

OES-4 EV Owners Web Protocol

Start of Block: Introduction

Q2 Thank you for taking the time to complete our web protocol today!

For the purpose of this research, we are only interested in EVs that plug into the electrical grid. We will be focusing on battery electric vehicles (BEVs) that do not use any gasoline and plug-in hybrid electric vehicles (PHEVs) that use a combination of gasoline and electricity.

Your responses will be protected as confidential information. According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 1905-0186. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any questions or need additional information about this research project, contact me at (xxx) xxx-xxxx, or by email at Gerson.Morales@eia.gov.

End of Block: Introduction

Start of Block: EV Screener

Q69 Do you own or lease a battery electric vehicle (BEV) or plug-in hybrid electric vehicle (PHEV)? *Please do not include vehicles that do not plug in to an electrical outlet or charger.*

Yes (1)

No (2)

Skip To: End of Survey If Do you own or lease a battery electric vehicle (BEV) or plug-in hybrid electric vehicle (PHEV)? P... = No

End of Block: EV Screener

Start of Block: Block 4

Q9 We'll begin by collecting information about your primary electric vehicle that is the electric vehicle you drive most frequently.

End of Block: Block 4

Start of Block: EV1

Q3 What kind of electric vehicle is your primary electric vehicle?

- Battery Electric Vehicle (BEV) (1)
 - Plug-In Hybrid Electric Vehicle (PHEV) (2)
 - Hybrid Electric Vehicle (HEV) (3)
-

Q4 What is the make, model, and year of your primary electric vehicle?

- Make (1) _____
 - Model (2) _____
 - Year (3) _____
-

Q5 What is the capacity of the battery in your $\{Q4/ChoiceTextEntryValue/3\}$ $\{Q4/ChoiceTextEntryValue/2\}$?

- kWh (1) _____
-

Q6 Approximately how many miles do you drive your $\{Q4/ChoiceTextEntryValue/3\}$ $\{Q4/ChoiceTextEntryValue/2\}$ per week? *Your best estimate is fine.*

Q7 Approximately what percentage of these $\{Q6/ChoiceTextEntryValue\}$ miles are spent on the highway?

- Less than 25% (1)
- 25% to less than 50% (2)
- 50% to less than 75% (3)
- More than 75% (4)

End of Block: EV1

Start of Block: More Electric Vehicles Screener

Q8 Do you own or lease any other electric vehicles?

- Yes (1)
- No (2)

Skip To: End of Block If Do you own or lease any other electric vehicles? = No

Q14 What kind of electric vehicle is your secondary electric vehicle?

- Battery Electric Vehicle (BEV) (1)
 - Plug-In Hybrid Electric Vehicle (PHEV) (2)
 - Hybrid Electric Vehicle (HEV) (3)
-

Q11 What is the make, model, and year of your electric vehicle?

Make (1) _____

Model (2) _____

Year (3) _____

Q12 What is the capacity of the battery in your [\\${Q11/ChoiceTextEntryValue/3}](#) [\\${Q11/ChoiceTextEntryValue/2}](#)?

kWh (1) _____

Q13 Approximately how many miles do you drive your [\\${Q11/ChoiceTextEntryValue/3}](#) [\\${Q11/ChoiceTextEntryValue/2}](#) per week? Your best estimate is fine.

Q14 Approximately what percentage of these [\\${Q13/ChoiceTextEntryValue}](#) miles are spent on the highway?

Less than 25% (1)

25% to less than 50% (2)

50% to less than 75% (3)

More than 75% (4)

Q21 Do you own or lease any other electric vehicles?

Yes (1)

No (2)

Skip To: End of Block If Do you own or lease any other electric vehicles? = No

Q16 What kind of electric vehicle is your third electric vehicle?

Battery Electric Vehicle (BEV) (1)

Plug-In Hybrid Electric Vehicle (PHEV) (2)

Hybrid Electric Vehicle (HEV) (3)

Q17 What is the make, model, and year of your electric vehicle?

Make (1) _____

Model (2) _____

Year (3) _____

Q18 What is the capacity of the battery in your $\{Q17/ChoiceTextEntryValue/3\}$ $\{Q17/ChoiceTextEntryValue/2\}$?

kWh (1) _____

Q19 Approximately how many miles do you drive your $\{Q17/ChoiceTextEntryValue/3\}$ $\{Q17/ChoiceTextEntryValue/2\}$ per week? Your best estimate is fine.

Q20 Approximately what percentage of these $\{Q19/ChoiceTextEntryValue\}$ miles are spent on the highway?

- Less than 25% (1)
- 25% to less than 50% (2)
- 50% to less than 75% (3)
- More than 75% (4)

End of Block: More Electric Vehicles Screener

Start of Block: Weekly Charging Intro

Q21 The following questions will be about your $\{Q4/ChoiceTextEntryValue/3\}$ $\{Q4/ChoiceTextEntryValue/2\}$ that you use as your **primary electric vehicle**.

