NYSERDA Drive Clean Rebate Adoption Survey: 2017-2018 Results

Summary Report | Report Number 20-22 | July 2020

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Serve as a catalyst – advancing energy innovation, technology, and investment; transforming New York's economy; and empowering people to choose clean and efficient energy as part of their everyday lives.

NYSERDA Drive Clean Rebate Adoption Survey: 2017–2018 Results

Summary Report

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NYSERDA Report 20-22 NYSERDA Contract 99297 July 2020

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Preferred Citation

New York State Energy and Research Development Authority (NYSERDA). 2020. "NYSERDA Drive Clean Rebate Adoption Survey: 2017–2018 Results," NYSERDA Report Number 20-22. Prepared by Center for Sustainable Energy, San Diego, CA. nyserda.ny.gov/publications

Abstract

This report summarizes results of a survey of rebate recipients who adopted an electric vehicle (EV) while participating in the New York State Energy Research and Development Authority's (NYSERDA) Drive Clean Rebate program between 2017 and 2018. The program offered point-of-sale rebates on new car purchases and leases for eligible electric cars. Invitations to participate in this "Adoption Survey" were sent via email to a total of 8,651 rebate recipients, resulting in 1,808 complete responses. Survey results are grouped by technology type, i.e., plug-in hybrid electric vehicles (PHEVs) and battery electric vehicles (BEVs). Results summarize purchasing decisions, the impact of the rebate on purchases, the role of dealers, EV charging access and behaviors, as well as demographic characteristics of EV adopters, i.e. homeowners vs. renters, residence type, gender, age, income and racial/ethnic identity.

Keywords

Electric cars, electric vehicles (EVs), plug-in electric hybrid vehicles (PHEVs), battery electric vehicles (BEVs), all-battery cars, Drive Clean Rebate program, point-of-sale rebates, rebate importance, Rebate Essentiality, auto dealers, EV adoption

Acknowledgments

The Center for Sustainable Energy would like to acknowledge the guidance and support of project manager Betsy McDonald Llanwarne, who worked with Patrick Bolton and Adam Ruder of NYSERDA to launch the Drive Clean Rebate program. Betsy passed away in October 2018. We would also like to thank Laura Parsons and Marcus Gilmore of the Center for Sustainable Energy for their project support.

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1 Introduction

NYSERDA's Drive Clean Rebate program provides point-of-sale rebates to consumers who purchase or lease eligible new plug-in electric hybrid or all-battery cars. The program launched in March 2017 and is administered by the Center for Sustainable Energy (CSE). One component of the program is a voluntary survey to gain insights into electric car adoption decisions, perceptions of program performance and efficacy, and demographic characteristics of participating households (i.e., the "Adoption Survey"). This report summarizes the results of this survey.

1.1 Survey Administration and Response Rate

The Drive Clean Rebate Adoption Survey is administered on a rolling basis. Program participants receive a survey invitation by email approximately 1-3 weeks after approval of their rebate. The participants included in this analysis purchased or leased cars between March 22, 2017 and July 31, 2018. A total of 8,651 non-fleet participants[1] received a rebate for cars acquired during this window and were invited to take the survey.

Of those invited to take the survey, 1,858 responded, resulting in a response rate of 21.6%. These respondents completed the survey between August 8, 2017 to September 5, 2018. Fifty respondents were disqualified because their rebate was for a different car, their car was primarily for commercial use, or they were not the primary driver, leaving 1,808 complete responses.

1.2 Representativeness and Weighting

Because the Adoption Survey is voluntary and not everyone chooses to complete it, responses may not be perfectly representative of the entire Drive Clean Rebate participant population. However, using application information available for all program participants, response weights were created to compensate for over- or under-representation among various groups. The dimensions used for weighting were car model, purchase versus lease, county, and technology type (plug-in hybrid versus all-battery). Weights were calculated using the raking method.[2] Weighted responses are presented in this report and are representative of applicants who purchased their cars between March 28, 2017 and July 31, 2018.

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1 This total includes only applications that were closed as of 9/5/2018 and excludes business and government applications.

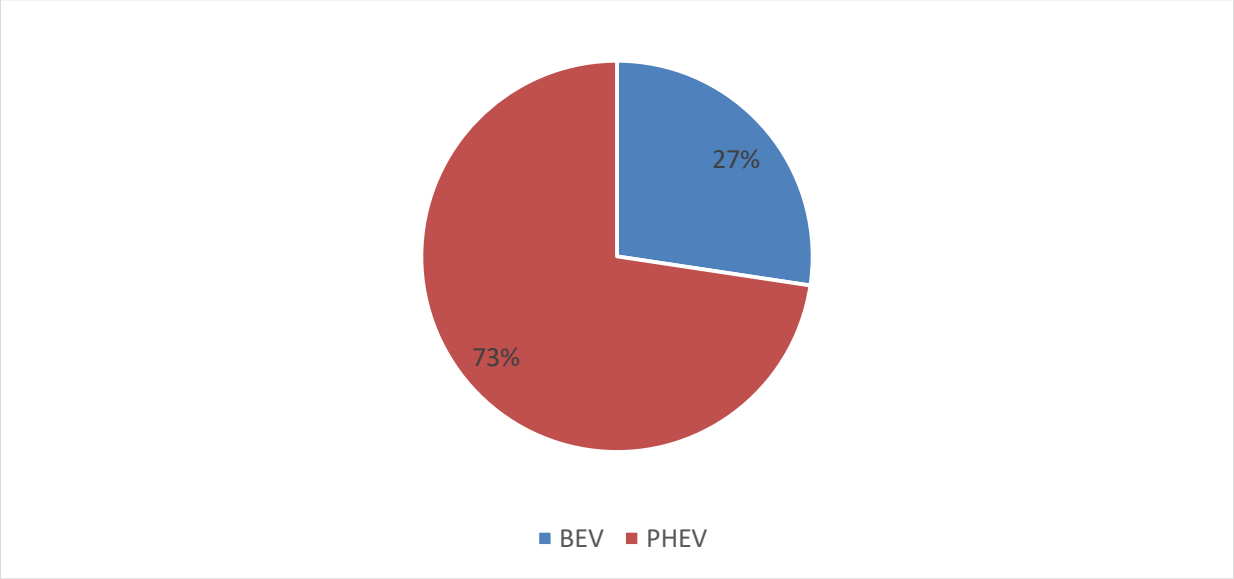
2 Raking, also known as iterative proportional fitting, is a technique used to match a distribution from one data set to another, generally more comprehensive, data set.

2 Results

2.1 Technology Types

Almost three quarters (73%) of the rebates were for plug-in hybrid electric vehicles (PHEVs), with the remainder for battery electric vehicles (BEVs; Figure 1).

Figure 1. Rebates by Technology Type

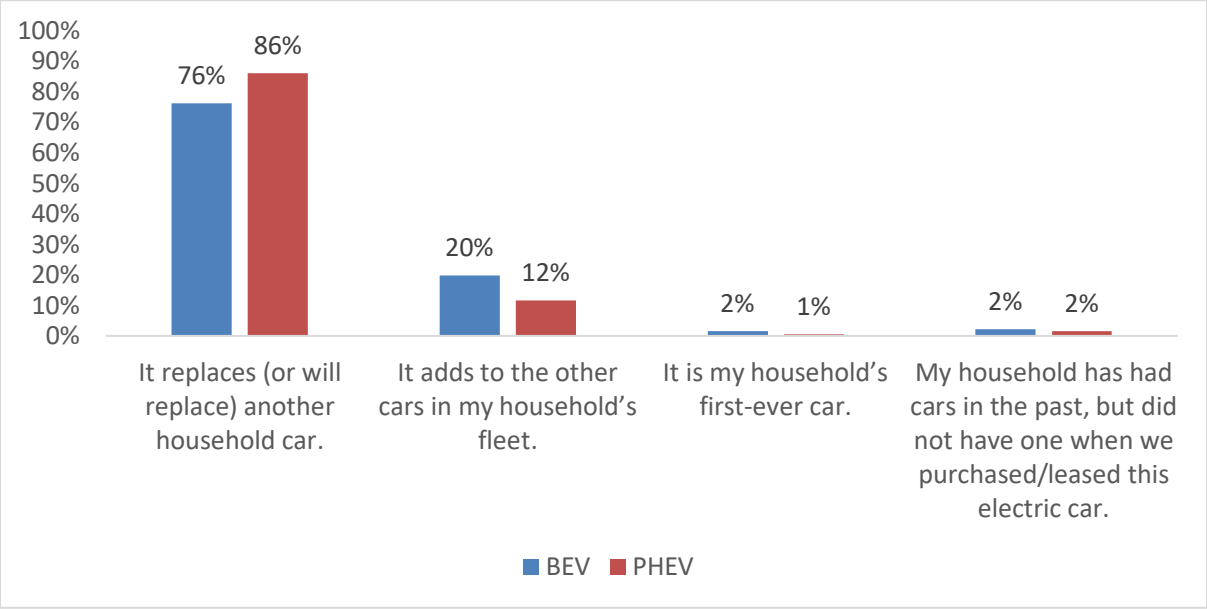


N=1808

2.2 Adoption Decisions

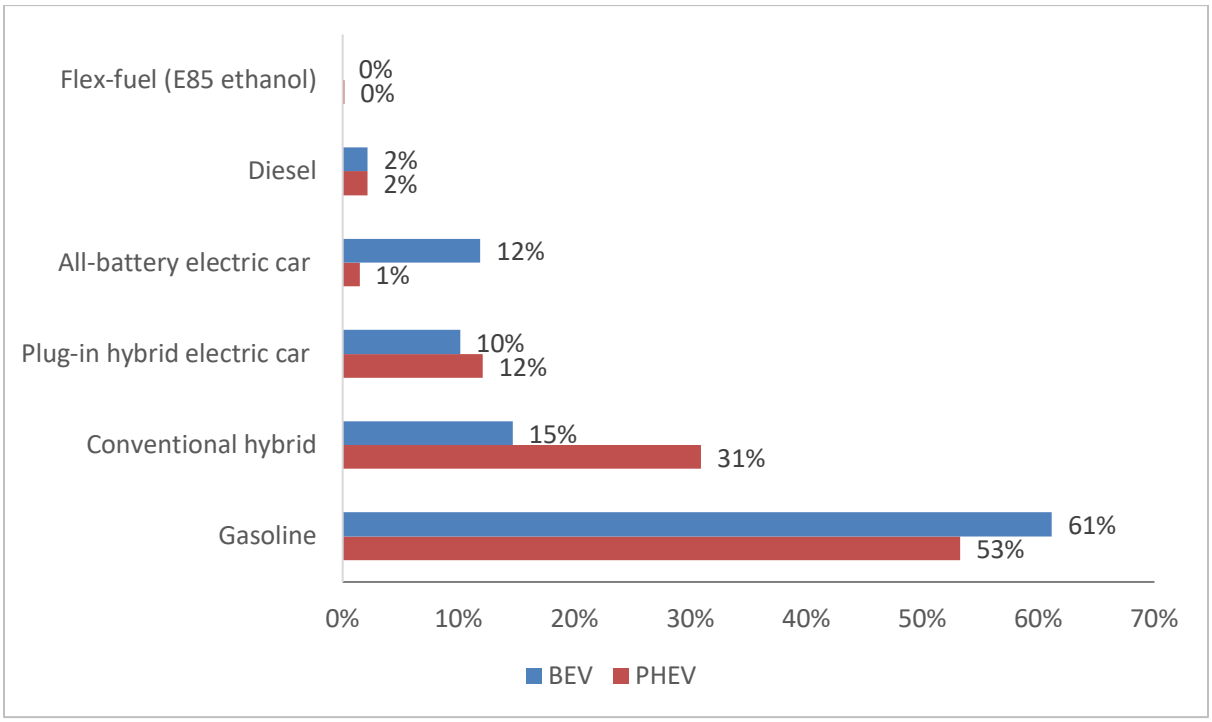
Overall, 83% of rebate recipients said the car rebated had replaced or would replace another household car; 14% reported it was an additional car to the household fleet. Figure 2 shows car replacement by technology type. Those who adopted a PHEV were significantly more likely to replace (or to plan to replace) a car in the home than those who adopted a BEV.

