NYSERDA Drive Clean Rebate Ownership Survey - 2024 Results

Final Report

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Abstract

This report summarizes the results of a survey collected from individual rebate recipients approximately one year after acquiring an electric car and participating in the NYSERDA Drive Clean Rebate Program. The program offered point-of-sale rebates on new car purchases and leases for eligible electric cars. Results reported represent rebate recipients who acquired their plug-in hybrid electric vehicle (PHEV) or battery electric vehicle (BEV) between January 1, 2024 and December 31, 2024.

Survey results are grouped by technology type, i.e., PHEVs and BEVs. Results summarize demographics that include homeownership, residence type, gender identity, age, income and racial/ethnic identity. Results also summarize electric car driving patterns, charging behaviors, electric car ownership challenges, and trends within disadvantaged community designations.

Results from the Ownership Survey showed high levels of satisfaction with owning an electric car and high likelihood of recommending electric car ownership to others. The most reported concerns were vehicle range limitations, charging infrastructure, and speed of charging. BEV respondents were charging their cars at home less frequently and were more likely to use public chargers compared to PHEV respondents, an ongoing trend observed from prior Ownership Survey results.

Keywords

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

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Acronyms and Abbreviations

BEV	battery electric vehicle
CSE	Center for Sustainable Energy
DAC	disadvantaged community
NYSERDA	New York State Energy Research and Development Authority
PHEV	plug-in hybrid electric vehicle

Executive Summary

NYSERDA's Drive Clean Rebate Program provides point-of-sale rebates to consumers who purchase or lease eligible new electric cars, including plug-in hybrid (PHEVs) and battery electric vehicles (BEVs). The program launched in March 2017, administered by the Center for Sustainable Energy (CSE). Individual participants are invited to take an Ownership Survey approximately one year after acquiring their electric car. The survey focuses on the ownership experience to understand the aspects that make electric car ownership attractive.

This report summarizes findings from 4,869 survey responses representing 45,958 participants (10.6% response rate) who purchased or leased a BEV or PHEV between January 1, 2024 and December 31, 2024. To account for differences in response rates and to better represent the larger population of individual participants, the survey data were weighted; key findings include the following:

- Respondents have driven an average[1] of 10,097 miles for PHEVs and 10,674 miles for BEVs.
- Typical vehicle uses[2] include running errands (90%) and commuting (70%).
- Respondents are satisfied with their electric cars:
  - 81% are "very" or "extremely" satisfied with their ownership experience.
  - 81% would "probably" or "definitely" recommend electric car ownership to others.
- Respondents have concerns about the availability of public charging infrastructure:
  - "Range limitations" and "Access to public charging stations" were two of the top three challenges of owning an electric car (55% and 50%, respectively), and 63% disagreed with the statement "there are enough public chargers."
  - 38% of respondents agreed with the statement "Public charging stations are often in use by others when I want to charge."
- Charging behavior of both BEV and PHEV respondents changed slightly compared to the 2023 Ownership Survey Results:
  - The percentage of BEV and PHEV respondents who charge at home daily decreased, from 37% to 34% for BEV respondents and 56% to 51% for PHEV respondents.
  - The percentage of respondents who never use public chargers increased, from 23% to 27% for BEV respondents and from 54% to 60% for PHEV respondents.
- The program share between BEVs and PHEVs is the same across respondents residing within and outside of disadvantaged communities.

1 Introduction

NYSERDA's Drive Clean Rebate Program provides point-of-sale rebates to consumers who purchase or lease eligible new BEVs or PHEVs. Hydrogen fuel-cell electric cars will be eligible when available in New York State.

The program launched in March 2017 and is administered by CSE. Individual participants[3] are invited to take two voluntary surveys designed to help researchers better understand owner experience and behavior. The first is shared with participants two weeks after the rebate is approved and is referred to as the Adoption Survey. This report summarizes findings from the second survey—the Ownership Survey—designed to more fully comprehend rebated electric car ownership experiences in New York and identify ways to make ownership attractive and sustainable.

1.1 Survey Administration and Response Rate

The Drive Clean Rebate Ownership Survey is administered on a quarterly basis. Individual participants receive a survey invitation by email approximately one year after they acquired their car.[4] The participants included in this analysis purchased or leased electric cars between January 1, 2024 and December 31, 2024 (Table 1). A total of 46,074 participants received a rebate for cars acquired during this window and were invited to take the survey.

Table 1. 2024 Drive Clean Rebate Ownership Survey

Details	Date Ranges
Survey Administration Dates	February 4, 2025 – October 30, 2025
Responses Received	February 4, 2025 – February 7, 2026
Rebate Application Approval Dates[a]	January 17, 2024 – January 13, 2026
Vehicle Purchase/Lease Dates[b]	January 1, 2024 – December 31, 2024

[a] Of participants in the collected survey sample. Note that the last rebate approval date occurs more than ten months after the last vehicle purchase in this data set. While dealers are required to submit applications within 90 days of the date of sale, NYSERDA occasionally grants exceptions so that dealers can submit applications outside of this eligibility window.

[b] Of participants in the collected survey sample.

Of those invited to take the survey, 4,913 responded, resulting in a 10.7% response rate. These respondents completed the survey between February 4, 2025 and February 7, 2026. Forty-four respondents were disqualified because they no longer own the electric car that they were incentivized for.

After eliminating these responses, a total of 4,869 valid responses remained and were analyzed in this report (10.6% response rate).

1.2 Representativeness and Weighting

Since the Ownership Survey is voluntary and not everyone chooses to complete it, responses may differ across groups, threatening the representativeness of the sample relative to the Drive Clean Rebate participant population. However, using application information available for all individual participants, response weights were created to compensate for over- or under-representation among various groups.[5] The dimensions used for weighting were car model, purchase versus lease, county, and technology type (BEV versus PHEV). The weights were calculated using iterative proportional fitting, or also known as raking.[6] In this report, responses are segmented by technology type when the differences between these two are statistically significant.[7] Rao-Scott adjusted Pearson's Chi-square testing with weighted data was used to test for differences between PHEV and BEV respondents.[8] Because multiple comparisons were conducted, all p-values reported reflect Holm-Bonferroni corrections to minimize Type 1 errors.[9] A summary of the participant population represented, survey sample size, and weighting method and dimensions can be found in Table 2.

Table 2. 2024 Drive Clean Rebate Ownership Survey Sample Size And Representativeness

Details	Sample Size and Representativeness
Program Participant Population	N = 45,958[a]
Responses in Data Set	n = 4,869 (10.6%)
Weighting Method	Iterative Proportional Fitting (Raking)
Representative Dimensions	Car Model, Purchase vs. Lease, County, Technology Type

[a] 116 rebate recipients were excluded from the program population of 46,074 because no corresponding survey response was represented in one or more of the strata used to weight.

Frequencies shown in figures throughout this report have been made proportionate based on the applied weights. In other words, all "%" results given below are proportionately weighted.

2 Results

Please note, all frequencies and percentages given below are proportionately weighted.

2.1 Technology Types

Figure 1 shows the distribution of survey responses by rebated electric car type; two-thirds of the survey responses collected were from respondents who were rebated for a BEV and a third were from respondents who were rebated for a PHEV. These percentages align with the proportion of rebates going to these technology types during the reporting period. BEV participation in the program decreased slightly from last year's results (66% vs 70% in the 2023 Ownership Survey) but still accounts for a majority of rebates. BEVs accounted for the majority of the rebates issued since 2022 (Figure 2), though the percentage share has decreased slightly over time.

