CE Batteries and EVs Survey

Start of Block: Consent

Q1 Welcome!   
  
We thank you very much for participating in this survey. The purpose of this study is to understand what people look for in their vehicle purchases. This survey should take about 10-15 minutes to complete.   
  
This survey will focus on the passenger vehicles that your household owns, which does not include motorcycles.  Your household includes all the persons who occupy the housing unit as their usual place of residence.  
  
In order to participate in this research please review the Consent to participate in research document and indicate whether you consent to participating. [link to be added to consent form]  
  
OMB CONTROL NO. 0693-0089   
Expiration Date 9/30/2024  
  
This collection of information contains Paperwork Reduction Act (PRA) requirements approved by the Office of Management and Budget (OMB). Notwithstanding any other provisions of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA unless that collection of information displays a currently valid OMB control number. Public reporting burden for this collection is estimated to be approximately 15 minutes per response. Send comments regarding this burden estimate or any aspect of this collection of information, including suggestions for reducing this burden, to the National Institute of Standards and Technology, Attn: Jennifer Helgeson, NIST, 100 Bureau Drive, MS 8603, Gaithersburg, MD 20899-1710, telephone 301-975-6133, or via email to Jennifer.helgeson@nist.gov.

* I consent (1)
* I do not consent (2)

Skip To: End of Survey If Welcome! We thank you very much for participating in this survey. The purpose of this study is to... = I do not consent

End of Block: Consent

Start of Block: Screening Demographics

Q2 How old are you?

* Under 18 (1)
* 18 - 19 (2)
* 20 - 24 (3)
* 25 - 29 (4)
* 30 - 34 (5)
* 35 - 39 (6)
* 40 - 44 (7)
* 45 - 49 (8)
* 50 - 54 (9)
* 55 - 59 (10)
* 60 - 64 (11)
* 65 - 69 (12)
* 70 - 74 (13)
* 75 - 79 (14)
* 80 - 84 (15)
* Over 85 (16)

Skip To: End of Survey If How old are you? = Under 18

Q3 a. What is your sex? If you would prefer to not answer this question, please skip to the next question.

* Male (1)
* Female (2)

End of Block: Screening Demographics

Start of Block: Currently Owned Vehicle Questions

Q4 How many passenger vehicles (not including motorcycles) are in use by your household? Your household includes all the persons who occupy the housing unit as their usual place of residence.

* 0 (1)
* 1 (2)
* 2 (3)
* 3 (4)
* 4 (5)
* 5 (6)
* 6 or more (7)

End of Block: Currently Owned Vehicle Questions

Start of Block: Vehicle 1 Questions

Note: This block of 3 questions is shown for each vehicle in the household up to the fifth vehicle.

Q5\_1 Please answer the following questions for the **[first, second, third, fourth, fifth]** vehicle in your household.  
  
 Considering the body style of the vehicle, what type of vehicle do you and others in your household own or lease right now?

* Coupe or hatchback (1)
* Sedan (3)
* Small SUV (two rows of seats) (4)
* SUV (three rows of seats) (5)
* Minivan or van (6)
* Truck (7)

Q6\_1 Considering the fuel type (or equivalent) of the vehicle, what type of vehicle do you and others in your household own or lease right now? Please answer about the **[first, second, third, fourth, fifth]** vehicle in your household.

* Gasoline (1)
* Diesel (2)
* Battery Electric Vehicle (BEV) (3)
* Hybrid (4)
* Plug in hybrid (5)
* Other (6) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q219\_1 Do you lease or own this vehicle? Please answer about the **[first, second, third, fourth, fifth]** vehicle in your household.

* Own (1)
* Lease (2)
* Other (3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

End of Block: Vehicle 1 Questions

Start of Block: BEV Block 1

Note: this block of questions that is in blue is only shown for Battery Electric Vehicle Owners.

Q7\_1 What year was your battery electric vehicle (BEV) produced?