Figure 2. Responses to "Which of the following best describes your new electric car purchase or lease?"



N=1801. PHEV and BEV responses are significantly different. Results of chi-squared test: F(2.87, 5171.22)=5.8419 P=0.0007

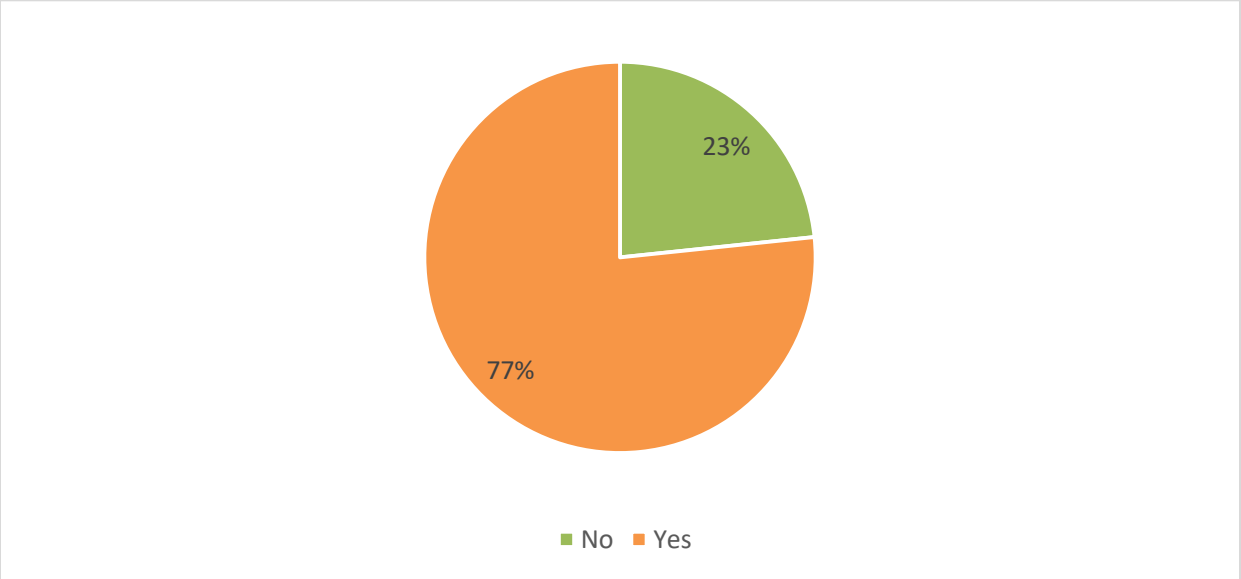
Figure 3. Technology of Cars Replaced



N=1058. PHEV and BEV drivers are significantly different. Results of chi-squared test: F(4.90, 5178.91)=14.53 P=0.00

Figure 3 shows that over half of replaced (or to-be-replaced) cars are conventional gasoline-powered cars, and over a quarter are conventional hybrids. Over three quarters (77%) of respondents reported that this was the first electric car they had purchased or leased (Figure 4). This number was not significantly different between PHEV and BEV owners.

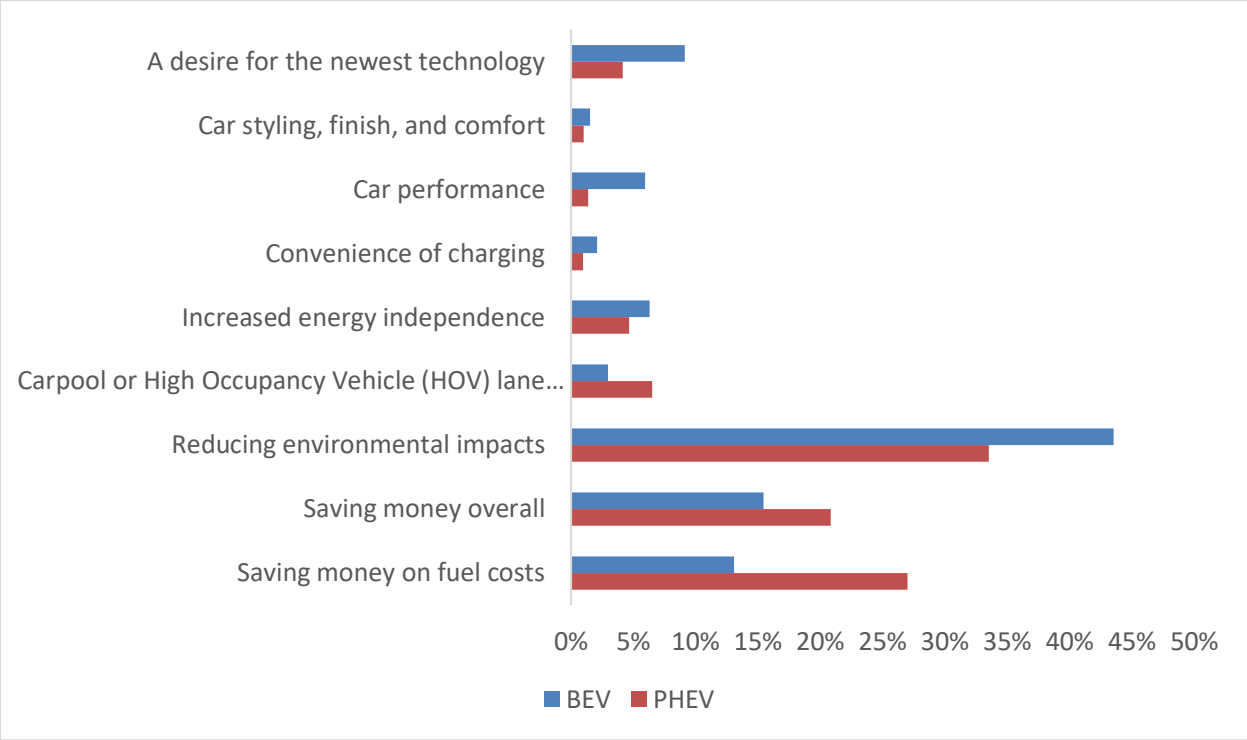
Figure 4. Responses to "Is this the first electric car you have ever purchased or leased?"



N=1804. PHEV and BEV responses are not significantly different. Results of chi-squared test: F(1, 1803)=1.76 P=0.18

Respondents were asked to choose the most important reason they decided to acquire an electric car (Figure 5). Across all respondents, the top reasons were "reducing environmental impacts," "saving money on fuel costs" and "saving money overall." BEV drivers were much more likely to select "reducing environmental impacts" or "a desire for the newest technology" than PHEV drivers. PHEV drivers were more likely to cite "saving money on fuel costs" or "saving money overall" as the most important factor in their decision.

Figure 5. Responses to "Which of these factors was the most important reason why you decided to acquire an electric car?"

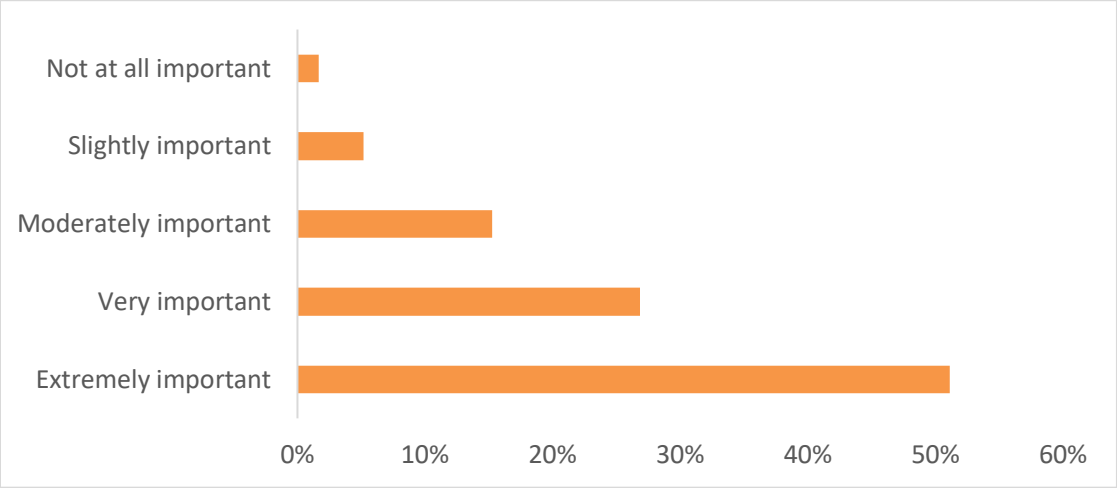


N=1799. BEV and PHEV responses are significantly different. Results of chi-squared test: F(7.91, 14217.93)= 10.92 P=0.00

2.3 Program Impact

Respondents were asked several questions to determine how influential the NYSERDA Drive Clean Rebate was to their purchase. Over three quarters (78%) rated the rebate as extremely or very important in making it possible for them to acquire their car (Figure 6).