Figure 1. Survey Responses By Car Technology Type

(n = 4,869)

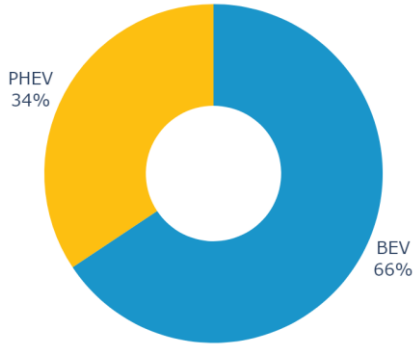
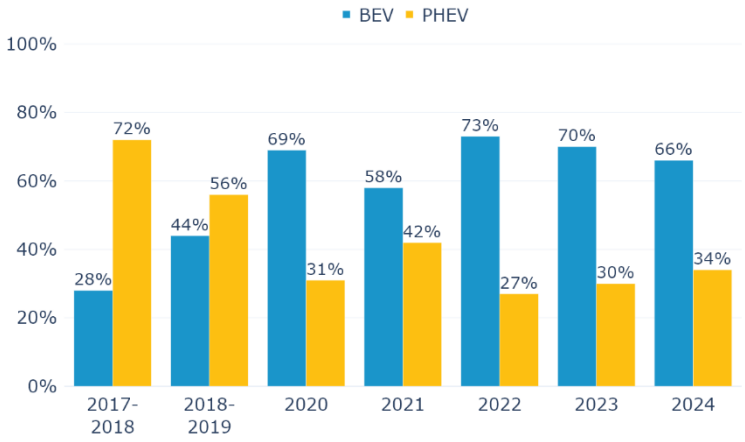


Figure 2. Car Technology Type Rebated By Survey Year



2.2 Screening Question: Car Status

All but 44 respondents (0.9% of the 4,913 respondents) said their household still had the rebated electric car. Twenty-eight respondents reported that their household now has a different electric car, and the remaining 16 respondents said they no longer own any electric car. Of the 16 who no longer had the rebated car, six sold or traded it in, seven had their electric car damaged or stolen, and three selected "other". The exact question wording can be found in the Appendix A. Ownership Survey Questionnaire.

2.3 Demographics and Housing Characteristics

Table 3 compares survey respondents with new car buyers in the state of New York, based on data from the Strategic Vision New Vehicle Experience Survey (NVES).[10]

Table 3. Comparison Of Survey Respondents With New Car Buyers In New York State

Characteristic	Drive Clean Survey Respondents	New Car Buyers in New York (NVES 2022)[11]
Male	69%	55%
Selected Solely white/Caucasian	75%	76%
40+ Years Old	83%	76%
Bachelor's Degree or Higher	76%	64%
Family Income $100,000+	77%	55%[a]
Own Home	85%	77%

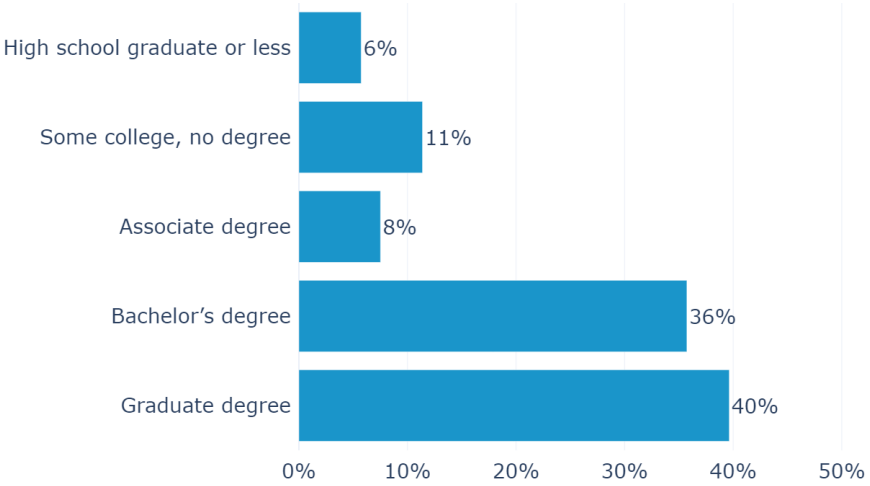
[a] NVES represents income greater than $100k (not greater than or equal to).

Table 3 provides some context when interpreting the data from survey respondents, shown in greater detail below. This is because new car buyers – rather than the population of New York State – are a more appropriate basis for comparison. Survey results indicate that program participants in 2024 more frequently identify as a male, are age 40 years or older, have college degrees, have higher incomes, and likelier to own a home than average new car buyers in the state.

Seventy-six percent (76%) of respondents have at least a bachelor's degree (relative to 64% of new car buyers). Figure 3 shows the distribution of education levels of respondents, with no significant education differences between BEV and PHEV respondents.

Figure 3. Highest Level Of Education Completed By Technology Type

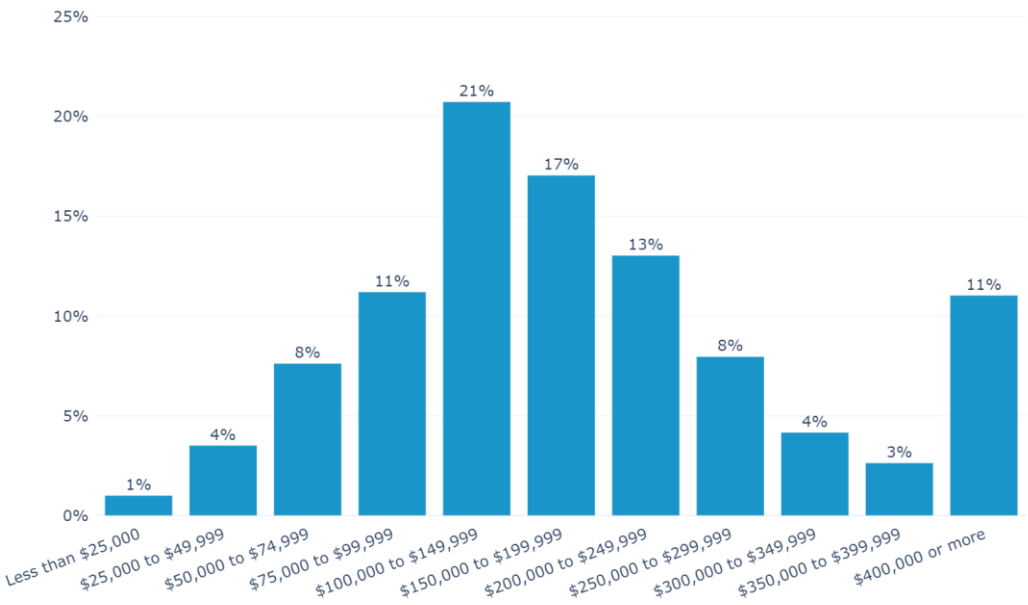
Responses from BEV and PHEV consumers are not significantly different (n = 4,682).



Seventy-seven percent of respondents have an annual household income of $100,000 or more compared to 55% of new car buyers in New York State. Figure 4 shows the distribution of income levels of respondents. No significant differences in income distributions between BEV and PHEV respondents were observed.

Figure 4. Annual Gross Household Income From All Sources By Technology Type

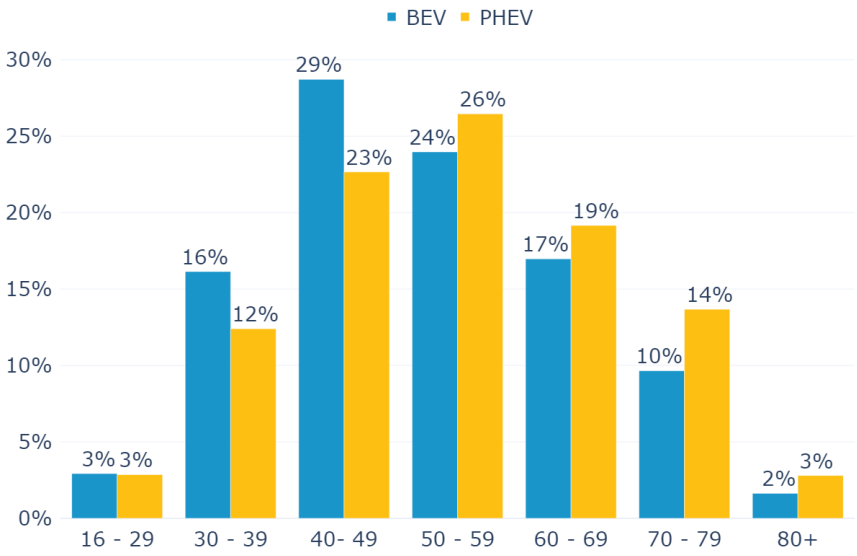
Responses from BEV and PHEV consumers are not significantly different (n = 4,008).



Eighty-three percent of rebate recipients are 40 years old or older, compared to 76% of new car buyers overall. Figure 5 shows significant age differences between BEV and PHEV respondents, with BEV respondents being younger than PHEV respondents.

