padding:8px; margin:5px; border-left:2px solid #333; border-right:2px solid #333; vertical-align:top; } table tr{ border: 1.75px solid #333; } table th{ border: 2.5px solid #333; } .table-condensed>tbody>tr>td{ padding:12px; } $(document).on('ready pjax:complete', function() { var sqids = []; for(var i = 1; i

phevMode									
phevRange									
evRange									
fcvRange									
phevUpgrade									
evUpgrade									
evQuick									
choice									
size									

AJ1. **Game 2**

As you explore, you can see the effect of different designs on the total purchase price at the bottom of each column. When you've designed a vehicle that matches your wishes and your budget, confirm your selection by checking the box at the bottom in the column of the vehicle you want.

table{ border:2.5px solid #333; border-spacing: 2px; border-collapse: collapse; } table td{ padding:8px; margin:5px; border-left:2px solid #333; border-right:2px solid #333; vertical-align:top; } table tr{ border: 1.75px solid #333; } table th{ border: 2.5px solid #333; } .table-condensed>tbody>tr>td{ padding:12px; } $(document).on('ready pjax:complete', function() { var sqids = []; for(var i = 1; i

phevMode									
phevRange									
evRange									
fcvRange									
phevUpgrade									
evUpgrade									
evQuick									
choice									
size									

Incentives for Plug-in Hybrid Electric, Battery Electric, and Fuel Cell Electric Vehicles

In this game, you will see incentives for Plug-in Hybrid, Battery, and Fuel Cell Electric Vehicles. You will be able to choose some, but not all, incentives. Some financial incentives vary according to changes you make in your vehicle designs. You will be shown the incentive amounts as you change your designs. After you have specified your vehicle design and any incentives, please confirm by selecting the "I choose this one" button at the bottom.

Federal income tax credit: In this design game, all *Plug-in Hybrid* or *Battery Electric Vehicles* are eligible for this credit. *Fuel Cell Electric Vehicles* are not eligible.

The credit varies in size from $2,500 to $7,500 depending on battery size—vehicles with bigger batteries, that is, longer electric driving distance, get bigger credits. Apply the credit to your federal taxes in the tax year you buy the vehicle. If you lease rather than buy, subtract the credit from the lease price.

State vehicle purchase rebate: In this game, everyone who designs their next vehicle to be a *Plug-in Hybrid, Battery, or Fuel Cell Electric Vehicle* is eligible for this incentive.

For *Plug-in Hybrid and Battery Electric Vehicles*, the incentive varies from $1,000 to $2,000 depending on battery size. All *Fuel Cell Electric Vehicles* are eligible for $4,500. You would apply for the state rebate after you buy or lease your new vehicle.

As you explore the vehicle designs, you will have the opportunity to choose one of the following two incentives.

Home Charging Appliance for *Plug-in Hybrid and Battery Electric Vehicles*: These are also known as Electric Vehicle Supply Equipment or EVSEs. They are part of the cost of upgrading to shorter charging time at home.

The rebate on the purchase and installation of a home charging appliance is $1,000. This may not cover your total cost to upgrade. You would apply for the rebate when you buy a home charging appliance, that is, an EVSE.

High Occupancy Vehicle (HOV) Lanes, also known as "diamond" or "commuter lanes" are available in some states. They are for use only by vehicles with at least a minimum number of people. The minimum is often two or three people.

If you live in a state with such lanes and you are driving a *Plug-in Hybrid, Battery, or Fuel Cell Electric Vehicle* you can drive in HOV lanes—even if you are alone in the car—until January 1, 2024.

Section AL: Section 4: Game 3

AL1. As you explore, you can see the effect of different designs on the total purchase price at the bottom of each column. When you've designed a vehicle that matches your wishes and your budget, confirm your selection by checking the box at the bottom in the column of the vehicle you want.

table{ border:2.5px solid #333; border-spacing: 2px; border-collapse: collapse; } table td{ padding:8px; margin:5px; border-left:2px solid #333; border-right:2px solid #333; vertical-align:top; } table tr{ border: 1.75px solid #333; } table th{ border: 2.5px solid #333; } .table-condensed>tbody>tr>td{ padding:12px; } $(document).on('ready pjax:complete', function() { var sqids = []; for(var i = 1; i

phevMode										
phevRange										
evRange										
fcvRange										
phevUpgrade										
evUpgrade										
evQuick										
phevIncentive										
evIncentive										
fcvIncentive										
choice										
size										

Section AM: Follow Up Questions Setup

AM1. N

AM2. N

AM3. N

AM4. N

AM5. N

Section AN: Section 4: {if(dogames.NAOK == "Y", "Design Games", "")} Followup

AN1. **What were your reasons for selecting a plug-in hybrid, battery, or fuel cell electric vehicle? Below are some reasons other people have given—feel free to add one of your own.**

Assign from zero to five points to any reason—the more points you assign to a reason, the more important it is to you. You may assign up to a total of 30 points, so you will not have enough points to assign five points to all the reasons. You don't have to spend all 30 points.