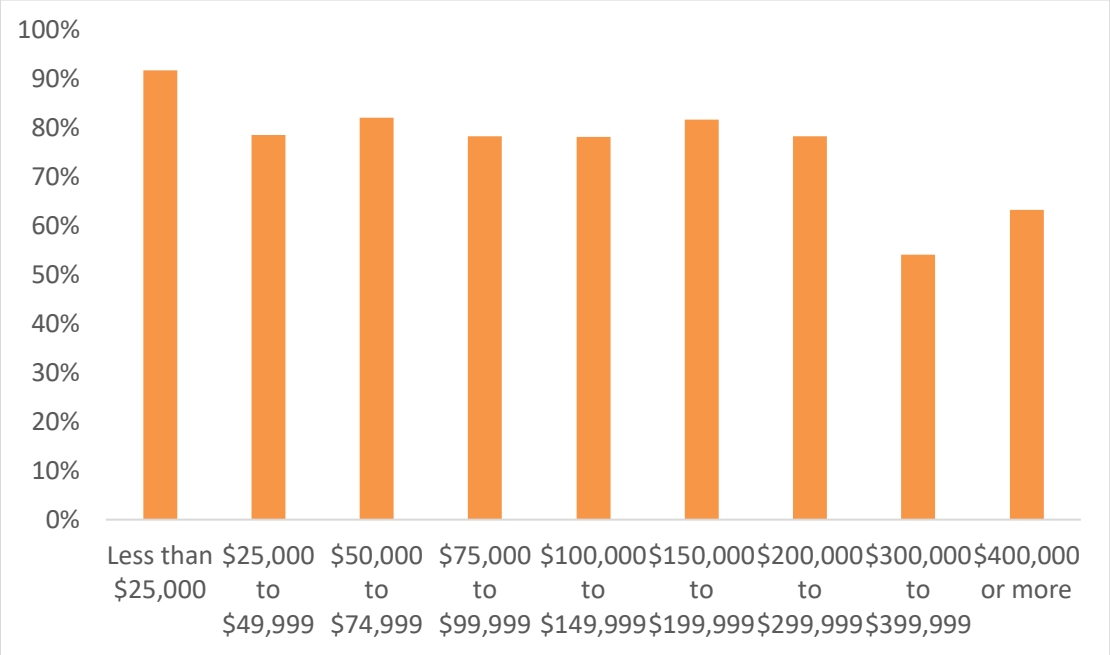
Figure 6. Responses to "How important was the State Drive Clean Rebate in making it possible for you to acquire your electric car?"



N=1742. PHEV and BEV drivers are not significantly different. Results from chi-squared test: F(3.99, 6954.46)= 0.9425 P=0.4380

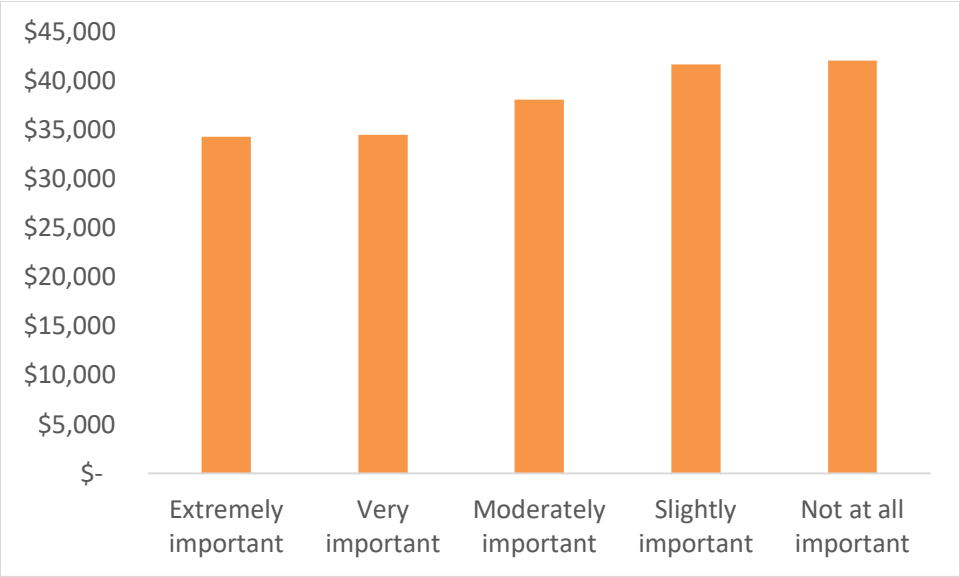
Unsurprisingly, vehicle rebate importance declines with income level (Figure 7) and with the MSRP of the new vehicle (Figure 8).

Figure 7. Percent of Respondents who Stated that the Rebate was "Very Important" or "Extremely Important" by Income Level



N=1433

Figure 8. Average MSRP for Rebated Vehicle by Rebate Importance

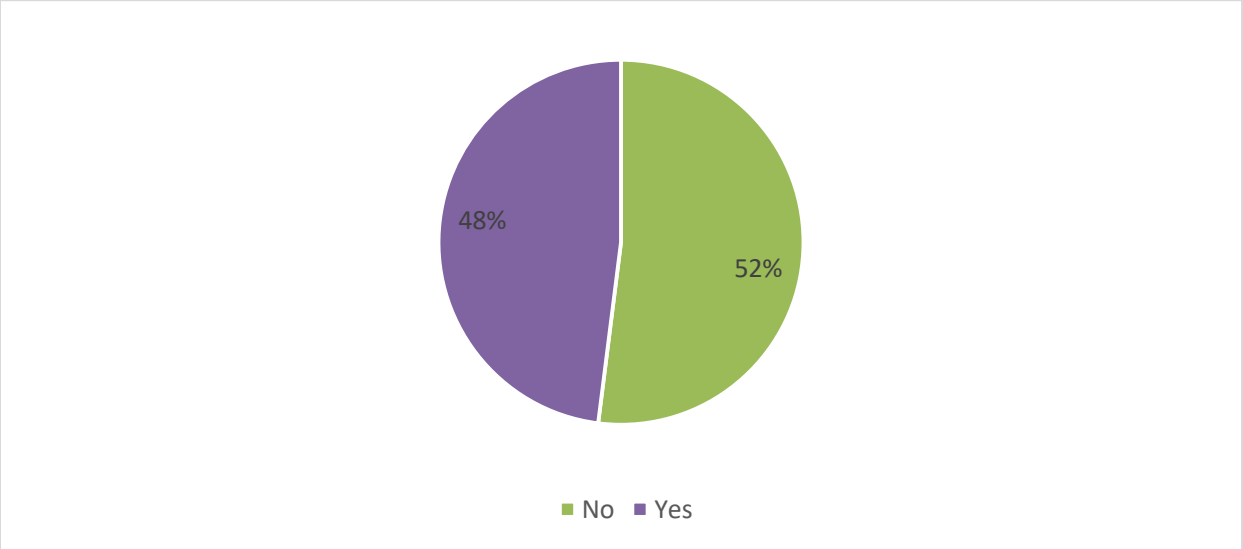


N=1742

Two questions asked about hypothetical purchase decisions in the absence of the rebate (Figures 9 and 10).[3] Approximately half (52%) of respondents indicated that they would not have purchased their electric vehicle without the Drive Clean Rebate.

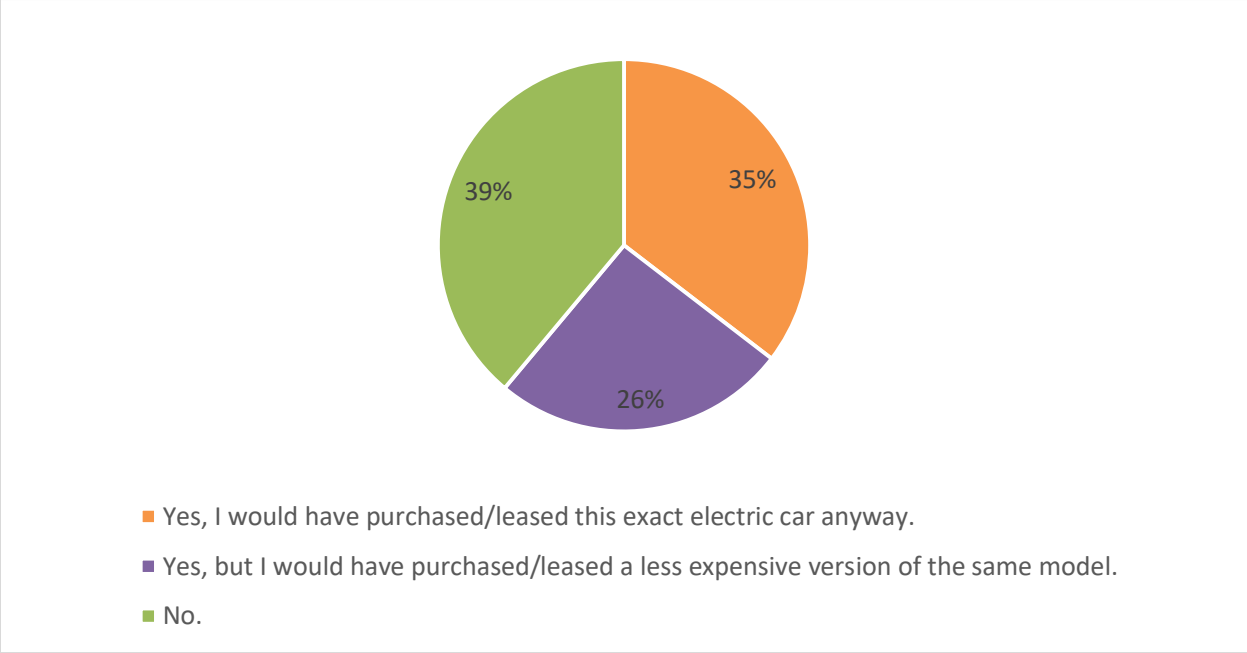
[3] Several respondents answered these two questions inconsistently, and therefore their responses are not included in the results for these two questions. If respondents answered "No" to the question "Would you have purchased/leased your electric car without the State car rebate (Drive Clean Rebate)?" and "Yes, I would have purchased/leased this exact electric car anyway" to the question "If the Drive Clean Rebate were not available for electric cars, would you still have purchased/leased the same car? Please select one statement", or vice versa, they were excluded from the sample. One hundred and six respondents gave inconsistent answers.

Figure 9. Responses to "Would you have purchased/leased your electric car without the State car rebate (Drive Clean Rebate)?"



N=1698. PHEV and BEV drivers are not significantly different. Results of chi-squared test: F(1, 1697)=0.06 P=0.80

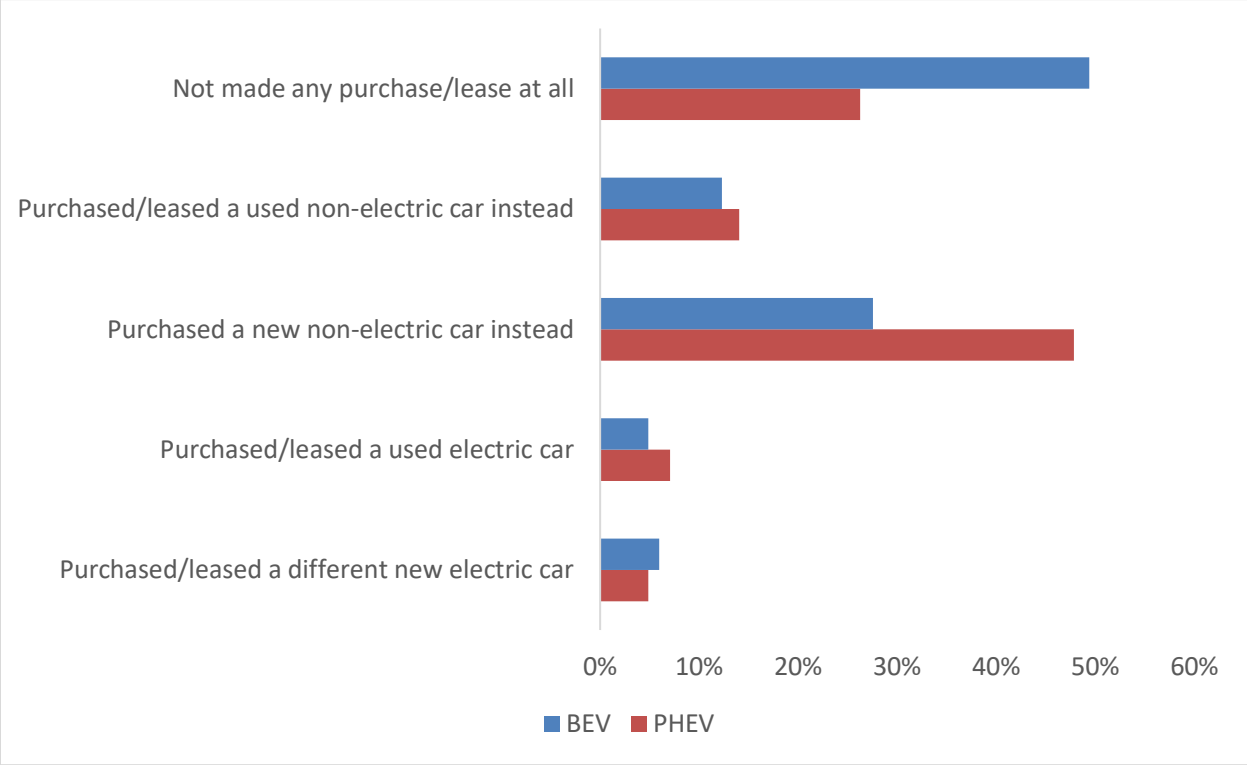
Figure 10. Responses to "If the Drive Clean Rebate were not available for electric cars, would you still have purchased/leased the same car?"