Figure 5. Age By Technology Type

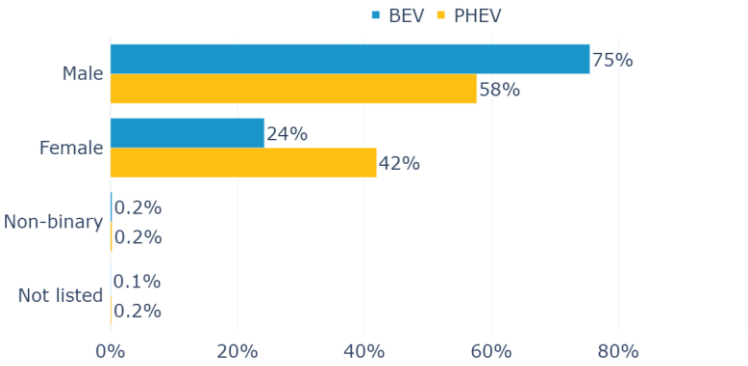
Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 56$, $p < 0.01$, $n = 4{,}719$).



While new car buyers in New York State are nearly evenly split between male and female gender identities (55% male), survey respondents identify as 69% male, slightly lower than last year's result of 74%. Figure 6 shows that those who identify as female make up a larger portion of PHEV respondents than BEV respondents (42% versus 24%, respectively). The 24% share of female BEV respondents is slightly higher than the 2023 Ownership Survey (21%), but the same as2022 and 2021 Ownership Surveys (24%) and represents an increase compared to the years prior (18% in the 2018-2019 Ownership Survey and 19% in the 2020 Ownership Survey).

Figure 6. Gender By Technology Type

Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 159$, $p < 0.01$, $n = 4{,}700$).



Most survey respondents identify as white or Caucasian (which Table 3 above shows is nearly the same as new car buyers overall, 75% versus 76%). A higher percentage of PHEV respondents identified as white or Caucasian. Nine percent of respondents identify as "Latino/a or Hispanic", the same percentage last year's result (not provided in a visual).

Figure 7. Responses To "How Do You Prefer To Describe Your Racial/Ethnic Identity?" By Technology Type

Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 162$, $p < 0.01$, $n = 4{,}168$). Note: Respondents can select all that apply for this question. Any respondent who selected two or more races is included in "More than one race".

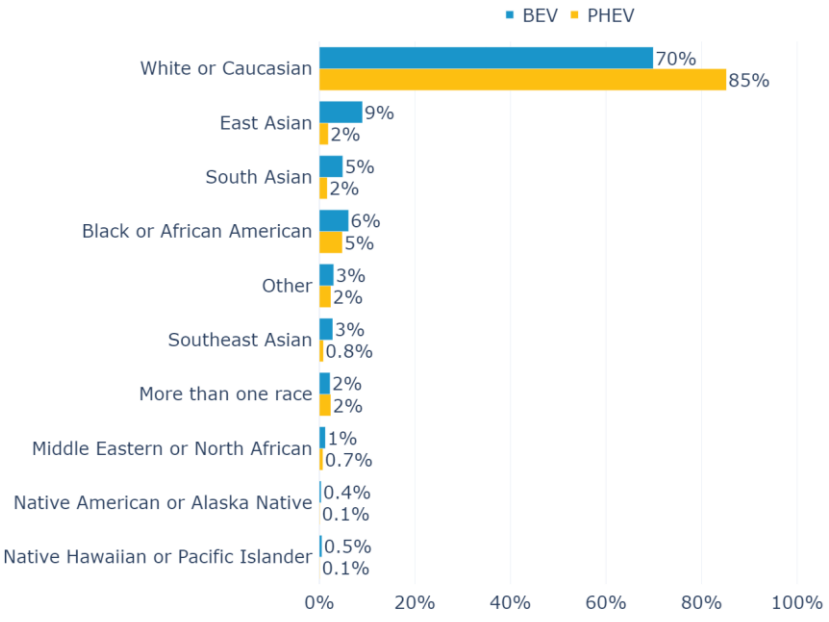


Figure 8 shows that most respondents own their residence. Compared to Table 3 above, respondents were more likely to be homeowners than the average new car buyer (85% versus 77%, respectively). Furthermore, Figure 9 shows that most respondents (78% overall) live in detached houses.

Figure 8. Responses To "Do You Own Or Rent Your Residence?" By Technology Type

Responses from BEV and PHEV consumers are not significantly different (chi-squared test: n = 4,712).

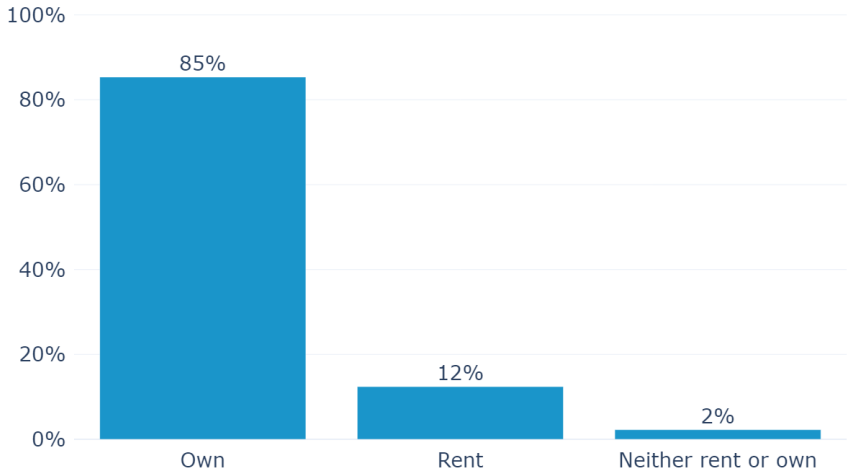
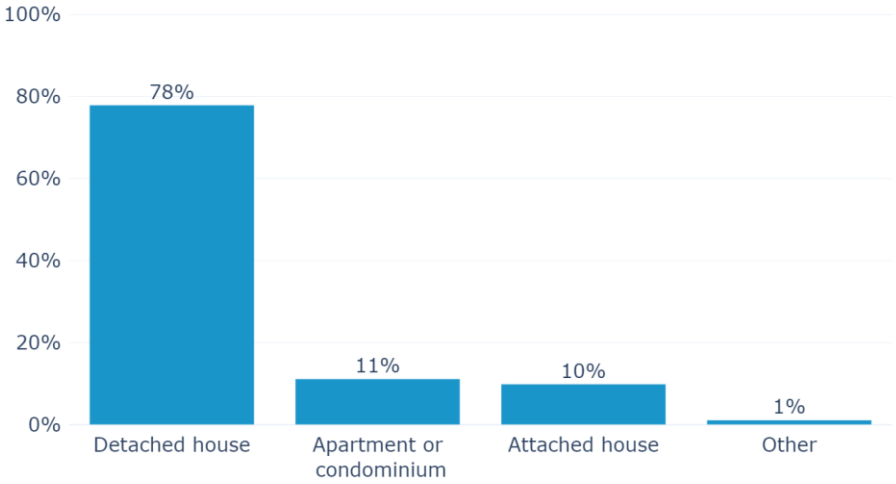


Figure 9. Responses To "What Type Of Residence Do You Live In?" By Technology Type

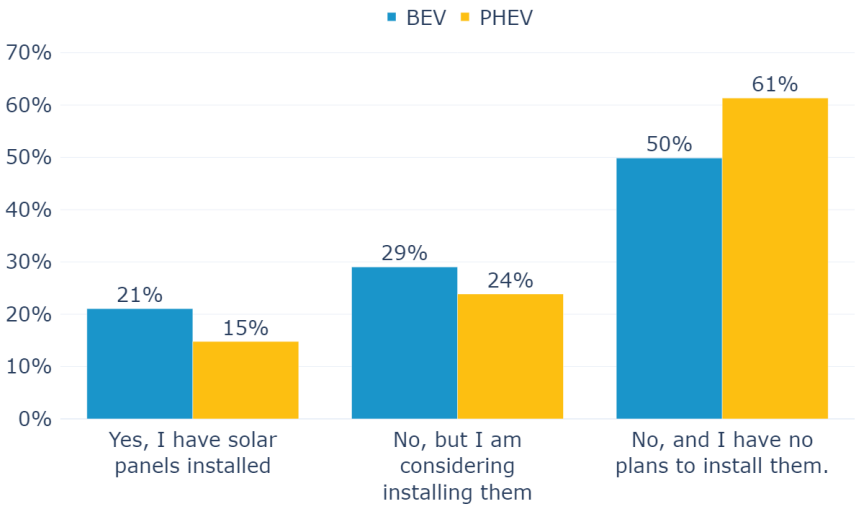
Responses from BEV and PHEV consumers are not significantly different (n = 4,709).