$(document).on('ready pjax:complete', function() { var points = PHEV.pointsQuestion(757566, , , 30, 'SQ017'); points.addReason('SQ001'); points.addReason('SQ002'); points.addReason('SQ003'); points.addReason('SQ004'); points.addReason('SQ005'); points.addReason('SQ006'); points.addReason('SQ007'); points.addReason('SQ008'); points.addReason('SQ009'); points.addReason('SQ010'); points.addReason('SQ011'); points.addReason('SQ012'); points.addReason('SQ013'); points.addReason('SQ014'); points.addOtherReason('SQ015', 'SQ016'); });

I'm interested in the new technology	
It will be fun to drive	
It will be safer than gasoline or diesel vehicles	
To save money compared to gasoline or diesel	
It will be more comfortable	
I like how it looks	
I think it makes the right impression family, friends, and others	
It fits my lifestyle/activities	
To save on the cost of vehicle purchase	
To save on the cost of maintenance and upkeep	
To reduce the effect of my driving on climate change	
To reduce the amount of oil that is imported to the United States	
To reduce the money I pay to oil companies or foreign oil producing nations	

To reduce the effect of my driving on air quality										
Another motivation, please specify:										
Other										
TOTAL										

AN2. **What were your reasons for not designing your next new vehicle to be a plug-in hybrid, battery, or fuel cell electric vehicle? Below we list some common reasons people give—feel free to add one of your own.**

You can assign from zero to five points to any reason —more points means it was more important. You can assign up to 30 points total to these reasons, so you will not have enough points to assign five points to all the reasons. You don't have to spend all the points.

```
$(document).on('ready pjax:complete', function() { var points =
PHEV.pointsQuestion(757566, , , 30, 'SQ020');
points.addReason('SQ001'); points.addReason('SQ002');
points.addReason('SQ003'); points.addReason('SQ004');
points.addReason('SQ005'); points.addReason('SQ006');
points.addReason('SQ007'); points.addReason('SQ008');
points.addReason('SQ009'); points.addReason('SQ010');
points.addReason('SQ011'); points.addReason('SQ012');
points.addReason('SQ013'); points.addReason('SQ014');
points.addReason('SQ015'); points.addReason('SQ016');
points.addReason('SQ017'); points.addOtherReason('SQ018', 'SQ019');
});
```

I'm unfamiliar with the vehicle technology

Concern about unreliable electricity, e.g. blackouts and overall supply

Concern about vehicle safety

I can't charge a plug-in hybrid or electric vehicle at home

Limited number of places to charge or fuel

I don't like the appearance of these vehicles

I don't think it makes the right impression

Cost of vehicle purchase

Cost of maintenance and upkeep

Cost to charge or fuel

Doesn't fit my lifestyle/activities

Concern about time needed to charge or refuel vehicle

Distance I can drive between charging or fueling is too short

Concern about safety of electricity

Environmental concerns about electricity or hydrogen									
Concerns about batteries									
Concern about vehicle reliability									
Another motivation:									
Other									
TOTAL									

AN3. **Did you think about the sources of electricity used to charge plug-in vehicles? That is, did you think about how electricity is produced?**

Yes, I thought about the sources of electricity. ☐

I did not consider the sources of electricity. ☐

AN4. **Did you think about how much gasoline, electricity, or hydrogen would cost you?**

Yes, I thought about how much gasoline, electricity, or hydrogen would cost. ☐

No, I did not. ☐

Section AO: Section 5: Your Beliefs and Opinions

AO1. **How much do you agree or disagree with each of the following statements.**

Please click the slider at the far right and move it to the point on the line that matches your answer along the scale of Strongly Disagree to Strongly Agree.

$(document).on('ready pjax:complete', function() { var config = { idk: false, callout: true, step: 0.1 } doSlider(757566, , , config); });

Air pollution can be reduced if individuals make changes in their lifestyle|Strongly Disagree|Strongly Agree								
I personally worry about air pollution|Strongly Disagree|Strongly Agree								
Air pollution is a health threat in my region|Strongly Disagree|Strongly Agree								

AO2. **Where you live, do you think powering a car with electricity poses less, similar, or more risk to human health than powering it with gasoline?**

$(document).on('ready pjax:complete', function() { var config = { idk: false, callout: true, step: 0.1, } doSlider(757566, , , config); });

|Electricity poses less of a risk than gasoline|Electricity poses a similar risk to gasoline|Electricity poses more of a risk than gasoline

AO3. **Again thinking about where you live, what about the risk to the environment?**

$(document).on('ready pjax:complete', function() { var config = { idk: false, callout: true, step: 0.1, } doSlider(757566, , , config); });

|Electricity poses less of a risk than gasoline|Electricity poses a similar risk to gasoline|Electricity poses more of a risk than gasoline

AO4. **How certain are you there is solid evidence that the average temperature on earth has been getting warmer over the past several decades?**

Please click the slider at the far right and move it to the point on the line that matches your answer along the scale.