N=1698. The difference between PHEV and BEV drivers is marginally significant. Results of chi-squared test: F(2.00, 3393.91)=2.52 P=0.08

Drivers who answered "No" to the question "If the Drive Clean Rebate were not available for electric cars, what would you most likely have done? Please select one statement." were asked a follow-up question about what purchase they would have made. Figure 11 shows that BEV drivers were most likely to report that they would not have made any purchase at all, while PHEV drivers were most likely to purchase a new non-electric car instead.

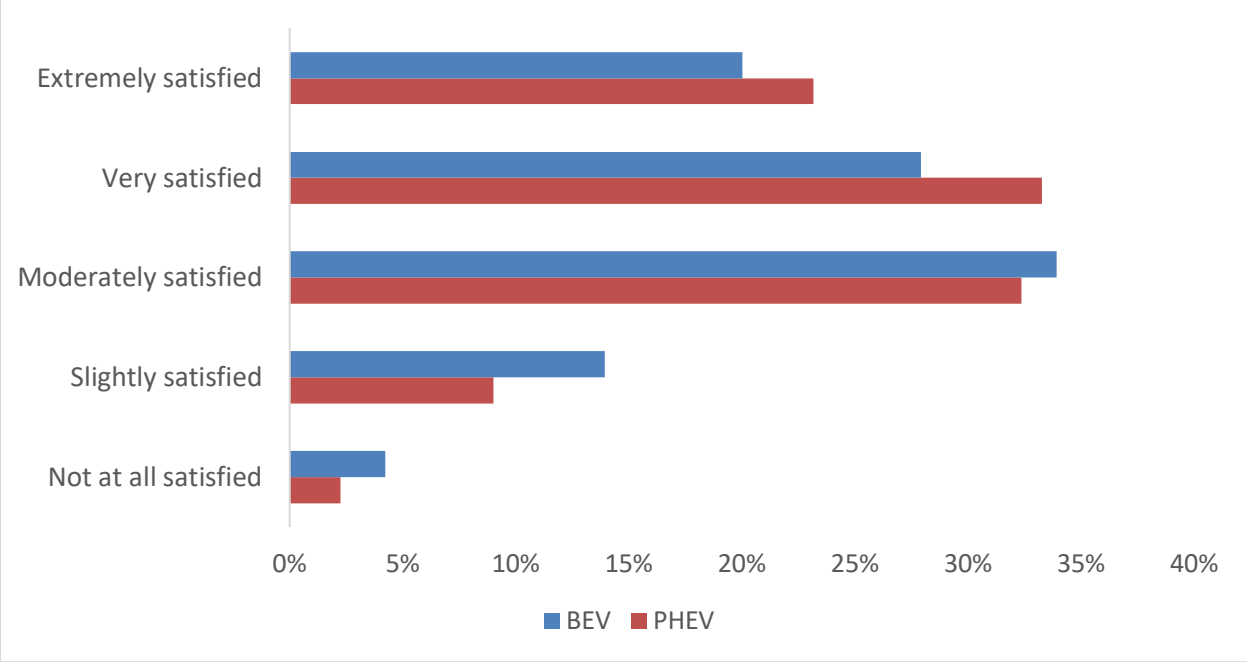
Figure 11. Responses to "If the Drive Clean Rebate were not available for electric cars, what would you most likely have done?"



N=705. PHEV and BEV drivers are significantly different. Results of chi-squared test: F(3.92, 2758.42)=8.9287 P=0.0000

Overall, more than half (54%) of respondents reported being extremely or very satisfied with the amount of the rebate. Figure 12 shows that PHEV drivers reported slightly higher levels of satisfaction than BEV drivers.

Figure 12. Satisfaction with the Amount of the Rebate

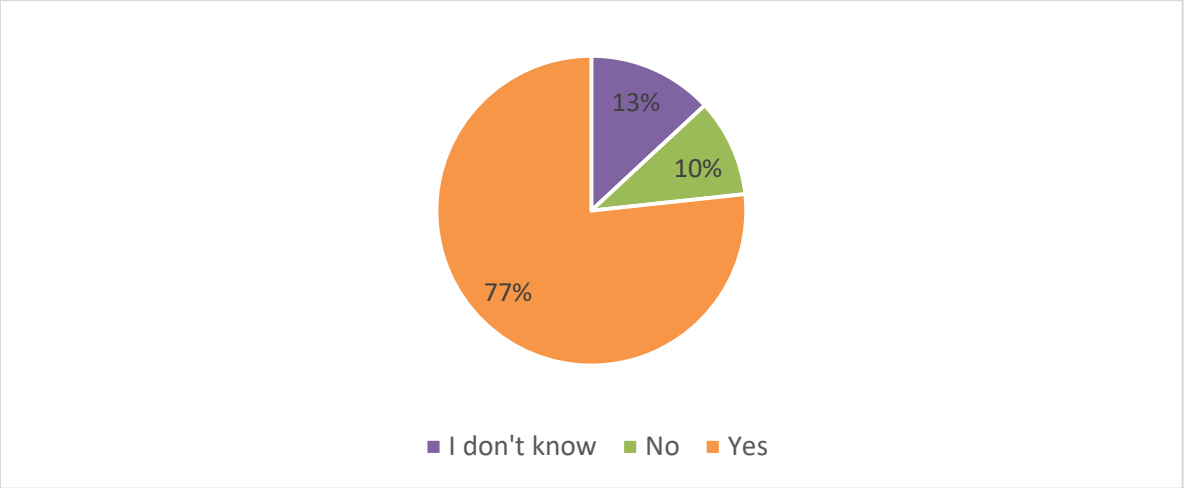


N=1801. PHEV and BEV drivers were significantly different. Results of chi-squared test: F(4.96, 8936.65)=3.33 P=0.01

2.4 Dealership Experience

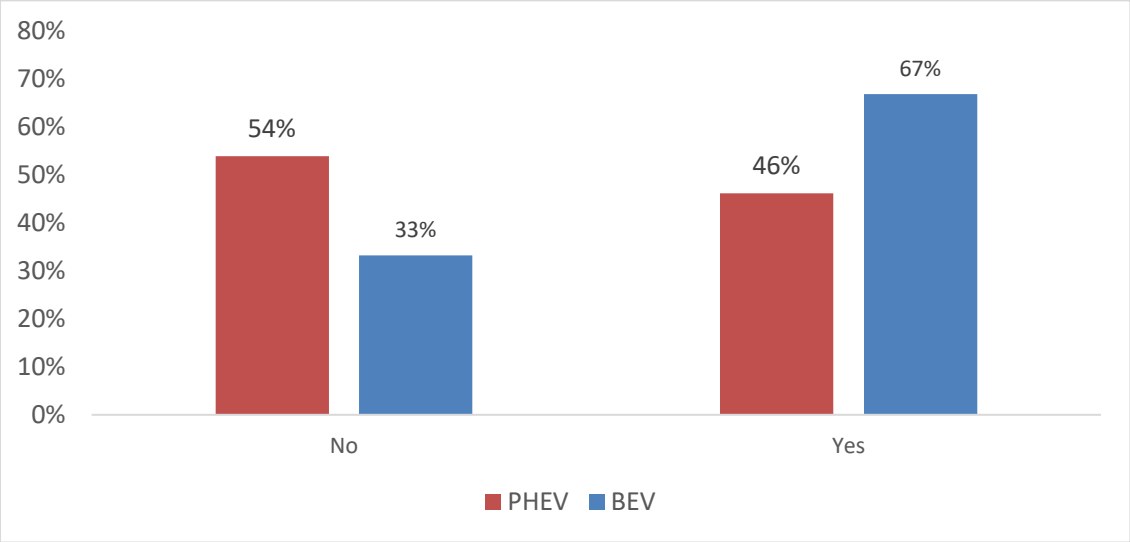
Dealers appear to be broadly aware of the Drive Clean Rebate, with 77% of respondents reporting that their dealer was aware of the rebate when the respondent first visited them (Figure 13). Drivers had lower initial awareness of the rebate: 52% of respondents reported being aware of the rebate before visiting a dealership (Figure 14). BEV drivers were more likely to be aware of the rebate than PHEV drivers.

Figure 13. Responses to "Did your dealer know about the Drive Clean Rebate when you first went to visit them?"



N=1804. PHEV and BEV drivers are not significantly different. Results of chi-squared test: F(2.00, 3603.97)=0.7579 P=0.4687

Figure 14. Responses to "Had you heard about the Drive Clean Rebate before you visited a dealership?"