Overall, 19% of respondents own solar panels (Figure 10), with BEV respondents more likely than PHEV respondents to have solar panels installed at their residence (21% versus 15%, respectively).

Figure 10. Responses To "Do You Have Solar Panels At Your Residence?" By Technology Type

Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 60$, $p < 0.01$, $n = 4{,}850$).



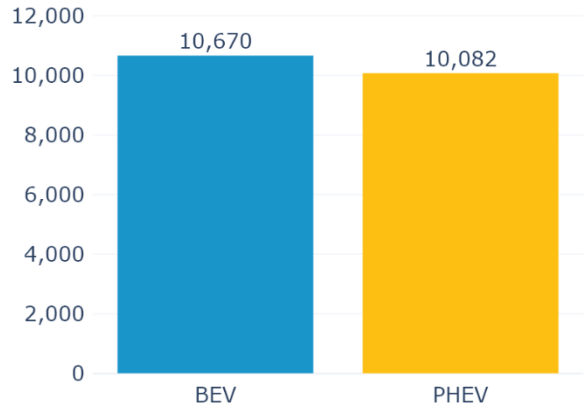
2.4 Electric Car Driving

Respondents were asked how many miles they drive their electric car per day and the total miles they've driven since acquiring their car. Total miles driven should approximate the respondent's annual mileage since they have owned the car for about one year. BEV respondents averaged 33 miles per day, while PHEV respondents averaged 30 miles.[12]

When asked how many total miles they have driven so far, BEV respondents averaged 577 miles more than PHEV respondents as shown in Figure 11. A linear regression adjusting for survey weights shows a significant difference between BEV and PHEV respondents. Total miles driven decreased overall relative to last year's result; BEV respondents averaged 10,670 miles versus 12,056 miles in the 2023 Ownership Survey and PHEV respondents averaged 10,082 miles versus 10,606 miles.

Figure 11. Average Of Responses To "How Many Total Miles Have You Driven Your Electric Car So Far?" By Technology Type

(Linear regression: t = -2.1, p = 0.04, n = 4,465)



Respondents were asked how often they use their electric car for a variety of tasks. Seventy-one percent (71%) of respondents reported using their car at least a few times a week for their commute (Figure 12). Twenty-nine percent (29%) of respondents reported using their car at least a few times a week for partial commute (Figure 13). Most respondents (90%) reported using their car at least a few times a week to run errands (Figure 14).

Figure 12. Frequency Of Full Commute By Technology Type

Responses from BEV and PHEV consumers are not significantly different (n = 4,112).

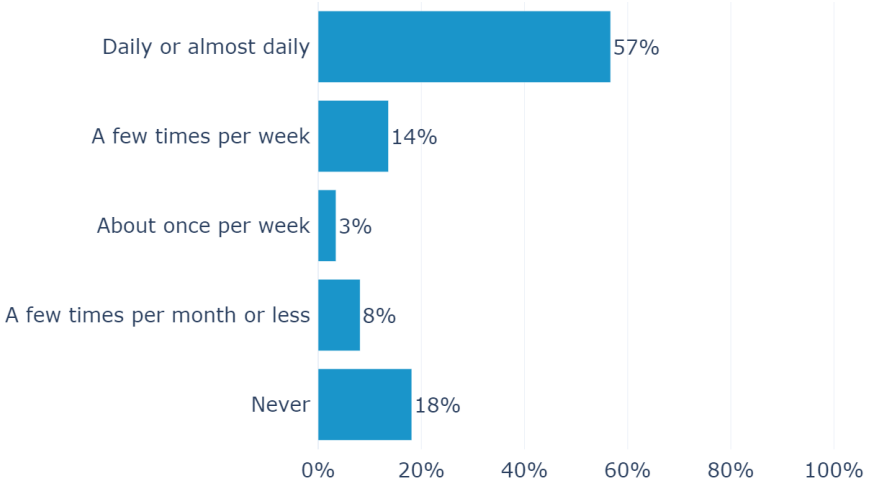


Figure 13. Frequency Of Partial Commute By Technology Type

Responses from BEV and PHEV consumers are not significantly different (n = 3,533).

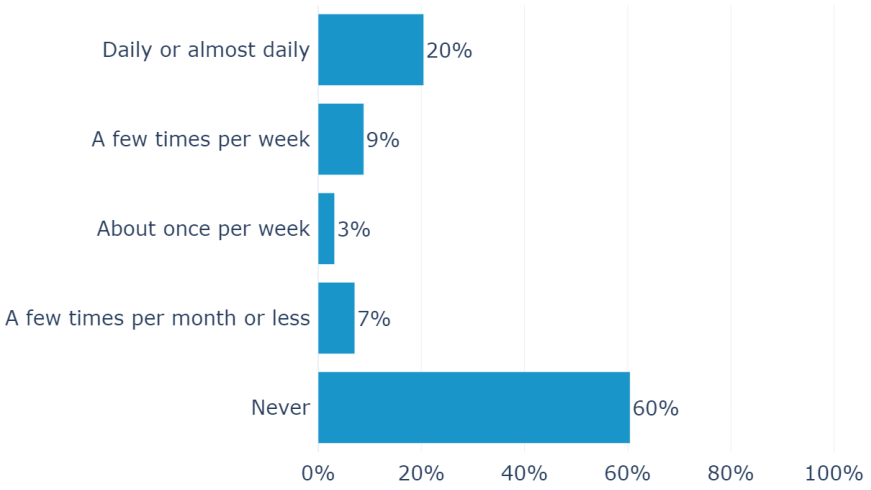


Figure 14. Frequency Of Running Errands By Technology Type

Responses from BEV and PHEV consumers are not significantly different (n = 4,817).

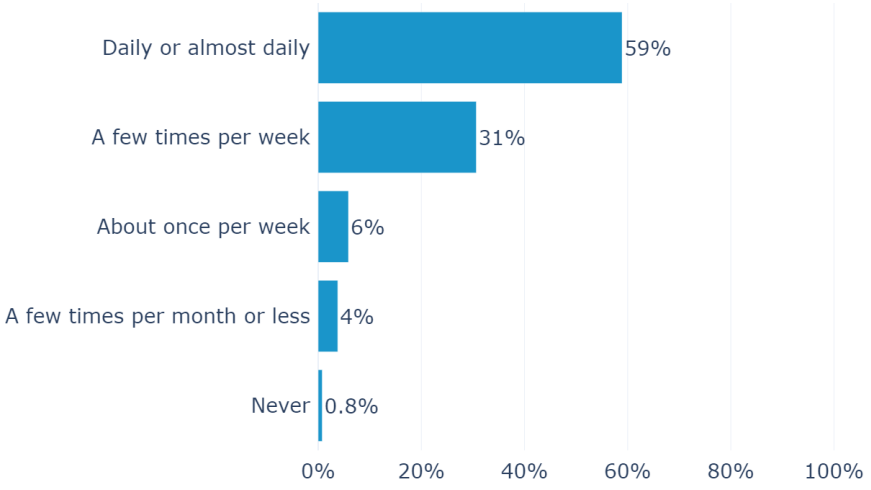


Figure 15 shows how often respondents use their BEV or PHEV for long trips (greater than 50 miles from home). Sixty-four percent of respondents use their car a few times a month or less for a long trip. When respondents were asked about the frequency of car use to provide ride-sharing services, 94% of respondents reported they never used their electric car for this task (Figure 16).

Figure 15. Frequency Of Long Trips (>50 Miles From Home) By Technology Type

Responses from BEV and PHEV consumers are not significantly different (n = 4,768).