$(document).on('ready pjax:complete', function() { var config = { idk: false, callout: true, step: 0.1, }; doSlider(757566, , , config); });

|Very certain there is solid evidence that the average temperature on earth has NOT been getting warmer over the past several decades|Very certain there is solid evidence that the average temperature on earth has been getting warmer over the past several decades

AO5. **Do you believe that the earth is getting warmer mostly because:**

Please click the slider at the far right and move it to the point on the line that matches your answer along the scale from mostly natural processes to mostly human activity.

$(document).on('ready pjax:complete', function() { var config = { idk: false, callout: true, step: 0.1, }; doSlider(757566, , , config); });

|Mostly Natural Processes|Mostly Human Activity

AO6. **Which of the following statements about human-caused climate change comes closest to your opinion?**

Human-caused climate change has been established to be a serious problem and immediate action is necessary. ☐

We don't know enough about climate change or whether humans are causing it; more research is necessary before we decide whether we need to take action or which actions to take. ☐

Concerns about human caused climate change are unjustified thus no actions are required to address it. ☐

AO7. **Climate change can be reduced if individuals make changes in their lifestyle.**

Please click the slider at the far right and move it to the point on the line that matches your answer along the scale of Strongly Disagree to Strongly Agree.

$(document).on('ready pjax:complete', function() { var config = { idk: false, callout: true, step: 0.1, }; doSlider(757566, , , config); });

|Strongly Disagree|Strongly Agree

Section AP: Section 6: Your Household

These final few questions are important to assure that the survey respondents look like the population of your state.

AP1. **How would you describe the building in which you live?**

Single family house not attached to any other house ☐

Single family house attached to one or more houses each with separate entry ☐

A manufactured/mobile home ☐

A single building with two to four separate residences ☐

A single building with 5 to 19 residences ☐

A single building with 20 or more residences ☐

Boat, RV, Van, Car ☐

Other, please briefly describe: ▼

Other, please briefly describe:

AP2. **Does your residence have solar panels to produce electricity?**

Yes ☐

No ☐

AP3. **Do you own, rent, or lease the building in which you live?**

Own ☐

Rent ☐

Lease ☐

Employer-provided ☐

Live with parents or other family member ☐

Other, please describe: ▼

Other, please describe:

☐

AP4. **Recall your household includes all the adults with whom you currently live and jointly make financial decisions such as vehicle purchases and any of your children living with you. How many people live in your household?**

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

6 ☐

7 ☐

8 or more ☐

AQ1.

Please provide a brief description of your household. Start with yourself, then any other licensed drivers, then non-drivers. var ageOpts = ["Under 7", "7 to 18", "19 to 29", "30 to 39", "40 to 49", "50 to 59", "60 to 69", "70 or 79", "80 or older"]; var genderOpts = ["Female", "Male", "Self-describe", "Prefer not to answer",]; var workOpts = ["Not Applicable", "Student", "Family Care Giver (not employed outside own home)", "Employed", "Presently Unemployed", "Retired",]; var driverOpts = ["Yes", "No",]; $(document).on('ready pjax:complete', function() { doDropdown(757566, , , '001_SQ001', ageOpts); doConditionalDropdown(757566, , , '001_SQ002', genderOpts, 2); doDropdown(757566, , , '001_SQ003', workOpts); doDropdown(757566, , , '001_SQ004', driverOpts); doDropdown(757566, , , '002_SQ001', ageOpts); doConditionalDropdown(757566, , , '002_SQ002', genderOpts, 2); doDropdown(757566, , , '002_SQ003', workOpts); doDropdown(757566, , , '002_SQ004', driverOpts); doDropdown(757566, , , '003_SQ001', ageOpts); doConditionalDropdown(757566, , , '003_SQ002', genderOpts, 2); doDropdown(757566, , , '003_SQ003', workOpts); doDropdown(757566, , , '003_SQ004', driverOpts); doDropdown(757566, , , '004_SQ001', ageOpts); doConditionalDropdown(757566, , , '004_SQ002', genderOpts, 2); doDropdown(757566, , , '004_SQ003', workOpts); doDropdown(757566, , , '004_SQ004', driverOpts); doDropdown(757566, , , '005_SQ001', ageOpts); doConditionalDropdown(757566, , , '005_SQ002', genderOpts, 2); doDropdown(757566, , , '005_SQ003', workOpts); doDropdown(757566, , , '005_SQ004', driverOpts); doDropdown(757566, , , '006_SQ001', ageOpts); doConditionalDropdown(757566, , , '006_SQ002', genderOpts, 2); doDropdown(757566, , , '006_SQ003', workOpts); doDropdown(757566, , , '006_SQ004', driverOpts); doDropdown(757566, , , '007_SQ001', ageOpts); doConditionalDropdown(757566, , , '007_SQ002', genderOpts, 2); doDropdown(757566, , , '007_SQ003', workOpts); doDropdown(757566, , , '007_SQ004', driverOpts); doDropdown(757566, , , '008_SQ001', ageOpts); doConditionalDropdown(757566, , , '008_SQ002', genderOpts, 2); doDropdown(757566, , , '008_SQ003', workOpts); doDropdown(757566, , , '008_SQ004', driverOpts); });