* 2007 or earlier (1)
* 2008 (2)
* 2009 (3)
* 2010 (4)
* 2011 (5)
* 2012 (6)
* 2013 (7)
* 2014 (8)
* 2015 (9)
* 2016 (10)
* 2017 (11)
* 2018 (12)
* 2019 (13)
* 2020 (14)
* 2021 (15)
* 2022 (16)
* 2023 (17)
* 2024 or later (18)

Q8\_2 What is the **make** of your BEV?

* Aston Martin (8)
* Audi (9)
* BMW (10)
* Chevrolet (11)
* Coda (12)
* Fisker (13)
* Fiat (14)
* Ford (15)
* Genesis (16)
* GMC (General Motors) (17)
* Honda (18)
* Hyundai (19)
* Jaguar (20)
* Kia (21)
* Lexus (22)
* Lotus (23)
* Lucid Motors (24)
* Maserati (25)
* Mazda (26)
* Mercedes-Benz (27)
* Mini Cooper (28)
* Mitsubishi (29)
* Nissan (30)
* Polestar (31)
* Porsche (32)
* Rivian (33)
* Subaru (34)
* Smart (35)
* Tesla (36)
* Toyota (37)
* Vinfast (38)
* Volkswagen (39)
* Volvo (40)
* Other (41) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Skip To: Q9\_1\_b If What is the make of your BEV? = Coda

Skip To: Q9\_1\_b If What is the make of your BEV? = Fisker

Skip To: Q9\_1\_b If What is the make of your BEV? = Fiat

Skip To: Q9\_1\_b If What is the make of your BEV? = Ford

Skip To: Q9\_1\_b If What is the make of your BEV? = Genesis

Skip To: Q9\_1\_b If What is the make of your BEV? = GMC (General Motors)

Skip To: Q9\_1\_c If What is the make of your BEV? = Honda

Skip To: Q9\_1\_c If What is the make of your BEV? = Hyundai

Skip To: Q9\_1\_c If What is the make of your BEV? = Jaguar

Skip To: Q9\_1\_c If What is the make of your BEV? = Kia

Skip To: Q9\_1\_c If What is the make of your BEV? = Lexus

Skip To: Q9\_1\_c If What is the make of your BEV? = Lotus

Skip To: Q9\_1\_c If What is the make of your BEV? = Lucid Motors

Skip To: Q9\_1\_d If What is the make of your BEV? = Maserati

Skip To: Q9\_1\_d If What is the make of your BEV? = Mazda

Skip To: Q9\_1\_d If What is the make of your BEV? = Mercedes-Benz

Skip To: Q9\_1\_d If What is the make of your BEV? = Mini Cooper

Skip To: Q9\_1\_d If What is the make of your BEV? = Mitsubishi

Skip To: Q9\_1\_d If What is the make of your BEV? = Nissan

Skip To: Q9\_1\_d If What is the make of your BEV? = Polestar

Skip To: Q9\_1\_d If What is the make of your BEV? = Porsche

Skip To: Q9\_1\_d If What is the make of your BEV? = Rivian

Skip To: Q9\_1\_e If What is the make of your BEV? = Subaru

Skip To: Q9\_1\_e If What is the make of your BEV? = Smart

Skip To: Q9\_1\_e If What is the make of your BEV? = Tesla

Skip To: Q9\_1\_e If What is the make of your BEV? = Toyota

Skip To: Q9\_1\_e If What is the make of your BEV? = Vinfast

Skip To: Q9\_1\_e If What is the make of your BEV? = Volkswagen

Skip To: Q9\_1\_e If What is the make of your BEV? = Volvo

Skip To: Q9\_1\_e If What is the make of your BEV? = Other

Q9\_1\_a What is the **model** of your BEV?