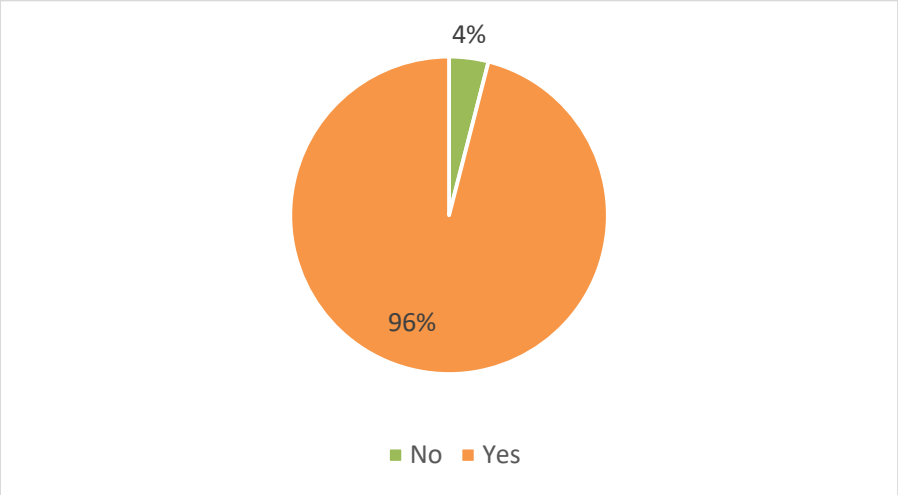


N=1807. PHEV and BEV drivers are significantly different. Results of chi-squared test: F(1, 1806)=50.57 P=0.00

2.5 Charging

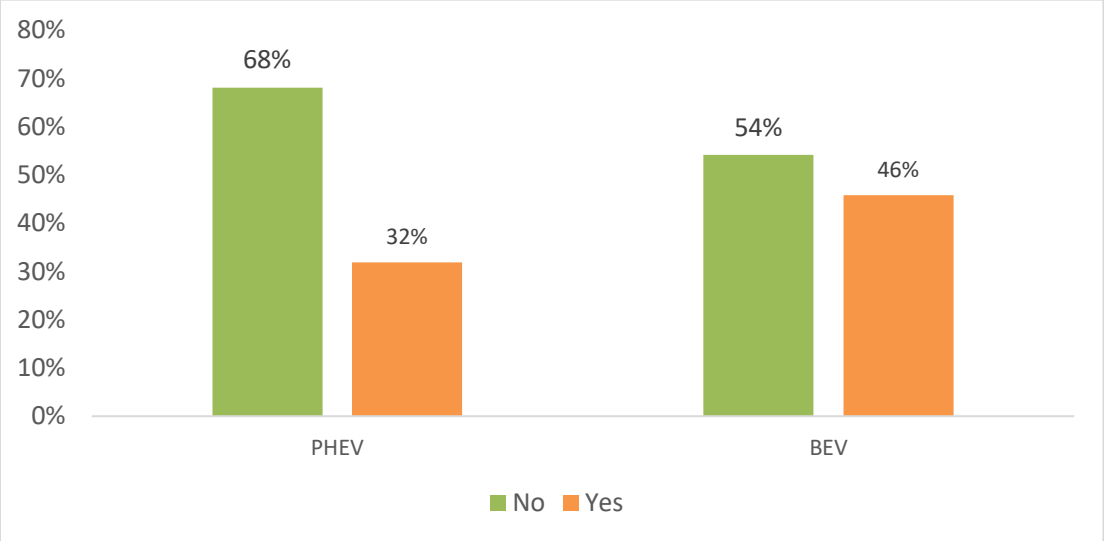
Figure 15 shows that almost all respondents have access to charging at or near their home. Regarding charging access at or near home, PHEV and BEV drivers were not significantly different. However, PHEV and BEV drivers differed significantly in terms of charging access at or near work. Figure 16 shows that BEV drivers were much more likely to report having access to charging at or near their work.

Figure 15. Access to Charging at or near Home



N=1808. PHEV and BEV drivers are not significantly different. Results of chi-squared test: F(1, 1807)=1.86 P=0.17

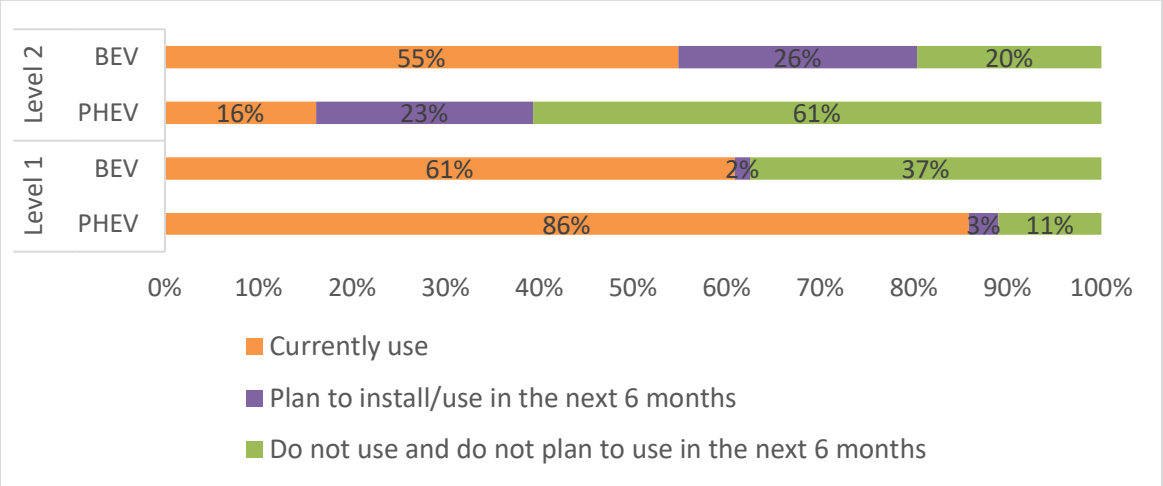
Figure 16. Access to Charging at or near Work



N=1808. PHEV and BEV drivers are significantly different. Results of chi-squared test: F(1, 1807)=26.93 P = 0.00

Respondents were asked about whether they currently use Level 1 or Level 2 charging at home, and whether they plan to do so in the next six months. Figure 17 shows that BEV drivers are almost equally likely to report using Level 1 or Level 2 charging, while PHEV drivers are over five times more likely to use Level 1 than Level 2 charging at home. Approximately 25% of all drivers plan to use Level 2 charging within the next six months.

Figure 17. How Respondents Charge at Home

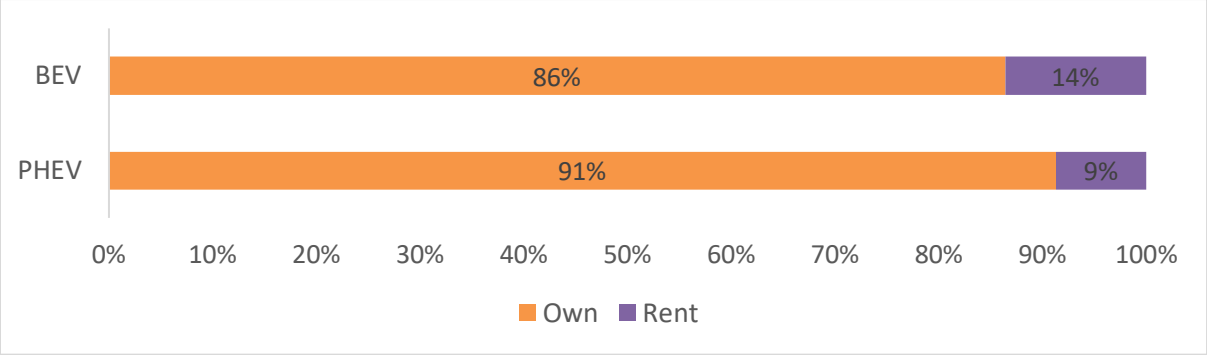


N=1524 for 120V; N=1570 for 240V

2.6 Demographics

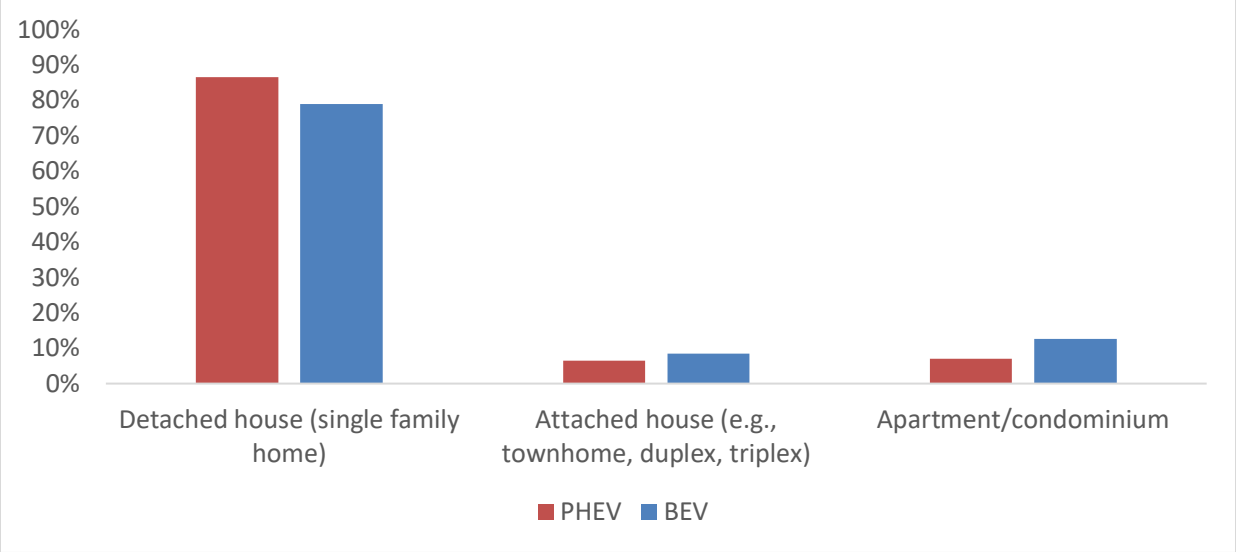
Figure 18 shows that a large majority of respondents are homeowners. The overall rate of home ownership is 90%, but BEV drivers are more likely to be renters. Figure 19 shows that most (84%) electric car adopters live in detached houses.

Figure 18. Responses to "Do you own or rent your residence?"



N=1808. PHEV and BEV drivers are significantly different. Results from chi-squared test: F(1.96, 3534.18)=3.66 P=0.03

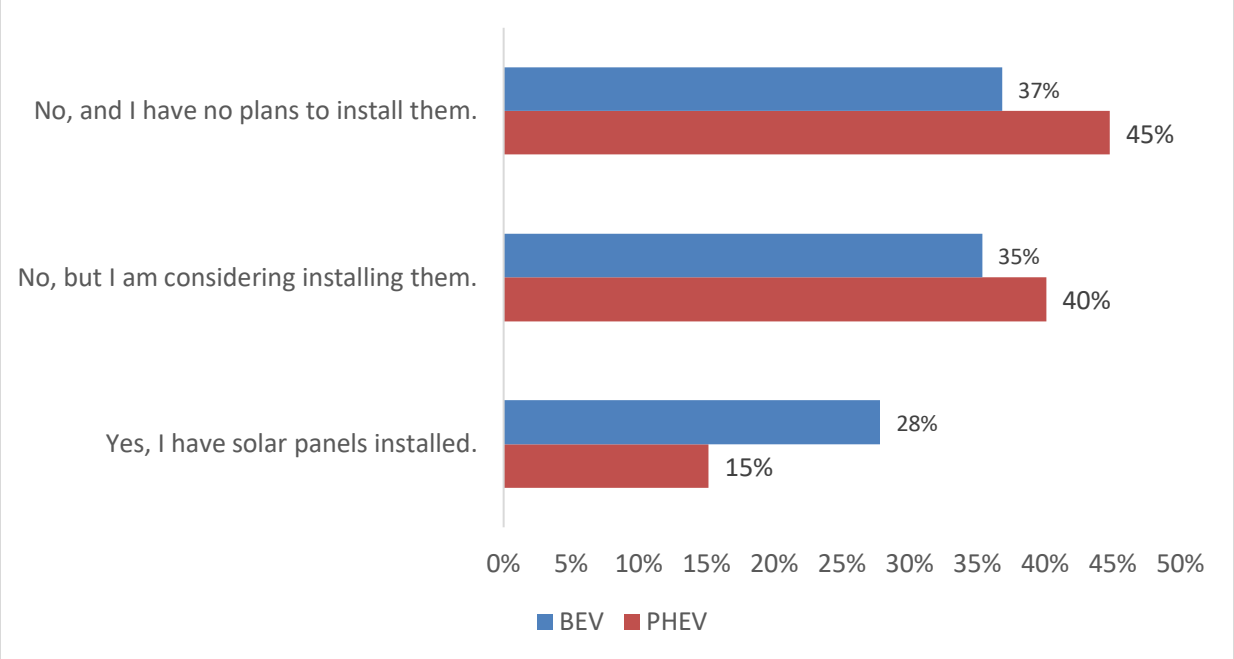
Figure 19. Residence Types



N=1808. PHEV and BEV drivers are significantly different. Results of chi-squared test: F(3.80, 6871.43)=3.55 P=0.01

Adoption of solar panels is at 19% overall, with BEV drivers almost twice as likely as PHEV drivers to have solar panels installed at their residence (Figure 20).