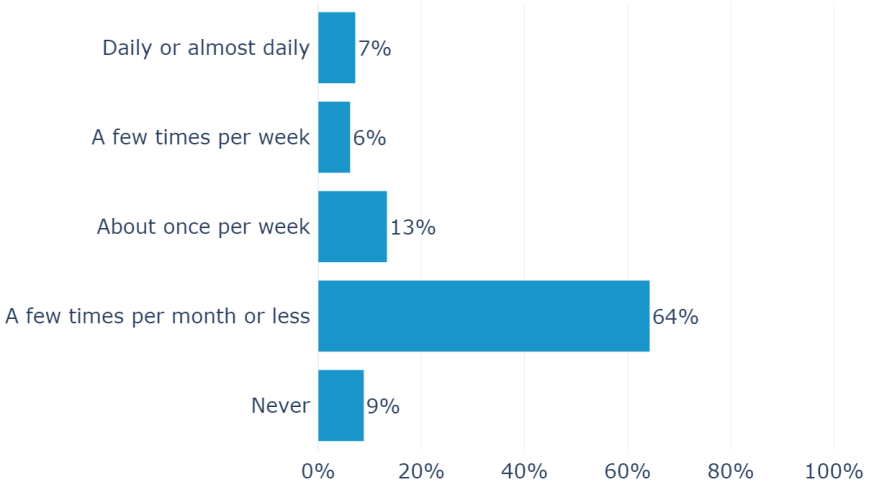
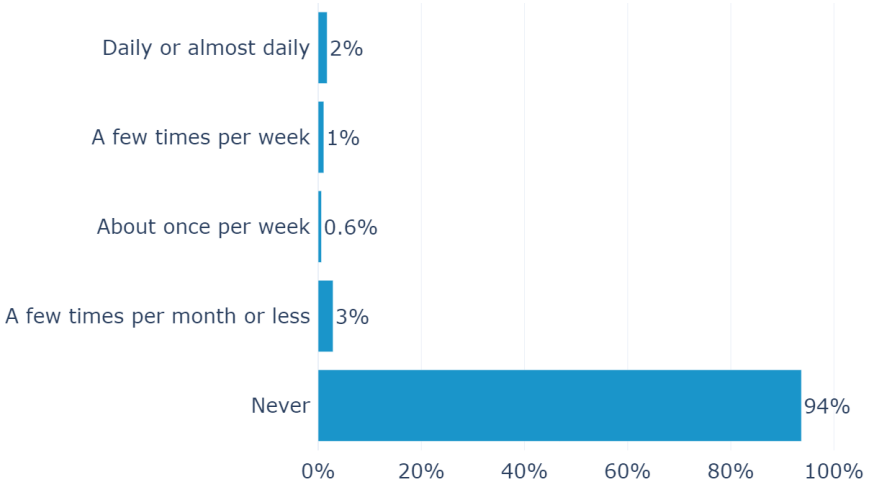


Figure 16. Frequency Of Providing Ride-Sharing Services (E.G., Uber/Lyft) By Technology Type

Responses from BEV and PHEV consumers are not significantly different (n = 3,958).

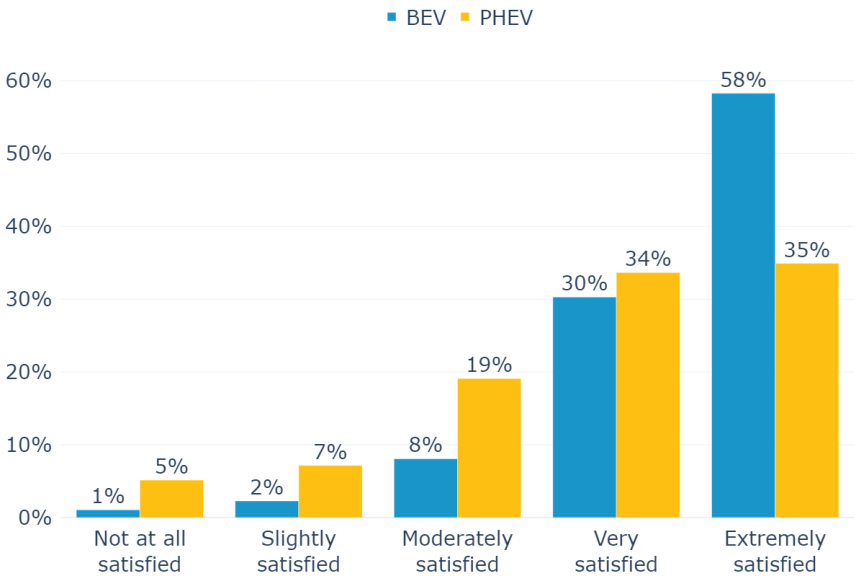


2.5 Ownership Satisfaction

Respondents were asked how satisfied they were with the experience of owning an electric car. Overall, 81% of respondents rated their satisfaction as “Very satisfied” or “Extremely satisfied” (Figure 17), which is a similar proportion of respondents as 80% last year. Two percent (2%) of respondents described themselves as “Not at all satisfied”, which is similar to the previous year of 3%. BEV respondents were more likely to be very or extremely satisfied with their vehicle as compared to PHEV respondents (88% vs 69%).

Figure 17. Participant Satisfaction By Technology Type

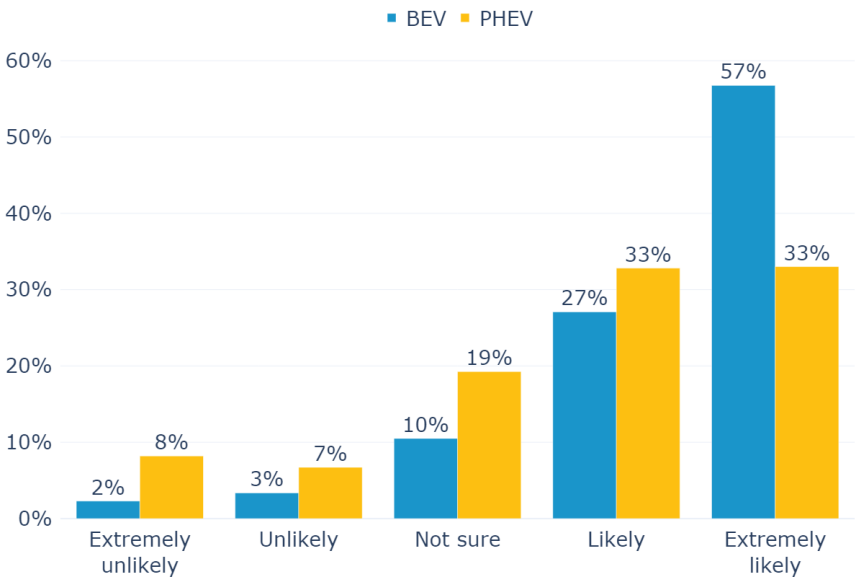
Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 374$, $p < 0.01$, $n = 4{,}834$).



Respondents were also asked how likely they were to purchase an electric car again. Overall, 78% said they are likely or extremely likely to repeat an electric car purchase, with BEV respondents more likely to acquire another electric car than PHEV respondents. Figure 18 displays the breakdown between BEV and PHEV respondents.

Figure 18. Responses To "How Likely Are You To Purchase/Lease Another Electric Car In The Future?" By Technology Type