* Blazer EV (1)
* Bolt EV (4)
* Bolt EUV (5)
* e-tron (6)
* e-tron GT (7)
* e-tron Sportback (8)
* i3 (2)
* i4 (9)
* i5 (10)
* i7 (11)
* iX xDrive45 (12)
* Lagonda (3)
* Q4 e-tron (13)
* Q4 e-tron Sportsback (14)
* Q6 e-tron (15)
* S-10 Electric (16)
* Spark EV (17)
* Other (18) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Skip To: Q10\_1 If What is the model of your BEV? = Blazer EV

Skip To: Q10\_1 If What is the model of your BEV? != Blazer EV

Q9\_1\_b What is the **model** of your BEV?

* 500e (1)
* Coda (2)
* E-Transit (3)
* Electrified G80 (4)
* Electrified GV70 (5)
* EV1 (6)
* F-150 Lightning (7)
* Focus Electric (8)
* Hummer EV (9)
* Mustang Mach-E (10)
* Ocean (11)
* Ranger EV (12)
* Other (13) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Skip To: Q10\_1 If What is the model of your BEV? = 500e

Skip To: Q9\_1\_c If What is the model of your BEV? != 500e

Q9\_1\_c What is the **model** of your BEV?

* Air (1)
* Clarity BEV (2)
* EV6 (3)
* EV9 (4)
* Fit EV (5)
* Gravity (6)
* I-PACE (7)
* IONIQ 5 (8)
* IONIQ 6 (9)
* IONIQ Electric (10)
* Kona Electric (11)
* Niro EV (12)
* RZ (13)
* Soul EV (14)
* Type 133 (15)
* Other (16) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Skip To: Q10\_1 If What is the model of your BEV? = Air

Skip To: Q10\_1 If What is the model of your BEV? != Air

Q9\_1\_d What is the **model** of your BEV?

* Ariya (1)
* 2 (2)
* 3 (19)
* 4 (3)
* B250e (5)
* Electric SE Hardtop 2 door (6)
* EQB (7)
* EQB 250+ (8)
* EQE (9)
* EQS (10)
* EQS SUV (11)
* GranTurismo (12)
* iMiEV (13)
* LEAF (14)
* MX-30 (15)
* R1S (16)
* R1T (17)
* Taycan (18)
* Other (21) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Skip To: Q10\_1 If What is the model of your BEV? = Ariya

Skip To: Q10\_1 If What is the model of your BEV? != Ariya

Q9\_1\_e What is the **model** of your BEV?

* bZ4x (1)
* C40 (2)
* e-Golf (3)
* EX90 (4)
* Fortwo (5)
* ID.4 (6)
* Model 3 (7)
* Model S (8)
* Model X (9)
* Model Y (10)
* RAV4 EV (11)
* Roadster (12)
* Solterra (13)
* VF9 (14)
* XC40 Recharge (15)
* Other (16) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q10\_1 What is the **trim level** of your BEV? The trim level refers to different pre-packaged groups of features of a vehicle.

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Q11\_1 What was the **manufacturer rated range** of your BEV when you purchased it? An approximate value is fine.

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Q12\_1 As of today, approximately how many miles are on your BEV?

* 0 - 9,999 (1)
* 10,000 - 19,999 (2)
* 20,000 - 29,999 (3)
* 30,000 – 39,999 (4)
* 40,000 – 49,999 (5)
* 50,000 – 59,999 (6)
* 60,000 – 69,999 (7)
* 70,000 – 79,999 (8)
* 80,000 – 89,999 (9)
* 90,000 – 99,999 (10)
* 100,000 – 109,999 (11)
* 110,000 – 119,999 (12)
* 120,000 – 129,999 (13)
* 130,000 – 139,999 (14)
* 140,000 – 149,999 (15)
* 150,000 – 159,999 (16)
* 160,000 – 169,999 (17)
* 170,000 – 179,999 (18)
* 180,000 – 189,999 (19)
* 190,000 – 199,999 (20)
* 200,000 or more (21)

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Q13\_1 What is the **current range** of your BEV when fully charged? An approximate value is fine.