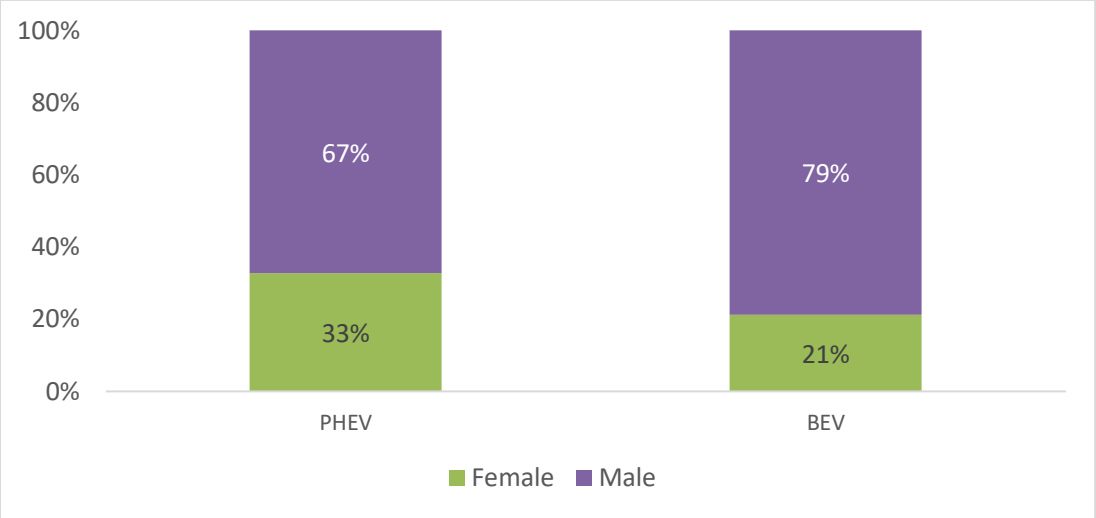
Figure 20. Responses to "Do you have solar panels at your residence?"



N=1806. PHEV and BEV drivers are significantly different. Results of chi-squared test: F(1.98, 3576.35)=11.60 P=0.00

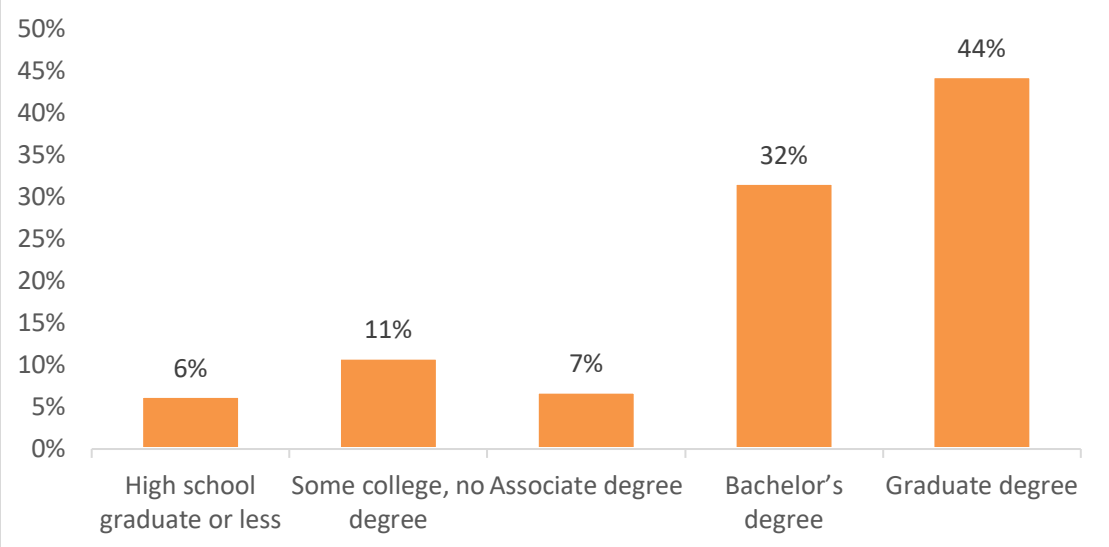
Respondents are 70% male, with females making up a larger portion of PHEV drivers than BEV drivers (Figure 21). The education level of respondents is high, with 76% having a bachelor's or graduate degree, and is not significantly different between PHEV and BEV drivers (Figure 22). Figures 23 and 24 show that on average BEV drivers are younger and have higher incomes than PHEV drivers. Eighty-two percent of respondents indicated they were white (Figure 25).

Figure 21. Gender



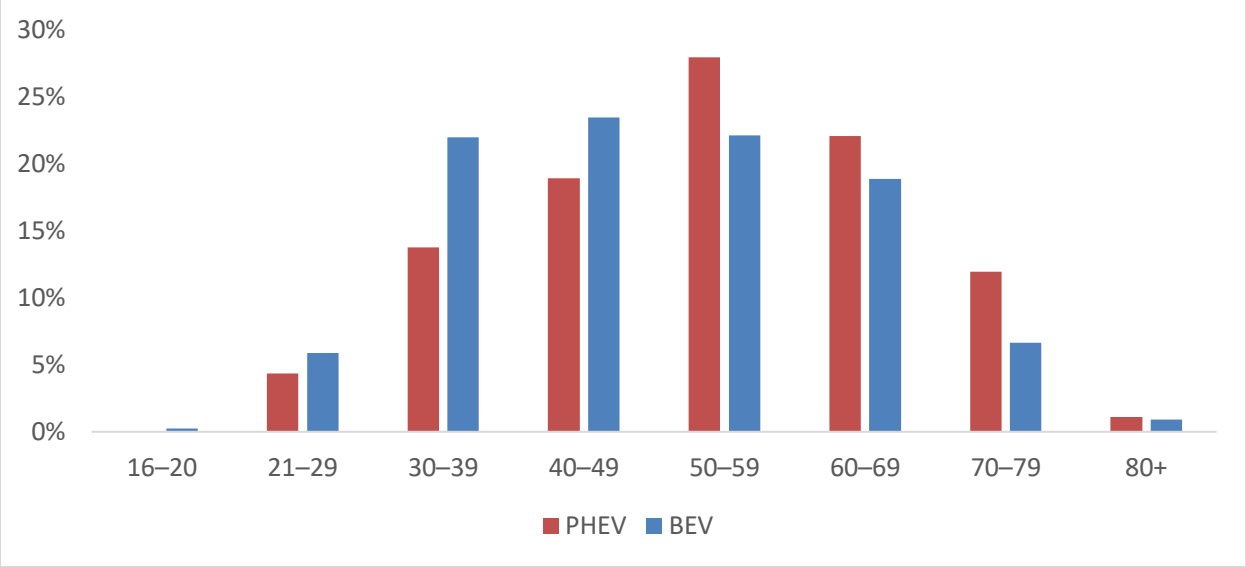
N=1808. PHEV and BEV drivers are significantly different. Results of chi-squared test: F(1.98, 3584.21)=10.08 P=0.00

Figure 22. Highest Level of Education Completed



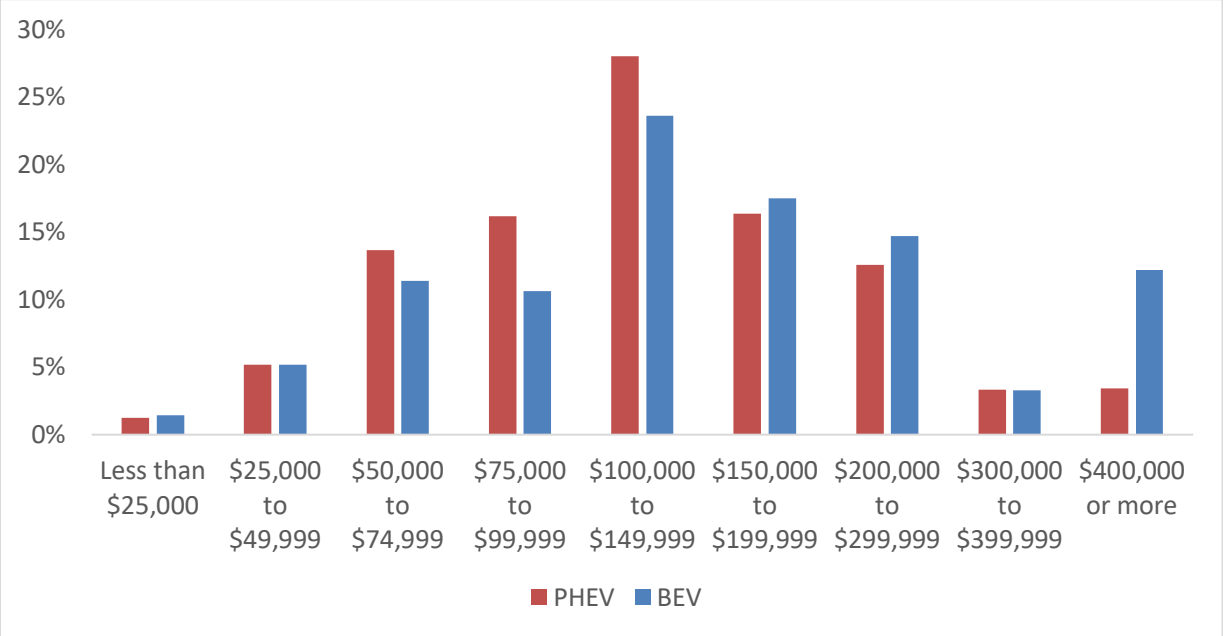
N=1808. PHEV and BEV drivers are not significantly different. Results from chi-squared test: F(4.97, 8972.73)= 1.15 P=0.33