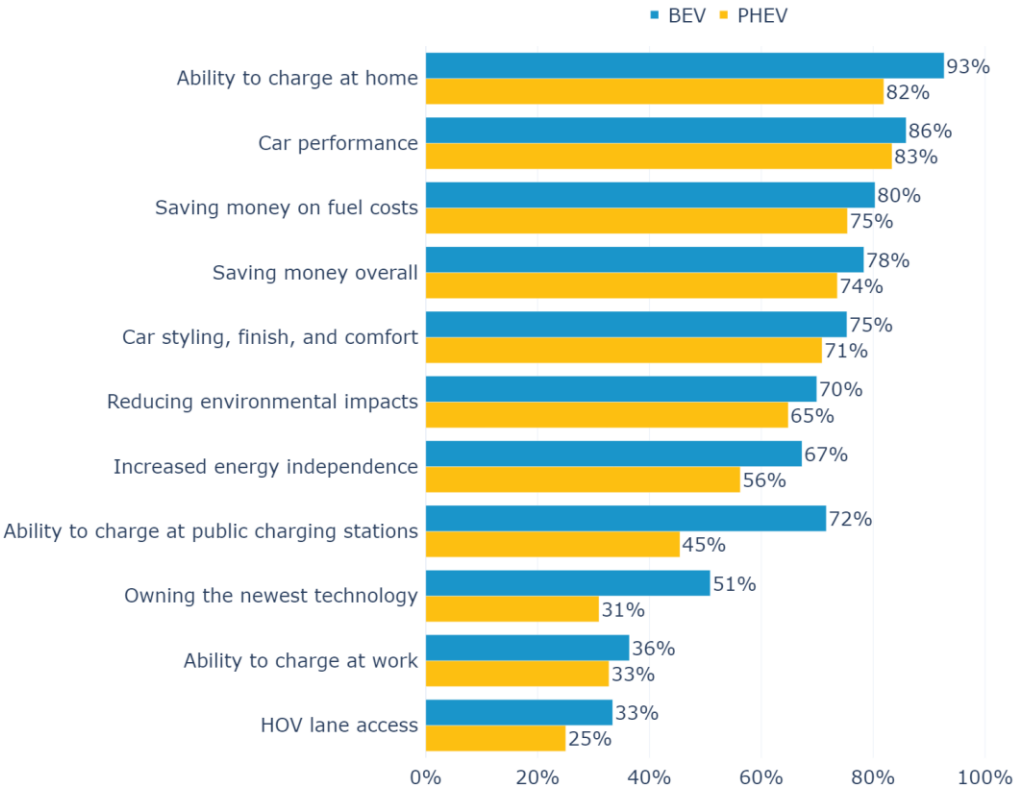
Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 318$, $p < 0.01$, $n = 4{,}862$).



Respondents were asked to rate the importance of various aspects of owning an electric car, from "Not at all important" to "Extremely important." Figure 19 shows the proportion of respondents who rated each factor "Very" or "Extremely Important." Across all respondents, the most important factors were "Ability to charge at home", "Car performance", and "Saving money on fuel costs", the same factors rated as most important in last year's survey results. The importance of "Reducing environmental impacts" did not rank among the top three reasons for owning an electric car for a fourth year, indicating a potential shift from early adopters to a more mature market.

Figure 19. Important Aspects Of Electric Car Ownership By Technology Type (Percent Responding "Very" Or "Extremely Important")

Responses from PHEV and BEV consumers are significantly different for ability to charge at home (chi-squared test: $\chi2 = 45$, $p < 0.01$, $n = 4,844$), car performance (chi-squared test: $\chi2 = 46$, $p < 0.01$, $n = 4,853$), saving money on fuel costs (chi-squared test: $\chi2 = 45$, $p < 0.01$, $n = 4,849$), saving money overall (chi-squared test: $\chi2 = 47$, $p < 0.01$, $n = 4,850$), car styling, finish, and comfort (chi-squared test: $\chi2 = 25$, $p < 0.01$, $n = 4,847$), reducing environmental impacts (chi-squared test: $\chi2 = 35$, $p < 0.01$, $n = 4,844$), increased energy independence (chi-squared test: $\chi2 = 79$, $p < 0.01$, $n = 4,843$), ability to charge at public charging stations (chi-squared test: $\chi2 = 445$, $p < 0.01$, $n = 4,846$), owning the newest technology (chi-squared test: $\chi2 = 247$, $p < 0.01$, $n = 4,845$), ability to charge at work ($\chi2 = 27$, $p < 0.01$, $n = 4,822$), and HOV lane access (chi-squared test: $\chi2 = 63$, $p < 0.01$, $n = 4,831$).



2.6 Program Performance

Survey respondents were very likely to be electric car promoters with 81% reporting that they would "probably" (29%) or "definitely" (52%) recommend electric car ownership to others. BEV respondents were more likely than PHEV respondents to indicate that they would "definitely" recommend electric car ownership (Figure 20). Across all respondents, 45% have had at least one family member or friend purchase an electric car since their own acquisition of an electric car. Figure 21 shows that BEV

respondents were more likely than PHEV respondents to report that a friend or family member had purchased an electric car.

Figure 20. Respondents Who Would Recommend Electric Car Ownership To Others By Technology Type

Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 357$, $p < 0.01$, $n = 4{,}858$).

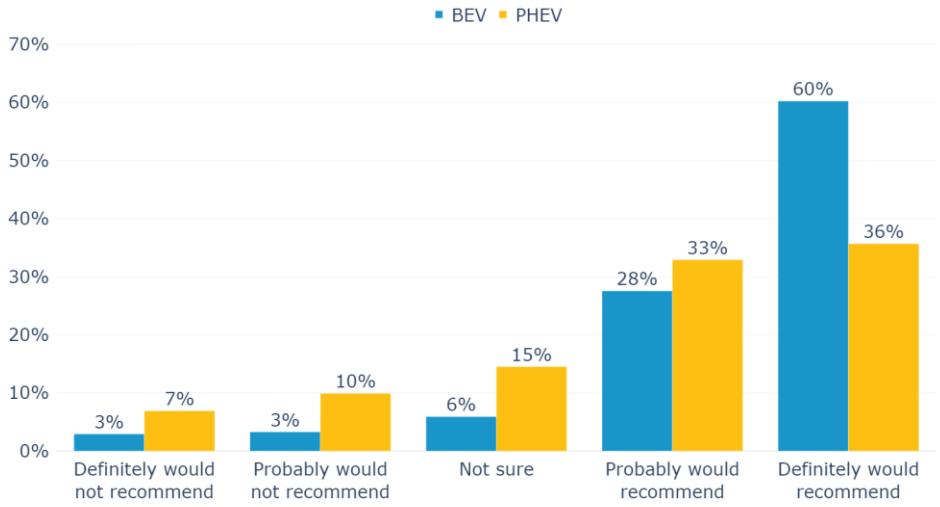
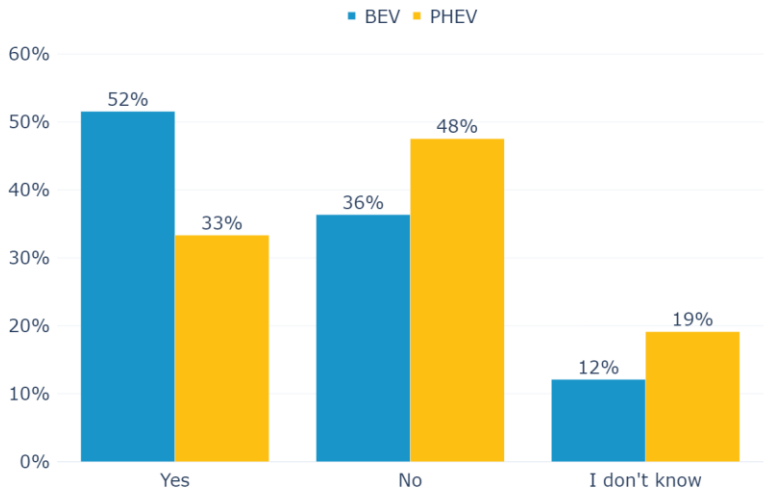


Figure 21. Respondents Whose Friends Or Family Purchased/Leased An Electric Car Since The Purchase Of Their Electric Car By Technology Type

Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 152$, $p < 0.01$, $n = 4{,}858$).