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Q22\_1 Was your BEV new or pre-owned when you purchased or leased it?

* New (1)
* Pre-owned (2)
* Other (3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Skip To: Q14\_1 If Was your BEV new or pre-owned when you purchased or leased it? = New

Skip To: Q14\_1 If Was your BEV new or pre-owned when you purchased or leased it? = Other

Q224\_1 How old was your BEV when you purchased it?

* Less than 1 year (1)
* 1 year (2)
* 2 years (3)
* 3 years (4)
* 4 years (5)
* 5 years (6)
* 6 years (7)
* 7 or more years (8)

Q225\_1 How many miles were on your BEV when you purchased it?

* 0 - 9,999 (1)
* 10,000 - 19,999 (2)
* 20,000 - 29,999 (3)
* 30,000 - 39,999 (4)
* 40,000 - 49,999 (5)
* 50,000 - 59,999 (6)
* 60,000 - 69,999 (7)
* 70,000 - 79,999 (8)
* 80,000 - 89,999 (9)
* 90,000 - 99,999 (10)
* 100,000 or more (11)

Q14\_1 How often do you charge your BEV?

* 1 time a day (1)
* 6 times a week (2)
* 5 times a week (3)
* 4 times a week (4)
* 3 times a week (5)
* 2 times a week (6)
* 1 time a week (7)
* Less than one time a week (8)

Q15\_1 Where do you charge your BEV most often?

* At home (1)
* At a work provided charging station (2)
* At a public charging station (3)

Q16\_1 What time of day do you typically charge your BEV?

* In the mornings (1)
* In the middle of the day (2)
* In the evenings (3)
* Overnight (4)

Q17\_1 How long do you typically charge your BEV?

* Less than one hour (1)
* 1-2 hours (2)
* 2-3 hours (3)
* 3-4 hours (4)
* 4-5 hours (5)
* 5-6 hours (6)
* 6-7 hours (7)
* 7-8 hours (8)
* More than 8 hours (9)

Q18\_1 Do you typically unplug your BEV once it is fully charged?

* Yes, most of the time (1)
* Yes, some of the time (2)
* Yes, but rarely (3)
* No, never (4)

Q19\_1 At your residence what type of charging do you use?

* Level 1 (120 volts from a standard outlet) (1)
* Level 2 (240 volts) (2)
* Level 3 (Supercharger or DCFC) (3)
* Do not charge at my residence (4)

Skip To: Q21\_1 If At your residence what type of charging do you use? = Do not charge at my residence

Q20\_1 Did you pay for the installation of a home charger?

* Yes (1)
* No (2)
* I do not have a home charger (3)

Q21\_1 How often do you use a **level 3 fast charger** (DC Fast Charging or Supercharging) to charge your BEV?

* Once a week or more (1)
* Twice a month (2)
* Once a month (3)
* Every other month (4)
* Every 6 months (5)
* Once a year or less (6)
* Never (7)

Q23\_1 What was your primary reason for purchasing a BEV?

* To save money on gasoline (1)
* To reduce trips to the gas station (2)
* To have a technologically innovative vehicle (3)
* To reduce my environmental footprint (4)
* Other (5) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q43\_1 In the last year, approximately how many times did your household use your BEV for a trip that took **more than 2.5 hours one direction**?

* Never (1)
* 1-3 times (2)
* 4-6 times (3)
* 7-9 times (4)
* 9-11 times (5)
* 12 or more times (6)

Q46\_1 What percent of your household's time spent driving the BEV is **on an interstate or highway**? Please consider all time spent driving the BEV by your household.

* Less than 25% (1)
* 25% to 49% (2)
* 50% to 74% (3)
* 75% or more (4)

Q47\_1 What percent of your household's time spent driving the BEV is **in stop and go traffic**? Please consider all time spent driving the BEV by your household.