1 (You)

Age:

AQ2.

Please provide a brief description of your household. Start with yourself, then any other licensed drivers, then non-drivers. var ageOpts = ["Under 7", "7 to 18", "19 to 29", "30 to 39", "40 to 49", "50 to 59", "60 to 69", "70 or 79", "80 or older"]; var genderOpts = ["Female", "Male", "Self-describe", "Prefer not to answer",]; var workOpts = ["Not Applicable", "Student", "Family Care Giver (not employed outside own home)", "Employed", "Presently Unemployed", "Retired",]; var driverOpts = ["Yes", "No",]; $(document).on('ready pjax:complete', function() { doDropdown(757566, , , '001_SQ001', ageOpts); doConditionalDropdown(757566, , , '001_SQ002', genderOpts, 2); doDropdown(757566, , , '001_SQ003', workOpts); doDropdown(757566, , , '001_SQ004', driverOpts); doDropdown(757566, , , '002_SQ001', ageOpts); doConditionalDropdown(757566, , , '002_SQ002', genderOpts, 2); doDropdown(757566, , , '002_SQ003', workOpts); doDropdown(757566, , , '002_SQ004', driverOpts); doDropdown(757566, , , '003_SQ001', ageOpts); doConditionalDropdown(757566, , , '003_SQ002', genderOpts, 2); doDropdown(757566, , , '003_SQ003', workOpts); doDropdown(757566, , , '003_SQ004', driverOpts); doDropdown(757566, , , '004_SQ001', ageOpts); doConditionalDropdown(757566, , , '004_SQ002', genderOpts, 2); doDropdown(757566, , , '004_SQ003', workOpts); doDropdown(757566, , , '004_SQ004', driverOpts); doDropdown(757566, , , '005_SQ001', ageOpts); doConditionalDropdown(757566, , , '005_SQ002', genderOpts, 2); doDropdown(757566, , , '005_SQ003', workOpts); doDropdown(757566, , , '005_SQ004', driverOpts); doDropdown(757566, , , '006_SQ001', ageOpts); doConditionalDropdown(757566, , , '006_SQ002', genderOpts, 2); doDropdown(757566, , , '006_SQ003', workOpts); doDropdown(757566, , , '006_SQ004', driverOpts); doDropdown(757566, , , '007_SQ001', ageOpts); doConditionalDropdown(757566, , , '007_SQ002', genderOpts, 2); doDropdown(757566, , , '007_SQ003', workOpts); doDropdown(757566, , , '007_SQ004', driverOpts); doDropdown(757566, , , '008_SQ001', ageOpts); doConditionalDropdown(757566, , , '008_SQ002', genderOpts, 2); doDropdown(757566, , , '008_SQ003', workOpts); doDropdown(757566, , , '008_SQ004', driverOpts); });

2

Age: | | | | | | | | | |

AQ3.