End of Block: Weekly Charging Intro

Start of Block: Weekly Charging Questions

Q22 How would you characterize your charging habits for your primary electric vehicle during a typical week?

- Charge my electric vehicle mostly at home (1)
 - Charge my electric vehicle about equally at home and outside of home (2)
 - Charge my electric vehicle mostly outside of home (3)
-

Q23 At which of the following locations did you charge your primary electric vehicle last week (select all that apply)? *If you did not charge your primary EV last week, please consider a typical week when you charged your EV.*

- Home or place of residence (1)
 - Public charging station (open access to public) (2)
 - Private charging station (restricted access to public) (3)
 - Other location (4)
-

Q25 Do you usually charge at the same place(s) every week?

Q24 How easy or difficult is it for you to report where you charged your vehicle last week?

- Very difficult (4)
 - Somewhat difficult (5)
 - Slightly difficult (6)
 - Not at all difficult (7)
-

Q26 In the space below, please describe any challenges you have reporting where you charged your electric vehicle during the last week.

End of Block: Weekly Charging Questions

Start of Block: Level Charger Question

Q32 How familiar are you with the difference between level 1, 2, and 3 chargers?

- Very familiar (4)
- Somewhat familiar (5)
- Slightly familiar (6)
- Not at all familiar (7)

End of Block: Level Charger Question

Start of Block: Home Block

Q37 Now let's focus on your **home charging** for your primary electric vehicle during the last week.

What type of charger did you use at home last week?

- Level 1 (i.e. 120v, standard outlet) (1)
- Level 2 (i.e., 240v outlet) (2)
- Level 3 (i.e. dc faster charger) (3)
- Don't know (4)

Q38 How much time did you spend charging with a [\\${Q37/ChoiceGroup/SelectedChoices}](#) charger last week at home?

Q39 Tell me more about how you came up with your estimate for the time spent charging your primary vehicle at home.

Q40 How confident are you in the estimate you provided for your home charging time?

- Not at all confident (1)
- Slightly confident (2)
- Somewhat confident (4)
- Very confident (3)

Q41 Do you usually charge until your battery is full (100%) at home?

- Yes (1)
- No (2)
- Don't know (3)

End of Block: Home Block

Start of Block: Public Block

Q43 Now let's focus on your **public station charging** for your primary electric vehicle during the last week.

What type of charger did you use at the public charging stations last week?

- Level 1 (i.e. 120v, standard outlet) (1)
- Level 2 (i.e., 240v outlet) (2)
- Level 3 (i.e. dc faster charger) (3)
- Don't know (4)
-

Q44 How much time did you spend charging with a [\\${Q43/ChoiceGroup/SelectedChoices}](#) charger last week at public charging stations?

Q45 Tell me more about how you came up with your estimate for your time spent charging your primary electric vehicle at public charging stations.

Q46 How confident are you in the estimate you provided for your public station charging time?

- Not at all confident (1)
- Slightly confident (2)
- Somewhat confident (4)
- Very confident (3)
-

Q47 Do you usually charge until your battery is full (100%) at public charging stations?

Yes (1)

No (2)

Don't know (3)

End of Block: Public Block

Start of Block: Private Block

Q48 Now let's focus on your **private station charging** for your primary electric vehicle during the last week.

What type of charger did you use at the private charging stations last week?

Level 1 (i.e. 120v, standard outlet) (1)

Level 2 (i.e., 240v outlet) (2)

Level 3 (i.e. dc faster charger) (3)

Don't know (4)

Q49 How much time did you spend charging with a [\\${Q48/ChoiceGroup/SelectedChoices}](#) charger last week at private charging stations?

Q50 Tell me more about how you came up with your estimate for the time spent charging your primary electric vehicle at private charging stations.

Q51 How confident are you in the estimate you provided for your private station charging time?

- Not at all confident (4)
 - Slightly confident (5)
 - Somewhat confident (7)
 - Very confident (6)
-

Q52 Do you usually charge until your battery is full (100%) at private charging stations?

- Yes (1)
- No (2)
- Don't know (3)

End of Block: Private Block

Start of Block: Other Block

Q53 Now let's focus on your charging of your primary electric vehicle at **other charging stations** during the last week.

What type of charger did you use at the other charging stations last week?

- Level 1 (i.e. 120v, standard outlet) (1)
 - Level 2 (i.e., 240v outlet) (2)
 - Level 3 (i.e. dc faster charger) (3)
 - Don't know (4)
-

Q54 How much time did you spend charging with a [\\${Q53/ChoiceGroup/SelectedChoices}](#) charger last week at other charging stations?

Q55 Tell me more about how you came up with your estimate for your time spent charging your primary electric vehicle at other charging stations.