* Less than 25% (1)
* 25% to 49% (2)
* 50% to 74% (3)
* 75% or more (4)

Q48\_1 What percent of your household's time spent driving the BEV is on **roads with a stop sign or traffic light within every 2-3 minutes of driving**? Please consider all time spent driving the BEV by your household.

* Less than 25% (1)
* 25% to 49% (2)
* 50% to 74% (3)
* 75% or more (4)

Q49\_1 How would you describe your household's driving style when driving the BEV?

* Very aggressive (1)
* Aggressive (2)
* Slightly aggressive (3)
* Neutral (4)
* Slightly passive (5)
* Passive (6)
* Very passive (7)

End of Block: BEV Block 1

Start of Block: Additional Screening Questions

Q34 When was the last time you purchased a new or pre-owned vehicle?

* Within the last year (1)
* 1-2 years (2)
* 2-3 years (3)
* 3-4 years (4)
* 4-5 years (5)
* 5 or more years (6)
* Never (7)

Q35 Do you plan to purchase or lease a new or pre-owned vehicle in the next:  
  
If you are unsure, please give us your best guess. 

* 1 year (1)
* 2 years (2)
* 3 years (3)
* 4 years (4)
* 5 years (5)
* 6 years (6)
* 7 years (7)
* 8 years (8)
* 9 years (9)
* 10 years (10)
* More than 10 years (11)
* Do not plan to purchase a new or pre-owned vehicle in the future (12)

Skip To: Q38 If Do you plan to purchase or lease a new or pre-owned vehicle in the next: If you are unsure, pleas... = More than 10 years

Skip To: Q38 If Do you plan to purchase or lease a new or pre-owned vehicle in the next: If you are unsure, pleas... = Do not plan to purchase a new or pre-owned vehicle in the future

Skip To: Q38 If Do you plan to purchase or lease a new or pre-owned vehicle in the next: If you are unsure, pleas... = 6 years

Skip To: Q38 If Do you plan to purchase or lease a new or pre-owned vehicle in the next: If you are unsure, pleas... = 7 years

Skip To: Q38 If Do you plan to purchase or lease a new or pre-owned vehicle in the next: If you are unsure, pleas... = 8 years

Skip To: Q38 If Do you plan to purchase or lease a new or pre-owned vehicle in the next: If you are unsure, pleas... = 9 years

Q36 When you purchase or lease a new or pre-owned vehicle, how **many years do you intend to keep that vehicle** before replacing it? If you are unsure, please give us your best guess.

* Less than 1 (1)
* 1 (2)
* 2 (3)
* 3 (4)
* 4 (5)
* 5 (6)
* 6 (7)
* 7 (8)
* 8 (9)
* 9 (10)
* 10 (11)
* 11 (12)
* 12 (13)
* 13 (14)
* 14 (15)
* 15 (16)
* 16 (17)
* 17 (18)
* 18 (19)
* 19 (20)
* 20 (21)
* more than 20 (22)

Q40 Which most accurately describes your **next** choice of vehicle?

* Purchase new vehicle (1)
* Lease new vehicle (2)
* Purchase a pre-owned vehicle less than 5 years old (3)
* Purchase a pre-owned vehicle more than 5 years old (4)
* I am unsure (5)
* Other (6) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q41 For the vehicle your household **plans to replace**, what is the fuel type (or equivalent)?

* The new or pre-owned vehicle will not replace any other vehicle (1)
* Gasoline (2)
* Diesel (3)
* BEV (4)
* Hybrid (5)
* Plug in Hybrid (6)
* Other (7) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q38 Many of the following questions ask about battery electric vehicles.  
   
 • A **battery electric vehicle (BEV)** is an all-electric vehicle powered by plugging into a specialized outlet and using electricity to charge a battery pack, with no gasoline engine. A Tesla Model 3 is an example of a BEV. A BEV cannot drive without being charged.  
 • A **hybrid vehicle** is a vehicle that uses gasoline and battery power, but does not plug in to charge. A hybrid’s battery is re-charged by driving the vehicle. A Toyota Prius is an example of a hybrid vehicle.  
 • A **plug-in hybrid** vehicle is a vehicle that uses gasoline and battery power that can be plugged in to charge the battery. The Chevy Bolt is an example of a plug-in hybrid vehicle.  
   