Please provide a brief description of your household. Start with yourself, then any other licensed drivers, then non-drivers. var ageOpts = ["Under 7", "7 to 18", "19 to 29", "30 to 39", "40 to 49", "50 to 59", "60 to 69", "70 or 79", "80 or older"]; var genderOpts = ["Female", "Male", "Self-describe", "Prefer not to answer",]; var workOpts = ["Not Applicable", "Student", "Family Care Giver (not employed outside own home)", "Employed", "Presently Unemployed", "Retired",]; var driverOpts = ["Yes", "No",]; $(document).on('ready pjax:complete', function() { doDropdown(757566, , , '001_SQ001', ageOpts); doConditionalDropdown(757566, , , '001_SQ002', genderOpts, 2); doDropdown(757566, , , '001_SQ003', workOpts); doDropdown(757566, , , '001_SQ004', driverOpts); doDropdown(757566, , , '002_SQ001', ageOpts); doConditionalDropdown(757566, , , '002_SQ002', genderOpts, 2); doDropdown(757566, , , '002_SQ003', workOpts); doDropdown(757566, , , '002_SQ004', driverOpts); doDropdown(757566, , , '003_SQ001', ageOpts); doConditionalDropdown(757566, , , '003_SQ002', genderOpts, 2); doDropdown(757566, , , '003_SQ003', workOpts); doDropdown(757566, , , '003_SQ004', driverOpts); doDropdown(757566, , , '004_SQ001', ageOpts); doConditionalDropdown(757566, , , '004_SQ002', genderOpts, 2); doDropdown(757566, , , '004_SQ003', workOpts); doDropdown(757566, , , '004_SQ004', driverOpts); doDropdown(757566, , , '005_SQ001', ageOpts); doConditionalDropdown(757566, , , '005_SQ002', genderOpts, 2); doDropdown(757566, , , '005_SQ003', workOpts); doDropdown(757566, , , '005_SQ004', driverOpts); doDropdown(757566, , , '006_SQ001', ageOpts); doConditionalDropdown(757566, , , '006_SQ002', genderOpts, 2); doDropdown(757566, , , '006_SQ003', workOpts); doDropdown(757566, , , '006_SQ004', driverOpts); doDropdown(757566, , , '007_SQ001', ageOpts); doConditionalDropdown(757566, , , '007_SQ002', genderOpts, 2); doDropdown(757566, , , '007_SQ003', workOpts); doDropdown(757566, , , '007_SQ004', driverOpts); doDropdown(757566, , , '008_SQ001', ageOpts); doConditionalDropdown(757566, , , '008_SQ002', genderOpts, 2); doDropdown(757566, , , '008_SQ003', workOpts); doDropdown(757566, , , '008_SQ004', driverOpts); });

3

Age:

AQ4.

Please provide a brief description of your household. Start with yourself, then any other licensed drivers, then non-drivers. var ageOpts = ["Under 7", "7 to 18", "19 to 29", "30 to 39", "40 to 49", "50 to 59", "60 to 69", "70 or 79", "80 or older"]; var genderOpts = ["Female", "Male", "Self-describe", "Prefer not to answer",]; var workOpts = ["Not Applicable", "Student", "Family Care Giver (not employed outside own home)", "Employed", "Presently Unemployed", "Retired",]; var driverOpts = ["Yes", "No",]; $(document).on('ready pjax:complete', function() { doDropdown(757566, , , '001_SQ001', ageOpts); doConditionalDropdown(757566, , , '001_SQ002', genderOpts, 2); doDropdown(757566, , , '001_SQ003', workOpts); doDropdown(757566, , , '001_SQ004', driverOpts); doDropdown(757566, , , '002_SQ001', ageOpts); doConditionalDropdown(757566, , , '002_SQ002', genderOpts, 2); doDropdown(757566, , , '002_SQ003', workOpts); doDropdown(757566, , , '002_SQ004', driverOpts); doDropdown(757566, , , '003_SQ001', ageOpts); doConditionalDropdown(757566, , , '003_SQ002', genderOpts, 2); doDropdown(757566, , , '003_SQ003', workOpts); doDropdown(757566, , , '003_SQ004', driverOpts); doDropdown(757566, , , '004_SQ001', ageOpts); doConditionalDropdown(757566, , , '004_SQ002', genderOpts, 2); doDropdown(757566, , , '004_SQ003', workOpts); doDropdown(757566, , , '004_SQ004', driverOpts); doDropdown(757566, , , '005_SQ001', ageOpts); doConditionalDropdown(757566, , , '005_SQ002', genderOpts, 2); doDropdown(757566, , , '005_SQ003', workOpts); doDropdown(757566, , , '005_SQ004', driverOpts); doDropdown(757566, , , '006_SQ001', ageOpts); doConditionalDropdown(757566, , , '006_SQ002', genderOpts, 2); doDropdown(757566, , , '006_SQ003', workOpts); doDropdown(757566, , , '006_SQ004', driverOpts); doDropdown(757566, , , '007_SQ001', ageOpts); doConditionalDropdown(757566, , , '007_SQ002', genderOpts, 2); doDropdown(757566, , , '007_SQ003', workOpts); doDropdown(757566, , , '007_SQ004', driverOpts); doDropdown(757566, , , '008_SQ001', ageOpts); doConditionalDropdown(757566, , , '008_SQ002', genderOpts, 2); doDropdown(757566, , , '008_SQ003', workOpts); doDropdown(757566, , , '008_SQ004', driverOpts); });

4

Age:

AQ5.