Q56 How confident are you in the estimate you provided for your charging time at other charging stations?

- Not at all confident (4)
- Slightly confident (5)
- Somewhat confident (7)
- Very confident (6)

Q57 Do you usually charge until your battery is full (100%) at other charging stations?

- Yes (1)
- No (2)
- Don't know (3)

End of Block: Other Block

Start of Block: Electric Vehicle Charging Consumption at Home

Q27 On average, how much has your monthly electric bill changed as a result of charging your electric vehicle?

- Increased a lot (1)
 - Increased some (2)
 - Stayed about the same (3)
 - Decreased some (4)
 - Decreased a lot (5)
 - Don't know (6)
-

Q28 Approximately how much has your monthly electric bill increased, on average, from charging your electric vehicle(s) at home?

Q36 Using the ranges provided below, approximately how much has your monthly electric bill increased since obtaining your electric vehicle?

- Less than \$10 (1)
 - Between \$10 and \$25 (2)
 - Between \$25 and \$50 (3)
 - Between \$50 and \$75 (4)
 - Between \$75 and \$100 (5)
 - Over \$100 (6)
 - Don't Know (7)
-

Q29 How confident are you in the estimate you provided for your monthly household charging expenses reported in the previous question?

- Not at all confident (4)
 - Slightly confident (5)
 - Somewhat confident (7)
 - Very confident (6)
-

Q30 In the space below, please describe any challenges you have reporting your monthly household electric vehicle charging expenses.

Q31 If you had your electricity bills on hand, could you figure out approximately how much your monthly household electric expenses have changed as a result of charging your electric vehicle?

- Yes (1)
 - No (2)
 - Don't Know (3)
-

Q33 Do you charge your electric vehicle(s) at home more often during the day hours from 8AM to 8PM, more often during night hours from 8PM to 8AM, or about equally during both of those time frames?

- More often during day hours from 8AM to 8PM (1)
 - Charge about equally during day and night hours (2)
 - More often during night hours from 8PM to 8AM (3)
-

Q34 What is the name of your electricity utility provider?

Q57 How familiar are you with the term kilowatt hour (kWh)?

Very familiar (4)

Somewhat familiar (5)

Slightly familiar (6)

Not at all familiar (7)

Q70 A kilowatt hour is a measure of electrical energy equivalent to a power consumption of 1,000 watts for 1 hour.

Q58 During the last month, how many kilowatt hours (kWh) did your electric vehicle(s) use for charging at home?

Q62 Using the ranges provided below, approximately how many kilowatt hours (kWh) has your monthly electric bill increased since obtaining your electric vehicle?

- Less than 10 kWh (1)
 - Between 10 and 100 kWh (2)
 - Between 100 and 200 kWh (3)
 - Between 200 and 300 kWh (4)
 - Between 300 and 400 kWh (5)
 - Between 400 and 500 kWh (6)
 - Between 500 and 1000 kWh (7)
 - Over 1000 kWh (8)
 - Don't Know (9)
-

Display This Question:

If Using the ranges provided below, approximately how many kilowatt hours (kWh) has your monthly electric bill increased since obtaining your electric vehicle? (9) Don't Know

Q59 How confident are you in the estimate of your monthly household charging for your electric vehicle reported above?

- Not at all confident (4)
 - Slightly confident (5)
 - Somewhat confident (7)
 - Very confident (6)
-

Q60 In the space provided below, please describe any challenges you have reporting your monthly household electric vehicle kilowatt hour (kWh) consumption.

Q61 If you had your electricity bills on hand, could you figure out how many kilowatt hours (kWh) you charged your electric vehicle last month?

Yes (1)

No (2)

Don't Know (3)

End of Block: Electric Vehicle Charging Consumption at Home

Start of Block: Electric Vehicle Charging Consumption Away from Home

Q63 How much money did you spend last week charging your electric vehicle outside of your home?

Q68 Using the ranges provided below, approximately how much did you spend last week charging your electric vehicle outside of your home or personal residence?

- Less than \$10 (1)
 - Between \$10 and \$25 (2)
 - Between \$25 and \$50 (3)
 - Between \$50 and \$75 (4)
 - Between \$75 and \$100 (5)
 - Over \$100 (6)
 - Don't Know (7)
-

Q64 How confident are you in the estimate you provided for your weekly charging expenses reported above?

- Not at all confident (4)
 - Slightly confident (5)
 - Somewhat confident (7)
 - Very confident (6)
-

Q65 Do the charging expenses reported in the previous question include only expenses for charging or other fees as well (e.g., idle fees or monthly membership fees)?

- Only include charging expenses (1)
- Charging expenses and other miscellaneous expenses (2)

Q66 In the space provided below, please describe any challenges you have reporting your weekly charging expenses.

End of Block: Electric Vehicle Charging Consumption Away from Home