 We will also ask several questions about your knowledge of vehicles and related items. Please do not look up answers to these questions, we want to know your best guess.

Q39 Think about your household’s **next** vehicle choice. How likely are you to select a BEV (Battery Electric Vehicle)?

* Extremely unlikely (1)
* Moderately unlikely (2)
* Slightly unlikely (3)
* Neither likely nor unlikely (4)
* Slightly likely (5)
* Moderately likely (6)
* Extremely likely (7)

Q42 Do you have access to an electrical outlet where your vehicle is parked at your primary residence?

* Yes (1)
* No (2)
* Unsure (3)

End of Block: Additional Screening Questions

Start of Block: Driving Patterns

Q43 Consider how frequently your household uses a vehicle for long trips. In the last year, including work-related trips, weekends, holidays and vacations, approximately how many times did you use your own vehicle for a trip that took **more than 2.5 hours one direction**?

* Never (1)
* 1-3 times (2)
* 4-6 times (3)
* 7-9 times (4)
* 9-11 times (5)
* 12 or more times (6)

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Q44 Approximately how many miles do you believe a fully charged BEV can be driven before the battery is drained?

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Q44 How long do you think it takes to charge a BEV battery from 20% capacity to **full** using a standard outlet?

* Less than 30 minutes (1)
* 30 minutes to 1 hour (2)
* 1 hour to 2 hours (3)
* 2 hours to 4 hours (4)
* 4 hours to 8 hours (5)
* Over 8 hours (6)

Q45 The year is 2019

* True (1)
* False (2)

Skip To: End of Survey If The year is 2019 = True

End of Block: Driving Patterns

Start of Block: Future Expectations

Q50 Compared to the annual fuel cost for a gasoline vehicle of the same type and size, do you think the **annual cost of electricity** for a BEV is**:**

* Much less (more than 50% lower) (1)
* Somewhat less (2)
* About the same (3)
* Somewhat more (4)
* Much more (more than 50% higher) (5)

Q52 Total Cost of Ownership includes financing, vehicle depreciation (loss in value), insurance premiums and fees, fuel-equivalent costs (either electricity or gasoline), repair and maintenance costs.  
   
 Compared to a gasoline vehicle of the same type and size, do you think the **Total Cost of Ownership** of a BEV over five years would be:

* Much less (more than 50% lower) (1)
* Somewhat less (2)
* About the same (3)
* Somewhat more (6)
* Much more (more than 50% higher) (7)

Q53 How do you expect **gasoline prices** to change in the next 5 years?

* Much less (more than 50% lower) (1)
* Somewhat less (2)
* About the same (3)
* Somewhat more (6)
* Much more (more than 50% higher) (7)

Q54 How do you expect **BEV battery prices** to change in the next 5 years?

* Much less (more than 50% lower) (1)
* Somewhat less (6)
* About the same (7)
* Somewhat more (8)
* Much more (more than 50% higher) (9)

Q55 How do you expect **BEV purchase prices** to change the next 5 years?

* Much less (more than 50% lower) (1)
* Somewhat less (6)
* About the same (7)
* Somewhat more (8)
* Much more (more than 50% higher) (9)

Q56 How do you expect **new gasoline vehicle purchase prices** to change the next 5 years?

* Much less (more than 50% lower) (1)
* Somewhat less (6)
* About the same (7)
* Somewhat more (8)
* Much more (more than 50% higher) (9)

Q57 How do you expect **pre-owned gasoline vehicle purchase prices** to change the next 5 years?