Please provide a brief description of your household. Start with yourself, then any other licensed drivers, then non-drivers. var ageOpts = ["Under 7", "7 to 18", "19 to 29", "30 to 39", "40 to 49", "50 to 59", "60 to 69", "70 or 79", "80 or older"]; var genderOpts = ["Female", "Male", "Self-describe", "Prefer not to answer",]; var workOpts = ["Not Applicable", "Student", "Family Care Giver (not employed outside own home)", "Employed", "Presently Unemployed", "Retired",]; var driverOpts = ["Yes", "No",]; $(document).on('ready pjax:complete', function() { doDropdown(757566, , , '001_SQ001', ageOpts); doConditionalDropdown(757566, , , '001_SQ002', genderOpts, 2); doDropdown(757566, , , '001_SQ003', workOpts); doDropdown(757566, , , '001_SQ004', driverOpts); doDropdown(757566, , , '002_SQ001', ageOpts); doConditionalDropdown(757566, , , '002_SQ002', genderOpts, 2); doDropdown(757566, , , '002_SQ003', workOpts); doDropdown(757566, , , '002_SQ004', driverOpts); doDropdown(757566, , , '003_SQ001', ageOpts); doConditionalDropdown(757566, , , '003_SQ002', genderOpts, 2); doDropdown(757566, , , '003_SQ003', workOpts); doDropdown(757566, , , '003_SQ004', driverOpts); doDropdown(757566, , , '004_SQ001', ageOpts); doConditionalDropdown(757566, , , '004_SQ002', genderOpts, 2); doDropdown(757566, , , '004_SQ003', workOpts); doDropdown(757566, , , '004_SQ004', driverOpts); doDropdown(757566, , , '005_SQ001', ageOpts); doConditionalDropdown(757566, , , '005_SQ002', genderOpts, 2); doDropdown(757566, , , '005_SQ003', workOpts); doDropdown(757566, , , '005_SQ004', driverOpts); doDropdown(757566, , , '006_SQ001', ageOpts); doConditionalDropdown(757566, , , '006_SQ002', genderOpts, 2); doDropdown(757566, , , '006_SQ003', workOpts); doDropdown(757566, , , '006_SQ004', driverOpts); doDropdown(757566, , , '007_SQ001', ageOpts); doConditionalDropdown(757566, , , '007_SQ002', genderOpts, 2); doDropdown(757566, , , '007_SQ003', workOpts); doDropdown(757566, , , '007_SQ004', driverOpts); doDropdown(757566, , , '008_SQ001', ageOpts); doConditionalDropdown(757566, , , '008_SQ002', genderOpts, 2); doDropdown(757566, , , '008_SQ003', workOpts); doDropdown(757566, , , '008_SQ004', driverOpts); });

5

Age:

AQ6.

Please provide a brief description of your household. Start with yourself, then any other licensed drivers, then non-drivers. var ageOpts = ["Under 7", "7 to 18", "19 to 29", "30 to 39", "40 to 49", "50 to 59", "60 to 69", "70 or 79", "80 or older"]; var genderOpts = ["Female", "Male", "Self-describe", "Prefer not to answer",]; var workOpts = ["Not Applicable", "Student", "Family Care Giver (not employed outside own home)", "Employed", "Presently Unemployed", "Retired",]; var driverOpts = ["Yes", "No",]; $(document).on('ready pjax:complete', function() { doDropdown(757566, , , '001_SQ001', ageOpts); doConditionalDropdown(757566, , , '001_SQ002', genderOpts, 2); doDropdown(757566, , , '001_SQ003', workOpts); doDropdown(757566, , , '001_SQ004', driverOpts); doDropdown(757566, , , '002_SQ001', ageOpts); doConditionalDropdown(757566, , , '002_SQ002', genderOpts, 2); doDropdown(757566, , , '002_SQ003', workOpts); doDropdown(757566, , , '002_SQ004', driverOpts); doDropdown(757566, , , '003_SQ001', ageOpts); doConditionalDropdown(757566, , , '003_SQ002', genderOpts, 2); doDropdown(757566, , , '003_SQ003', workOpts); doDropdown(757566, , , '003_SQ004', driverOpts); doDropdown(757566, , , '004_SQ001', ageOpts); doConditionalDropdown(757566, , , '004_SQ002', genderOpts, 2); doDropdown(757566, , , '004_SQ003', workOpts); doDropdown(757566, , , '004_SQ004', driverOpts); doDropdown(757566, , , '005_SQ001', ageOpts); doConditionalDropdown(757566, , , '005_SQ002', genderOpts, 2); doDropdown(757566, , , '005_SQ003', workOpts); doDropdown(757566, , , '005_SQ004', driverOpts); doDropdown(757566, , , '006_SQ001', ageOpts); doConditionalDropdown(757566, , , '006_SQ002', genderOpts, 2); doDropdown(757566, , , '006_SQ003', workOpts); doDropdown(757566, , , '006_SQ004', driverOpts); doDropdown(757566, , , '007_SQ001', ageOpts); doConditionalDropdown(757566, , , '007_SQ002', genderOpts, 2); doDropdown(757566, , , '007_SQ003', workOpts); doDropdown(757566, , , '007_SQ004', driverOpts); doDropdown(757566, , , '008_SQ001', ageOpts); doConditionalDropdown(757566, , , '008_SQ002', genderOpts, 2); doDropdown(757566, , , '008_SQ003', workOpts); doDropdown(757566, , , '008_SQ004', driverOpts); });

6

Age:

AQ7.