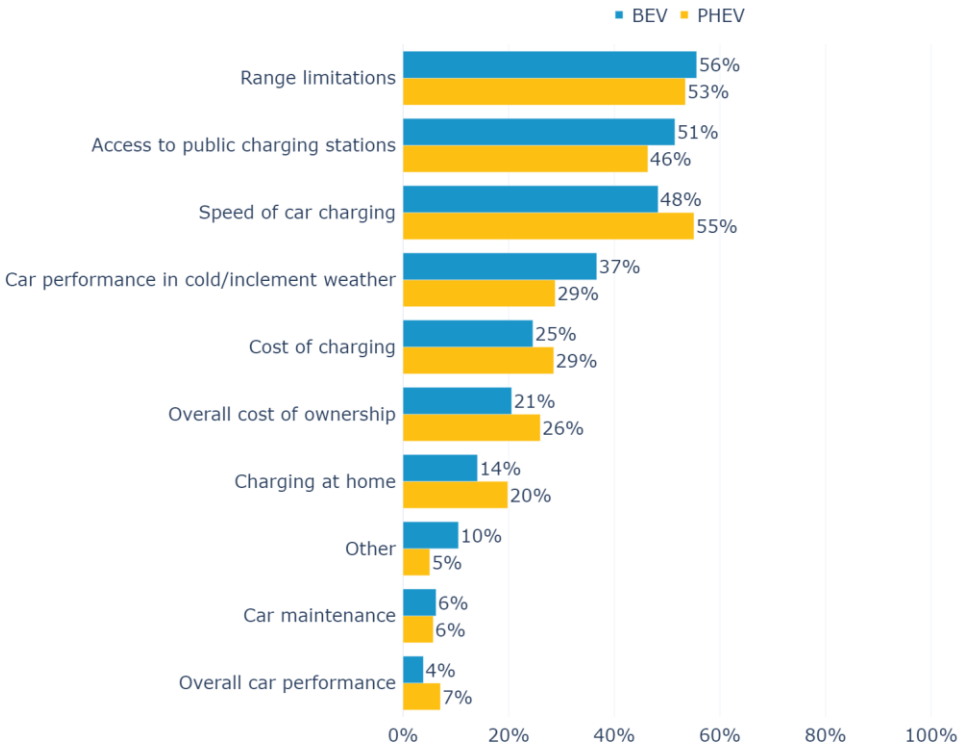
2.7 Participant Challenges

To understand the program participants' challenges, respondents were asked to select "the three greatest challenges to owning an electric car in New York" from a list of possible options. The challenges most frequently selected by respondents were "Range limitations", "Access to public charging stations", and "Speed of car charging" (Figure 22). PHEV respondents were more likely than BEV respondents to find the speed of car charging a challenging aspect of owning an electric car.

Respondents selected the same major challenges as last year's survey results, suggesting that the battery technology of electric cars could still be improved and may also suggest that the rate of electric car adoption is outpacing the rate of charging infrastructure installation within New York State.[13]

Figure 22. Greatest Challenges Of Owning An Electric Car In New York State By Technology Type

Responses from PHEV and BEV consumers are significantly different for access to public charging stations (chi-squared test: $\chi 2 = 11$, $p = 0.02$, $n = 4{,}821$), speed of car charging (chi-squared test: $\chi 2 = 20$, $p < 0.01$, $n = 4{,}821$), car performance in cold/inclement weather (chi-squared test: $\chi 2 = 30$, $p < 0.01$, $n = 4{,}821$), cost of charging (chi-squared test: $\chi 2 = 9$, $p = 0.04$, $n = 4{,}821$), overall cost of ownership (chi-squared test: $\chi 2 = 18$, $p < 0.01$, $n = 4{,}821$), charging at home (chi-squared test: $\chi 2 = 27$, $p < 0.01$, $n = 4{,}821$), other (chi-squared test: $\chi 2 = 41$, $p < 0.01$, $n = 4{,}821$), and overall car performance (chi-squared test: $\chi 2 = 24$, $p < 0.01$, $n = 4{,}821$). There was no significant difference for range limitations ($n = 4{,}821$), and car maintenance ($n = 4{,}821$).



2.8 Charging

Twenty-three (23%) of respondents indicated they have access to charging at their workplace, and Figure 23 shows the distribution between respondents that can charge for free and those that must pay to charge. Figure 24 shows that of the respondents who do have access to workplace charging on-site, 66% of BEV respondents and 63% of PHEV respondents charge at work at least occasionally (did not select "Never").

Figure 23. Responses To "Do You Have Access To Charging At Your Place Of Work?"

Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 13$, $p = 0.03$, $n = 3{,}792$).

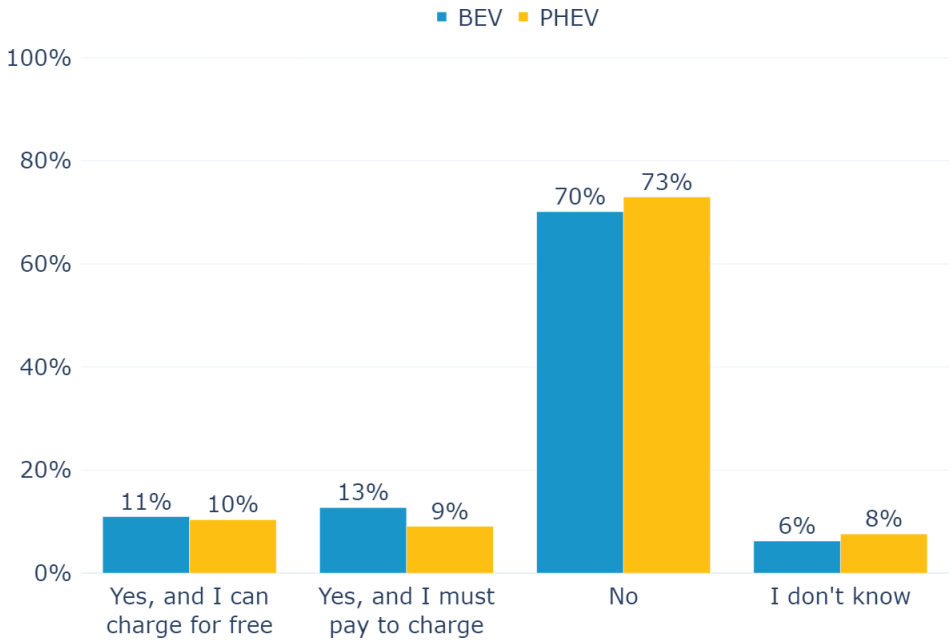


Figure 24. Frequency Of Charging At Given Locations By Technology Type

Responses from PHEV and BEV consumers are significantly different for home (chi-squared test: $\chi 2 = 403$, $p < 0.01$, $n = 4{,}849$), on-site at work (chi-squared test: $\chi 2 = 27$, $p < 0.01$, $n = 912$), public charging (chi-squared test: $\chi 2 = 735$, $p < 0.01$, $n = 4{,}794$), and other (chi-squared test: $\chi 2 = 66$, $p < 0.01$, $n = 4{,}234$). There was no significant difference for off-site at work ($n = 3{,}429$).

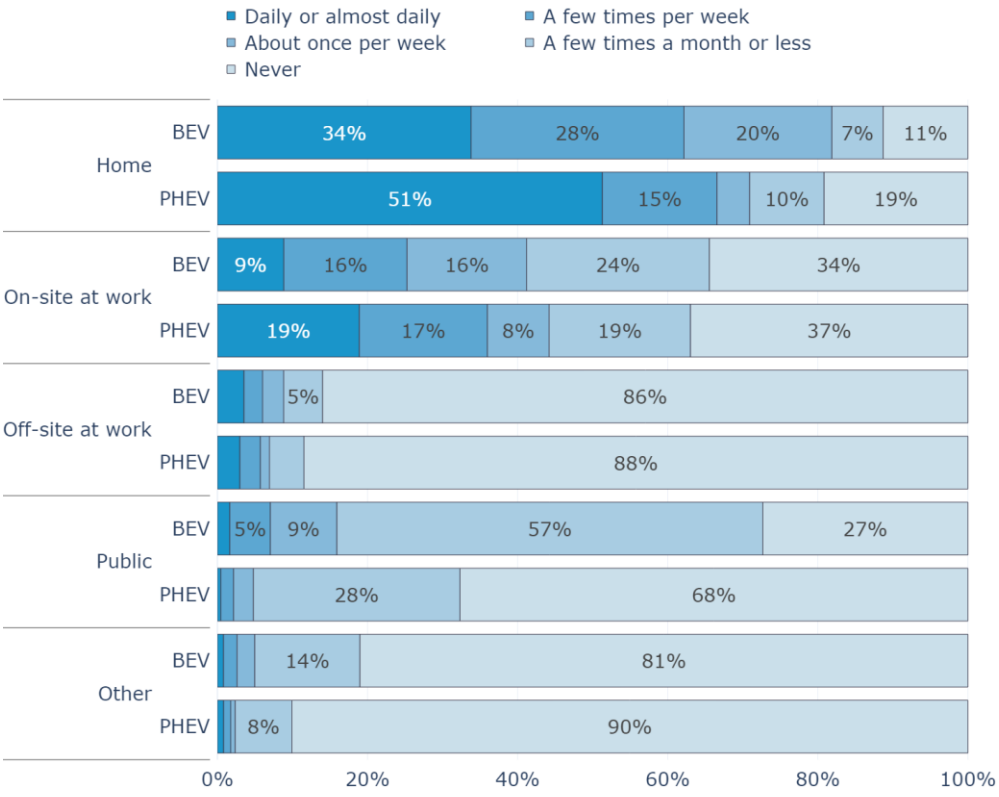
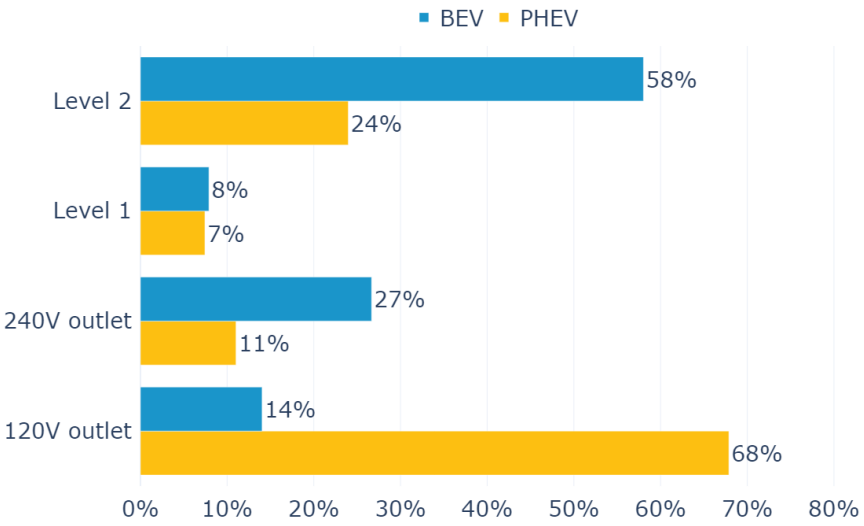