* Much less (more than 50% lower) (1)
* Somewhat less (6)
* About the same (7)
* Somewhat more (8)
* Much more (more than 50% higher) (9)

|  |  |
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Q58 How many years do you expect the battery of a new BEV to last before you must replace the battery? Please only use whole numbers.

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Q59 How much do you think replacing a BEV battery costs (including the cost of the battery and labor to install the battery)? Please only use whole numbers.

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End of Block: Future Expectations

Start of Block: Perceptions/ Behavioral Variables

Q60 What type of information would be useful in your decision-making process to buy a **pre-owned** BEV?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Extremely unuseful (1) | Moderately unuseful (2) | Slightly unuseful (3) | Neither useful nor unuseful (4) | Slightly useful (5) | Moderately useful (6) | Extremely useful (7) |
| Expected remaining lifetime of the battery (1) |  |  |  |  |  |  |  |
| Expected remaining driving range of the battery for a specific number of years (2) |  |  |  |  |  |  |  |
| Current remaining driving range of the vehicle (3) |  |  |  |  |  |  |  |

Q61 What source of information would be useful in your decision-making process to buy a **pre-owned** BEV?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Extremely unuseful (1) | Moderately unuseful (2) | Slightly unuseful (3) | Neither useful nor unuseful (4) | Slightly useful (5) | Moderately useful (6) | Extremely useful (7) |
| The battery is guaranteed to last for a specific number of years (1) |  |  |  |  |  |  |  |
| The battery is federally rated to last for a specific number of years (2) |  |  |  |  |  |  |  |
| The battery is under manufacturer warranty for a specific number of years (3) |  |  |  |  |  |  |  |
| The battery is industry rated to last for a specific number of years (4) |  |  |  |  |  |  |  |

Q62 Please indicate the extent to which you agree or disagree with the following statements.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Strongly disagree (1) | Disagree (2) | Somewhat disagree (3) | Neither agree nor disagree (4) | Somewhat agree (5) | Agree (6) | Strongly agree (7) |
| If I owned a BEV, I would often worry about running out of charge (1) |  |  |  |  |  |  |  |
| If I owned a BEV, I would worry about finding places to charge it if I wanted to drive somewhere new (2) |  |  |  |  |  |  |  |
| Range is a major disadvantage of owning a BEV (3) |  |  |  |  |  |  |  |
| Please select "strongly disagree" as your response to this item (4) |  |  |  |  |  |  |  |

Skip To: End of Survey If Please indicate the extent to which you agree or disagree with the following statements. != Please select "strongly disagree" as your response to this item [ Strongly disagree ]

End of Block: Perceptions/ Behavioral Variables

Start of Block: New Resale Matrix

Q63 Please indicate the extent to which you agree or disagree with the following statements.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Strongly disagree (1) | Disagree (2) | Somewhat disagree (3) | Neither agree nor disagree (4) | Somewhat agree (5) | Agree (6) | Strongly agree (7) |
| If I bought a **new** BEV, I would worry that I would not get a good price when I wanted to sell it (1) |  |  |  |  |  |  |  |
| BEVs are less valuable than gasoline cars on the resale market, because the technology is always advancing (2) |  |  |  |  |  |  |  |
| If I bought a **new** BEV, I would worry about fast depreciation because of battery technology (relative to gasoline vehicles) (3) |  |  |  |  |  |  |  |

End of Block: New Resale Matrix

Start of Block: Pre-owned Resale Matrix

Q64 Please indicate the extent to which you agree or disagree with the following statements.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Strongly disagree (1) | Disagree (2) | Somewhat disagree (3) | Neither agree nor disagree (4) | Somewhat agree (5) | Agree (6) | Strongly agree (7) |
| If I bought a **pre-owned** BEV, I would worry that I would not get a good price when I wanted to sell it (1) |  |  |  |  |  |  |  |
| BEVs are less valuable than gasoline cars on the resale market, because the technology is always advancing (2) |  |  |  |  |  |  |  |
| If I bought a **pre-owned** BEV, I would worry about fast depreciation because of battery technology (relative to gasoline vehicles) (3) |  |  |  |  |  |  |  |