Please provide a brief description of your household. Start with yourself, then any other licensed drivers, then non-drivers. var ageOpts = ["Under 7", "7 to 18", "19 to 29", "30 to 39", "40 to 49", "50 to 59", "60 to 69", "70 or 79", "80 or older"]; var genderOpts = ["Female", "Male", "Self-describe", "Prefer not to answer",]; var workOpts = ["Not Applicable", "Student", "Family Care Giver (not employed outside own home)", "Employed", "Presently Unemployed", "Retired",]; var driverOpts = ["Yes", "No",]; $(document).on('ready pjax:complete', function() { doDropdown(757566, , , '001_SQ001', ageOpts); doConditionalDropdown(757566, , , '001_SQ002', genderOpts, 2); doDropdown(757566, , , '001_SQ003', workOpts); doDropdown(757566, , , '001_SQ004', driverOpts); doDropdown(757566, , , '002_SQ001', ageOpts); doConditionalDropdown(757566, , , '002_SQ002', genderOpts, 2); doDropdown(757566, , , '002_SQ003', workOpts); doDropdown(757566, , , '002_SQ004', driverOpts); doDropdown(757566, , , '003_SQ001', ageOpts); doConditionalDropdown(757566, , , '003_SQ002', genderOpts, 2); doDropdown(757566, , , '003_SQ003', workOpts); doDropdown(757566, , , '003_SQ004', driverOpts); doDropdown(757566, , , '004_SQ001', ageOpts); doConditionalDropdown(757566, , , '004_SQ002', genderOpts, 2); doDropdown(757566, , , '004_SQ003', workOpts); doDropdown(757566, , , '004_SQ004', driverOpts); doDropdown(757566, , , '005_SQ001', ageOpts); doConditionalDropdown(757566, , , '005_SQ002', genderOpts, 2); doDropdown(757566, , , '005_SQ003', workOpts); doDropdown(757566, , , '005_SQ004', driverOpts); doDropdown(757566, , , '006_SQ001', ageOpts); doConditionalDropdown(757566, , , '006_SQ002', genderOpts, 2); doDropdown(757566, , , '006_SQ003', workOpts); doDropdown(757566, , , '006_SQ004', driverOpts); doDropdown(757566, , , '007_SQ001', ageOpts); doConditionalDropdown(757566, , , '007_SQ002', genderOpts, 2); doDropdown(757566, , , '007_SQ003', workOpts); doDropdown(757566, , , '007_SQ004', driverOpts); doDropdown(757566, , , '008_SQ001', ageOpts); doConditionalDropdown(757566, , , '008_SQ002', genderOpts, 2); doDropdown(757566, , , '008_SQ003', workOpts); doDropdown(757566, , , '008_SQ004', driverOpts); });

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Age:

AQ8.

Please provide a brief description of your household. Start with yourself, then any other licensed drivers, then non-drivers. var ageOpts = ["Under 7", "7 to 18", "19 to 29", "30 to 39", "40 to 49", "50 to 59", "60 to 69", "70 or 79", "80 or older"]; var genderOpts = ["Female", "Male", "Self-describe", "Prefer not to answer",]; var workOpts = ["Not Applicable", "Student", "Family Care Giver (not employed outside own home)", "Employed", "Presently Unemployed", "Retired",]; var driverOpts = ["Yes", "No",]; $(document).on('ready pjax:complete', function() { doDropdown(757566, , , '001_SQ001', ageOpts); doConditionalDropdown(757566, , , '001_SQ002', genderOpts, 2); doDropdown(757566, , , '001_SQ003', workOpts); doDropdown(757566, , , '001_SQ004', driverOpts); doDropdown(757566, , , '002_SQ001', ageOpts); doConditionalDropdown(757566, , , '002_SQ002', genderOpts, 2); doDropdown(757566, , , '002_SQ003', workOpts); doDropdown(757566, , , '002_SQ004', driverOpts); doDropdown(757566, , , '003_SQ001', ageOpts); doConditionalDropdown(757566, , , '003_SQ002', genderOpts, 2); doDropdown(757566, , , '003_SQ003', workOpts); doDropdown(757566, , , '003_SQ004', driverOpts); doDropdown(757566, , , '004_SQ001', ageOpts); doConditionalDropdown(757566, , , '004_SQ002', genderOpts, 2); doDropdown(757566, , , '004_SQ003', workOpts); doDropdown(757566, , , '004_SQ004', driverOpts); doDropdown(757566, , , '005_SQ001', ageOpts); doConditionalDropdown(757566, , , '005_SQ002', genderOpts, 2); doDropdown(757566, , , '005_SQ003', workOpts); doDropdown(757566, , , '005_SQ004', driverOpts); doDropdown(757566, , , '006_SQ001', ageOpts); doConditionalDropdown(757566, , , '006_SQ002', genderOpts, 2); doDropdown(757566, , , '006_SQ003', workOpts); doDropdown(757566, , , '006_SQ004', driverOpts); doDropdown(757566, , , '007_SQ001', ageOpts); doConditionalDropdown(757566, , , '007_SQ002', genderOpts, 2); doDropdown(757566, , , '007_SQ003', workOpts); doDropdown(757566, , , '007_SQ004', driverOpts); doDropdown(757566, , , '008_SQ001', ageOpts); doConditionalDropdown(757566, , , '008_SQ002', genderOpts, 2); doDropdown(757566, , , '008_SQ003', workOpts); doDropdown(757566, , , '008_SQ004', driverOpts); });