Figure 23. Age



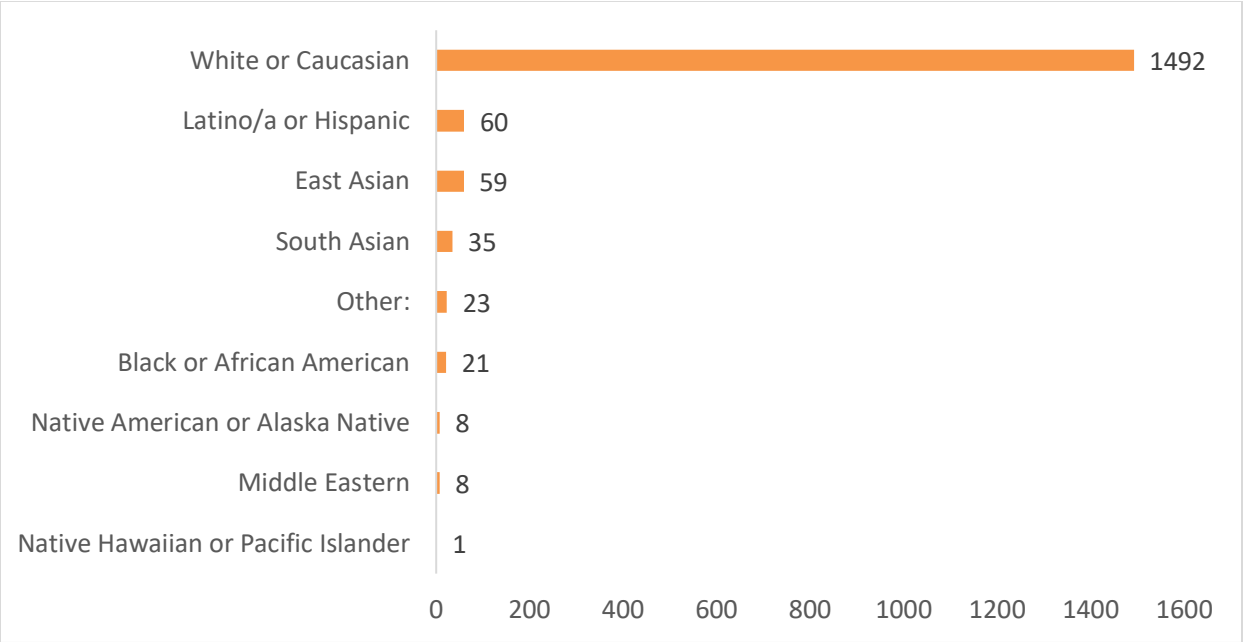
N=1808. PHEV and BEV drivers are significantly different. Results from chi-squared test: F(7.93, 14324.91)=4.47 P=0.00

Figure 24. Current Annual Gross Household Income from all Sources (i.e., before Taxes)



N=1808. PHEV and BEV drivers are significantly different. Results of chi-squared test: F(8.88, 16042.59)=4.9822 P=0.0000

Figure 25. Racial/Ethnic Identity



N=1707. Multiple responses were allowed.

Appendix: Adoption Survey Questionnaire

Introduction

Welcome to NYSERDA's Drive Clean Rebate "Electric Car Adoption Survey."

Congratulations on your new electric car! Please take a few moments to complete the following survey to help our program best support the electric car market in New York.

Your participation in the survey is voluntary. However, your input is valuable for enhancing the electric car experience for all New Yorkers, and it is important that you try to answer all of the questions. The information you provide will be **kept private** to the extent permitted by law. The analysis will only use summary level data; no individual respondents will be identified.

The survey will take about 10–15 minutes. Your link is personalized and cannot be shared with others. This means that your progress will be saved, so you can exit and return at a more convenient time to complete the survey.

If you have any questions about this research project or if you experience any technical difficulties, you may contact the Center for Sustainable Energy (CSE), the Drive Clean Rebate Program Administrator for NYSERDA, at:

Phone: (866) 595-7917
Email: NYDriveClean@energycenter.org

Personal Car

Page exit logic: Skip / Disqualify Logic**IF:** Question "According to our records, you received a rebate for a [contact("nymake")] [contact("nymodel")]. Is this car used primarily for personal use?" #1 is one of the following answers ("No, this car is primarily for commercial/organizational use") **THEN:** Jump to page 15 - Disqualification (commercial vehicle)

Page exit logic: Skip / Disqualify Logic**IF:** Question "According to our records, you received a rebate for a [contact("nymake")] [contact("nymodel")]. Is this car used primarily for personal use?" #1 is one of the following answers ("My rebate is for a different car") **THEN:** Jump to page 16 - Disqualification (different vehicle)

1) According to our records, you received a rebate for a [contact("nymake")] [contact("nymodel")]. Is this car used primarily for personal use?*

( ) Yes

( ) No, this car is primarily for commercial/organizational use

( ) My rebate is for a different car

Primary Driver

Page exit logic: Skip / Disqualify Logic**IF:** Question "Are you the primary driver of this [contact("nymake")] [contact("nymodel")]?" #2 is one of the following answers ("No") **THEN:** Jump to page 17 - Disqualification (primary driver)

Logic: Show/hide trigger exists.

2) Are you the primary driver of this [contact("nymake")] [contact("nymodel")]?*

( ) Yes

( ) No

Electric Car Definition

In this survey, we are going to ask you about your experience with your **electric car**. By car, we mean passenger cars, SUVs, or light duty trucks. Your car might:

- run entirely on electricity from plugging the car in (**all-battery electric car**),
- use a combination of electricity from plugging in and gasoline (**plug-in hybrid electric car**), or
- use hydrogen as fuel (**hydrogen fuel-cell electric car**).

When we refer to **electric cars,** we are referring to all of these.

Electric Car Purchasing Decisions

Logic: Show/hide trigger exists. Hidden unless: Question "Are you the primary driver of this [contact("nymake")] [contact("nymodel")]?" #2 is one of the following answers ("Yes")

3) Which of the following best describes your new electric car purchase or lease?

( ) It replaces (or will replace) another household car.

( ) It adds to the other cars in my household's fleet.

( ) It is my household's first-ever car.

( ) My household has had cars in the past, but did not have one when we purchased/leased this electric car.

Logic: Hidden unless: Question "Which of the following best describes your new electric car purchase or lease?" #3 is one of the following answers ("It replaces (or will replace) another household car.")

4) Please describe your previous car that you replaced (or plan to replace) with your new electric car.

Make:

( ) Acura

( ) Audi

( ) BMW

( ) Buick

( ) Cadillac

( ) Chevrolet

( ) Chrysler

( ) Dodge

( ) FIAT

( ) Ford

( ) GMC

( ) Honda

( ) Hyundai

( ) Infiniti

( ) Jaguar

( ) Jeep

( ) Kia

( ) Land Rover / Range Rover

( ) Lexus

( ) Lincoln

( ) Mazda

( ) Mercedes-Benz

( ) Mercury

( ) MINI

( ) Mitsubishi

( ) Nissan

( ) Oldsmobile

( ) Pontiac

( ) Porsche

( ) Saab

( ) Saturn

( ) Scion

( ) smart

( ) Subaru

( ) Suzuki

( ) Tesla

( ) Toyota

( ) Volkswagen

( ) Volvo

( ) Other: _____*

Model: _____

Model Year:

( ) 2017

( ) 2016

( ) 2015

( ) 2014

( ) 2013

( ) 2012

( ) 2011

( ) 2010

( ) 2009

( ) 2008

( ) 2007

( ) 2006

( ) 2005

( ) 2004

( ) 2003

( ) 2002

( ) 2001

( ) 2000

( ) 1999 or earlier

Technology Type:

( ) Gasoline

( ) Conventional hybrid (fueled with gasoline only)

( ) Plug-in hybrid electric car (recharged with electricity and/or fueled with gasoline)

( ) All-battery electric car (recharged with electricity only)

( ) Hydrogen fuel-cell electric car

( ) Diesel

( ) Compressed natural gas

( ) Flex-fuel (E85 ethanol)

( ) Other alternative fuel

Electric Car Purchasing Decisions (cont.)

Logic: Show/hide trigger exists.

5) Including your new electric car, how many cars does your household own or lease in total? [please exclude motorcycles, ATVs, RVs, etc. or any cars not currently registered]

( ) 1

( ) 2

( ) 3

( ) 4 or more

Logic: Hidden unless: Question "Including your new electric car, how many cars does your household own or lease in total? [please exclude motorcycles, ATVs, RVs, etc. or any cars not currently registered]" #5 is one of the following answers ("2","3","4 or more")

6) Other than your rebated electric car, please describe the car in your household that you will use most often.

Car Type:

( ) Compact Car

( ) Midsize Car

( ) Fullsize Car

( ) Small/midsize SUV

( ) Fullsize SUV

( ) Pickup truck

( ) Minivan

Technology Type:

( ) Gasoline

( ) Conventional hybrid (fueled with gasoline only)

( ) Plug-in hybrid electric car (recharged with electricity and/or fueled with gasoline)

( ) All-battery electric car (recharged with electricity only)

( ) Hydrogen fuel-cell electric car

( ) Diesel

( ) Compressed natural gas

( ) Flex-fuel (E85 ethanol)

( ) Other alternative fuel

7) Which of the following statements best describes your interest in acquiring an electric car when you started your search for a new car? Please select one statement.

( ) I did not know electric cars existed.

( ) I knew electric cars existed, but had no interest in one.

( ) I had some interest in an electric car.

( ) I was very interested in an electric car.

8) Is this the first electric car you have ever purchased or leased?

( ) Yes

( ) No

Electric Car Purchasing Decisions

9) On a scale of 1 to 5 (with 1 representing "Not at all important" and 5 representing "Extremely important"), please describe how important each of the following factors was in your decision to acquire an electric car.

	Not at all important (1)	**Slightly important (2)**	**Moderately important (3)**	**Very important (4)**	**Extremely important (5)**
Saving money on fuel costs	( )	( )	( )	( )	( )
Saving money overall	( )	( )	( )	( )	( )
Reducing environmental impacts	( )	( )	( )	( )	( )
Carpool or High Occupancy	( )	( )	( )	( )	( )

Vehicle (HOV) lane access					
Increased energy independence	( )	( )	( )	( )	( )
Convenience of charging	( )	( )	( )	( )	( )
Speed of car refueling	( )	( )	( )	( )	( )
Car performance	( )	( )	( )	( )	( )
Car styling, finish, and comfort	( )	( )	( )	( )	( )
A desire for the newest technology	( )	( )	( )	( )	( )

Logic: Hidden unless: nyfueltype is exactly equal to "Electric"

10) Which of these factors was the **most important** reason why you decided to acquire an electric car? Please select one statement.

( ) Saving money on fuel costs

( ) Saving money overall

( ) Reducing environmental impacts

( ) Carpool or High Occupancy Vehicle (HOV) lane access

( ) Increased energy independence

( ) Convenience of charging

( ) Car performance

( ) Car styling, finish, and comfort

( ) A desire for the newest technology

Logic: Hidden unless: nyfueltype is exactly equal to "Hydrogen"

11) Which of these factors was the **most important** reason why you decided to acquire an electric car? Please select one statement.

( ) Saving money on fuel costs

( ) Saving money overall

( ) Reducing environmental impacts

( ) Carpool or High Occupancy Vehicle (HOV) lane access

( ) Increased energy independence

( ) Speed of car refueling

( ) Car performance

( ) Car styling, finish, and comfort

( ) A desire for the newest technology

12) On a scale of 1 to 5 (with 1 representing "Not at all important" and 5 representing "Extremely important"), please describe how important each of the following factors was in **making it possible** for you to acquire your electric car.