End of Block: Pre-owned Resale Matrix

Start of Block: Demographics

Q65 How do you see yourself: Are you generally a person who is fully prepared to take risks or do you try to avoid taking risks? Please answer in general – these can be risks in any realm of your life.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Avoid Risk    1 (1) | 2 (11) | 3 (3) | 4 (4) | 5 (5) | 6 (6) | 7 (7) | 8 (8) | 9 (9) | Risk Taking     10 (10) |
| 1 (1) |  |  |  |  |  |  |  |  |  |  |

Q67 How would you describe your residence?

* Single family home (detached or free-standing residence) (1)
* Multi-family home (apartment, condo) (2)
* Duplex, triplex-, or 4-plex (3)
* Townhouse (4)
* Mobile home (5)
* Other (6)

Q68 Do you own or rent this residence?

* Own (1)
* Rent (2)
* Other (3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q69 Do you have solar panels installed on your residence?

* No (1)
* Yes (2)

Skip To: Q71 If Do you have solar panels installed on your residence? = No

Q70 Do you own or lease your solar panels?

* Lease (1)
* Own (2)
* Other (3) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q71 What is your annual **household** income?

* Less than $10,000 (1)
* $10,000 to $19,999 (2)
* $20,000 to $29,999 (3)
* $30,000 to $39,999 (4)
* $40,000 to $49,999 (5)
* $50,000 to $59,999 (6)
* $60,000 to $69,999 (7)
* $70,000 to $79,999 (8)
* $80,000 to $89,999 (9)
* $90,000 to $99,999 (10)
* $100,000 to $109,999 (11)
* $110,000 to $119,999 (12)
* $120,000 to $129,999 (13)
* $130,000 to $139,999 (14)
* $140,000 to $149,999 (15)
* $150,000 to $159,999 (16)
* $160,000 to $169,999 (17)
* $170,000 to $179,999 (18)
* $180,000 to $189,999 (19)
* $190,000 to $199,999 (20)
* $200,000 to $209,999 (21)
* $210,000 to $219,999 (22)
* $220,000 to $229,999 (23)
* $230,000 to $239,999 (24)
* $240,000 to $249,999 (25)
* $250,000 or more (26)
* Prefer not to answer (27)

Q72 Including yourself, how many people live in your household?

* 1 (1)
* 2 (2)
* 3 (3)
* 4 (4)
* 5 (5)
* 6 or more (6)

Q73 Including yourself, how many people in your household drive a vehicle?

* 1 (1)
* 2 (2)
* 3 (3)
* 4 (4)
* 5 (5)
* 6 or more (6)

|  |
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|  |

Q74 What is your zip code?

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Q75 What is your race? Please check all that apply.

* White (1)
* Black or African American (2)
* Native American or Alaska Native (3)
* Asian (including Asian Indian) (4)
* Native Hawaiian or Pacific Islander (5)

Q76 Are you Hispanic, Latino, or Spanish in origin?

* No, not of Hispanic, Latino, or Spanish origin (1)
* Yes, Mexican, Mexican Am., Chicano (2)
* Yes, Puerto Rican (3)
* Yes, Cuban (4)
* Yes, another Hispanic, Latino, or Spanish origin (5)

Q77 Please indicate your highest level of education (include degree you are currently working on if applicable)

* Some high school (1)
* High school (2)
* GED (3)
* Some college (4)
* Associate's degree (2-year degree) (5)
* 4-year college degree (6)
* Masters degree (7)
* Doctoral degree / advanced degree (8)
* Other (9) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q78 How much do you, personally, worry about the issue of global climate change?

* None at all (1)
* A little (2)
* A moderate amount (3)
* A lot (4)
* A great deal (5)

Q218 What is the largest concern you have about purchasing a battery electric vehicle?

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End of Block: Demographics