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Age: | | | | | | | | |

AR1. **Is there someone in your household that your friends and extended family would describe as being *very* interested in new technology? That is to say, this person is often among the first people to buy a product specifically because it uses new technology.**

Yes ☐

Probably yes ☐

Probably not ☐

No ☐

AR2. **How interested are you personally in the technical details of vehicles that run on electricity or hydrogen and how they work?**

Very interested ☐

Interested ☐

A little interested ☐

Not interested ☐

AR3. **Is there someone else in your household who is more interested in these details than you are?**

Yes, there is someone more interested than I ☐

Probably yes ☐

Probably not ☐

No ☐

AR4. **What is the highest level of formal education you personally have completed?**

Grade 8 or less ☐

Some High School ☐

High School Graduate or GED ☐

Some College ☐

College Graduate ☐

Some Graduate School ☐

Masters, Doctorate, or Professional Degree ☐

Prefer not to answer ☐

Section AS: Section 6: Page 4

AS1. **What was your household's pre-tax income for the past tax year?** *Please click the slider at the far right to movie it to the point on the line that matches your answer.* **$(document).on('ready pjax:complete', function() { var config = { labels: ['Prefer not to answer', 'No answer',], idk: true, callout: true, step: 1000, min: 0, max: 200000, prefix: '$', commas: true } doSlider(757566, , , config); });**

|$0|$200,000 or greater ☐☐☐☐☐☐☐☐☐☐

Section AT: Section 6: Page 5

In Fall 2019, some electric utilities in California shut-off electric power for periods ranging from several hours to a few days. Most of these events affected a few thousand electricity customers. However, twice these events affected 100s of thousands of customers over large areas of the state. Similarly, people living in other states may at different times have had their electricity off for a few hours to a few days because of large storms or other events.

Having made it to end, you must hit the Submit button to record your response. After you do, you will be sent back to [Vendor's name] to process your incentive. Thank you!

AT1. **In what zip code does your household reside?**

$(document).on('ready pjax:complete', function() { addPlaceholder(757566, , , null, 'XXXX'); });

AT2. In what zip code is your workplace located?

$(document).on('ready pjax:complete', function() { addPlaceholder(757566, , , null, 'XXXX'); });

AT3. Was electricity shut-off to your residence by your electric utility in 2019?

No ☐

Yes ☐

AT4. Did you consider the possibility of such electricity outages when you designed your next new vehicle?

No ☐

Yes ☐

AT5. You designed a as a plausible next vehicle for your household. How do these electric power shut-offs affect the likeliness you would buy a ?

$(document).on('ready pjax:complete', function() { var config = { idk: false, } doSlider(757566, , , config); });

|Eliminated the possibility my household would buy a {if(gamesphev.NAOK == "Y", "PHEV", if(gamesev.NAOK == "Y", "BEV", ""))}|No effect|Made me absolutely certain to buy a {if(gamesphev.NAOK == "Y", "PHEV", if(gamesev.NAOK == "Y", "BEV", ""))}

AT6. You designed a as a plausible next vehicle for your household. How do these electric power shut-offs affect the likeliness you would buy a plug-in hybrid electric vehicle or a battery electric vehicle?

$(document).on('ready pjax:complete', function() { var config = { idk: false, } doSlider(757566, , , config); });

|Less likely|Unchanged|More likely

AT7. Which type of vehicle are you more likely to buy instead?

Conventional gasoline or diesel ☐

Hybrid ☐

Plug-in hybrid ☐

Battery electric ☐

Fuel cell electric ☐

AT8. **Thank you for answering our questions. We appreciate the time and attention you've given to us. If you want to offer any final comments, please enter them in the box below.**

AT9. **If you are willing to be contacted to talk with us personally about the topics in this questionnaire, please provide your e-mail address. Interviews will be conducted (preferably) via the internet, for example by Skype or Zoom, but may also be done over the telephone. An additional incentive will be provided. Interview selection will be based on covering a wide variety of responses to this questionnaire, so we cannot promise all who volunteer will be contacted.**

Email

Confirm