	Not at all important (1)	**Slightly important (2)**	**Moderately important (3)**	**Very important (4)**	**Extremely important (5)**	***Not applicable***
State car rebate (Drive Clean Rebate)	( )	( )	( )	( )	( )	( )
Federal tax incentives	( )	( )	( )	( )	( )	( )
Green Pass or similar toll/E-ZPass discount	( )	( )	( )	( )	( )	( )
Manufacturer or dealer incentives (e.g. low	( )	( )	( )	( )	( )	( )

interest rate, cash back)						
Parking incentives (employer, business, or government)	( )	( )	( )	( )	( )	( )
Special electricity rates for charging at home	( )	( )	( )	( )	( )	( )
Free charging away from home	( )	( )	( )	( )	( )	( )
Free hydrogen fueling	( )	( )	( )	( )	( )	( )

Program Performance

13) Would you have purchased/leased your electric car without the State car rebate (Drive Clean Rebate)?

( ) Yes

( ) No

14) If the Drive Clean Rebate were not available for electric cars, would you still have purchased/leased the same car? Please select one statement.

( ) Yes, I would have purchased/leased this exact electric car anyway.

( ) Yes, but I would have purchased/leased a less expensive version of the same model.

( ) No

Logic: Hidden unless: Question "If the Drive Clean Rebate were not available for electric cars, would you still have purchased/leased the same car? Please select one statement. #14 is one of the following answers ("No")

15) If the Drive Clean Rebate were not available for electric cars, what would you most likely have done? Please select one statement.

( ) Purchased/leased a different new electric car

( ) Purchased/leased a used electric car

( ) Purchased a new non-electric car instead

( ) Purchased/leased a used non-electric car instead

( ) Not made any purchase/lease at all

16) Had you heard about the Drive Clean Rebate before you visited a dealership?

( ) Yes

( ) No

Program Performance (cont.)

17) On a scale of 1 to 5 (with 1 representing "Not at all satisfied" and 5 representing "Extremely satisfied"), please describe how satisfied you were with each of the following aspects of the Drive Clean Rebate.

	Not at all satisfied (1)	**Slightly satisfied (2)**	**Moderately satisfied (3)**	**Very satisfied (4)**	**Extremely satisfied (5)**	***Not applicable***
Promotion	( )	( )	( )	( )	( )	( )
Website	( )	( )	( )	( )	( )	( )
Dealer familiarit	( )	( )	( )	( )	( )	( )

y with the rebate						
Amount of the rebate	( )	( )	( )	( )	( )	( )

Dealership Experience

The following questions will ask about your experience with your electric car dealer. If you visited more than one dealer, please answer the following questions for the dealer where you acquired your electric car.

18) How many electric cars did you see on your dealer's lot? [please provide your best estimate]

( ) None; electric cars had to be ordered

( ) 1–2

( ) 3–5

( ) 6–10

( ) 11–20

( ) More than 20

19) Did your dealer know about the Drive Clean Rebate when you first went to visit them?

( ) Yes

( ) No

( ) I don’t know

20) On a scale of 1 to 5 (with 1 representing "Not at all knowledgeable" and 5 representing "Extremely knowledgeable"), please describe how knowledgeable your dealer was about the following topics.

	Not at all knowledgeable (1)	**Slightly knowledgeable (2)**	**Moderately Knowledgeable (3)**	**Very knowledgeable (4)**	***Extremely knowledgeable (5)***	***I don't recall***	***Did not discuss***
Electric cars in general	( )	( )	( )	( )	()	( )	( )
Total cost of ownership	( )	( )	( )	( )	()	( )	( )
Government financial incentives	( )	( )	( )	( )	()	( )	( )
Other incentives/perks	( )	( )	( )	( )	()	( )	( )
Car performance	( )	( )	( )	( )	()	( )	( )
Environmental benefits of electric cars	( )	( )	( )	( )	()	( )	( )

Electricity rates to charge at home	( )	( )	( )	( )		( )	( )
Home charging (outlet/equipment options, installation costs, etc.)	( )	( )	( )	( )		( )	( )
Away-from-home charging (workplace, public)	( )	( )	( )	( )		( )	( )
Current availability of hydrogen fueling stations	( )	( )	( )	( )		( )	( )
Future plans for hydrogen fueling stations in New York	( )	( )	( )	( )		( )	( )
Hydrogen safety	( )	( )	( )	( )		( )	( )
Hydrogen refueling process	( )	( )	( )	( )		( )	( )

21) Whether or not these were offered to you, which of these services would be valuable for a dealer to provide? [select all that apply]

[ ] The option to have an extended test drive or loaner electric car before buying/leasing

[ ] An electric car specialist to answer questions about cars

[ ] Facilitating the installation of a home charging station

[ ] Electric car tutorials or workshops for new owners

[ ] Free charging at dealership

[ ] Free hydrogen fueling at dealership

[ ] Other, please specify:: _____*

[ ] None of the above

Charging

Logic: Hidden unless: nyfueltype is exactly equal to "Electric"

22) Do you have access to charging at the following locations?

	Yes, and I can charge for free	**Yes, but I must pay to charge**	**No**	**I don't know**	***Not applicable***
At your home	( )	( )	( )	( )	( )
Near your home	( )	( )	( )	( )	( )
At your workplace	( )	( )	( )	( )	( )
Near your workplace	( )	( )	( )	( )	( )

Logic: Hidden unless: nyfueltype is exactly equal to "Hydrogen"

23) Do you have access to fueling at the following locations?

	Yes, and I can refuel for free	Yes, but I must pay to refuel	No	I don't know	*Not applicable*
Near your home	( )	( )	( )	( )	( )
Near your workplace	( )	( )	( )	( )	( )
On the way to/from your workplace	( )	( )	( )	( )	( )

Logic: Hidden unless: nyfueltype is exactly equal to "Electric"

24) Please indicate how you will charge **at home**:

	Currently use	Plan to install/use in the next 6 months	Do not use and do not plan to use in the next 6 months
120 volt / Level 1	[ ]	[ ]	[ ]
240 volt / Level 2	[ ]	[ ]	[ ]

Household and Demographic Characteristics

In this final section, we will be asking some questions about you and your household so we can learn more about the characteristics of electric car adopters in New York. The information you provide will be kept private to the extent permitted by law. The analysis will only use summary level data; no individual respondents will be identified.

25) Do you own or rent your residence?*

( ) Own

( ) Rent

( ) Prefer not to answer

26) What type of residence do you live in?*

( ) Detached house (single family home)

( ) Attached house (e.g., townhome, duplex, triplex)

( ) Apartment/condominium

( ) Other, please specify: _____*

( ) Prefer not to answer

27) Do you have solar panels at your residence?

( ) Yes, I have solar panels installed.

( ) No, but I am considering installing them.

( ) No, and I have no plans to install them.

28) How many people live in your household, including yourself?

( ) 1

( ) 2

( ) 3

( ) 4

( ) 5

( ) 6

( ) 7

( ) 8

( ) 9 or more

29) How many licensed drivers live in your household, including yourself?

( ) 1

( ) 2

( ) 3

( ) 4

( ) 5

( ) 6

( ) 7

( ) 8

( ) 9 or more

Household and Demographic Characteristics

30) What is your age?*

( ) 16–20

( ) 21–29

( ) 30–39

( ) 40–49

( ) 50–59

( ) 60–69

( ) 70–79

( ) 80+

( ) Prefer not to answer

31) How do you prefer to describe your gender?*

( ) Female

( ) Male

( ) Prefer not to answer

32) What is the highest level of education you have completed?*

( ) High school graduate or less

( ) Some college, no degree

( ) Associate degree

( ) Bachelor's degree

( ) Graduate degree

( ) Prefer not to answer

33) What is your current annual gross household income from all sources (i.e. before taxes)?*

( ) Less than $25,000

( ) $25,000 to $49,999

( ) $50,000 to $74,999

( ) $75,000 to $99,999

( ) $100,000 to $149,999

( ) $150,000 to $199,999

( ) $200,000 to $299,999

( ) $300,000 to $399,999

( ) $400,000 or more

( ) Prefer not to answer

34) How do you prefer to describe your racial/ethnic identity? [select all that apply]*

[ ] Black or African American

[ ] East Asian

[ ] Latino/a or Hispanic

[ ] Middle Eastern

[ ] Native American or Alaska Native

[ ] Native Hawaiian or Pacific Islander

[ ] South Asian

[ ] White or Caucasian

[ ] Other: _____*

[ ] Prefer not to answer

Other Comments

Please be sure to click "Submit" at the bottom of the page to complete the survey.

35) What has been the best part of your experience purchasing or leasing an electric car?

_____

_____

_____

_____

36) Please share any feedback about how the Drive Clean Rebate could be improved in the box below.

_____

_____

_____

_____

37) Please share any additional comments about your electric car experience or this survey in the box below.

_____

_____

_____

_____

Page entry logic: This page will show when: Question "According to our records, you received a rebate for a [contact("nymake")] [contact("nymodel")]. Is this car used primarily for personal use?" #1 is one of the following answers ("No, this car is primarily for commercial/organizational use")

Disqualification (commercial vehicle)

Unfortunately, you do not qualify for this survey at this time. You indicated that the car associated with your survey invitation is not being used primarily as a private car.

However, we welcome you to provide any feedback you have about the Drive Clean Rebate in the comment box below.

If you have any questions, please email NYDriveClean@energycenter.org. We thank you for your time and appreciate your interest.

38) Please share any comments in the box below.

_____

_____

_____

_____

Page entry logic: This page will show when: Question "According to our records, you received a rebate for a [contact("nymake")] [contact("nymodel")]. Is this car used primarily for personal use?" #1 is one of the following answers ("My rebate is for a different car")

Disqualification (different vehicle)

Unfortunately, you do not qualify for this survey at this time. You indicated that the car associated with your survey invitation is a different car than the one for which you are receiving this rebate.

However, we welcome you to provide any feedback you have about the Drive Clean Rebate in the comment box below.

If you wish to take the survey for another private car receiving a rebate, please look for the survey invitation associated with that car, or email NYDriveClean@energycenter.org with any questions.

39) Please share any comments in the box below.

_____

_____

_____

_____

Page entry logic: This page will show when: Question "Are you the primary driver of this [contact("nymake")] [contact("nymodel")]?*" #1 is one of the following answers ("No")

Disqualification (primary driver)

Unfortunately, you do not qualify for this survey at this time. You indicated that you are not the primary driver of the rebated car.

However, we welcome you to provide any feedback you have about the Drive Clean Rebate in the comment box below.

If you have any questions, please email NYDriveClean@energycenter.org. We thank you for your time and appreciate your interest.

38) Please share any comments in the box below.

_____

_____

_____

_____

Thank You!

Thank you for your participation in this survey. Your feedback is greatly appreciated and will help inform and support the development of electric car markets in New York. If you have any questions about this research project, you may contact the Center for Sustainable Energy (CSE), the Drive Clean Rebate Program Administrator for NYSERDA, at:

Phone: (866) 595-7917
Email: NYDriveClean@energycenter.org

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