Figure 24 shows that almost all respondents charge their electric car at home, with only 11% of BEV and 19% of PHEV respondents stating they never charge at home. The share of BEV respondents who charge at home a few times per week or daily or almost daily was 62%, slightly lower than last year's survey results of 64%. PHEV respondents who charge at home daily or almost daily decreased compared to last year's survey results (51% versus 56%). BEV respondents were more likely than PHEV respondents to charge at public charging stations at least occasionally (73% versus 32%), though both respondent groups decreased compared to last year's results (77% and 40%, respectively). It is also important to note that many of the write-in responses for "Other" ($n = 584$) included public charging stations, a friend's or relative's home, and local businesses or malls, so the number of respondents who selected public charging may be an underestimate of the number who use them.

Figure 25 shows that PHEV respondents who charge at home are much more likely than BEV respondents to report using a standard 120V outlet (68% versus 14%), while BEV respondents were more likely to use a Level 2 charger (58% versus 24%).[14] The higher prevalence of Level 2 charging among BEV respondents is unsurprising given the larger battery size of these cars and the inability to fall back on gasoline if a battery is not adequately charged.

Figure 25. How Respondents Charge At Home By Technology Type

Responses from PHEV and BEV consumers are significantly different for 120V outlet (chi-squared test: $\chi 2 = 1262$, $p < 0.01$, $n = 4,288$), 240V outlet (chi-squared test: $\chi 2 = 136$, $p < 0.01$, $n = 4,288$), and Level 2 charger (chi-squared test: $\chi 2 = 437$, $p < 0.01$, $n = 4,288$). There was no significant difference for Level 1 charger ($n = 4,288$).



Seventy percent (62%) of respondents disagreed with the statement “There are enough public chargers”, with Figure 26 showing the distribution between BEV and PHEV respondents. This has decreased compared to last year’s results (70%), indicating that this may be some improvement, though still an ongoing concern amongst electric car owners.

Figure 26. Agreement/Disagreement With The Statement "There Are Enough Public Chargers" By Technology Type

Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 74$, $p < 0.01$, $n = 4{,}833$).

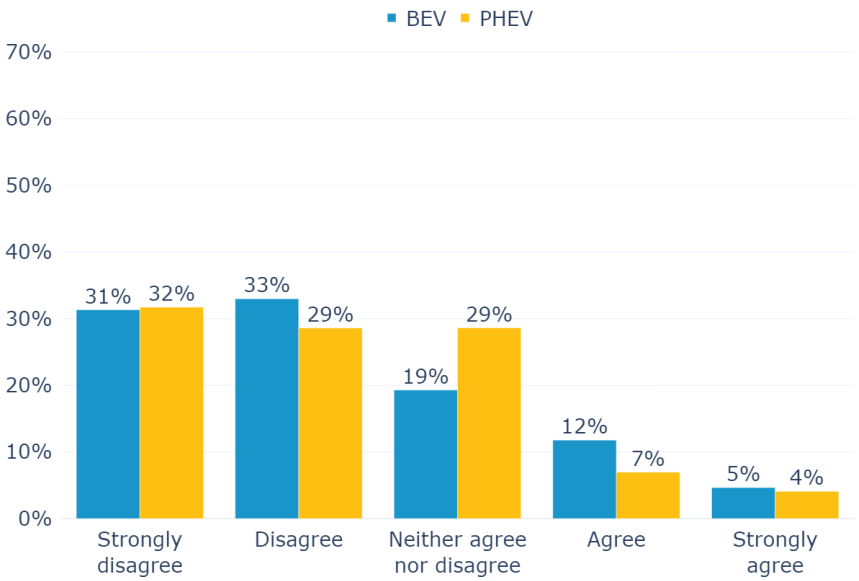
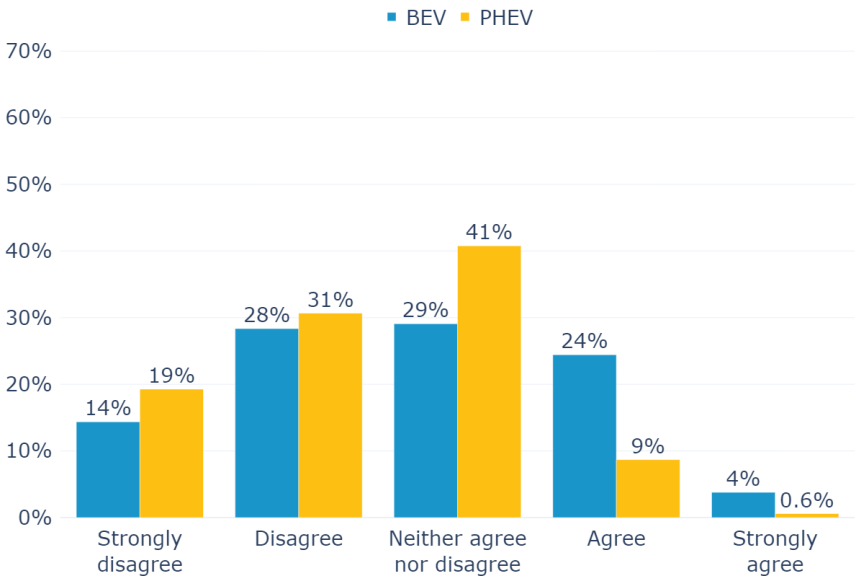


Figure 27. Agreement/Disagreement With The Statement "There Are Public Charging Stations In The Places Where I Need Them" By Technology Type

Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 246$, $p < 0.01$, $n = 4{,}828$).



Echoing the top concerns reported by respondents, only 22% of respondents agreed with the statement, "There are public charging stations in the places where I need them" with BEV respondents more likely to agree with the statement than PHEV respondents as shown in Figure 27. The proportion of BEV respondents who selected "agree" or "strongly agree" stayed the same relative to last year's results (24% and 4%, respectively). Respondents who "strongly disagree" with the statement decreased compared to last year's survey results, from 19% to 14% of BEV respondents and 28% to 19% of PHEV respondents.

For the next statement, "I frequently see gasoline-fueled cars parked in spaces with public electric car chargers," approximately 22% of respondents agreed or strongly agreed, with BEV respondents selecting this as a slightly more common concern (Figure 28).

Figure 28. Agreement/Disagreement With The Statement "I Frequently See Gasoline-Fueled Cars Parked In Spaces With Public Electric Car Chargers" By Technology Type

Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 173$, $p < 0.01$, $n = 4{,}826$).

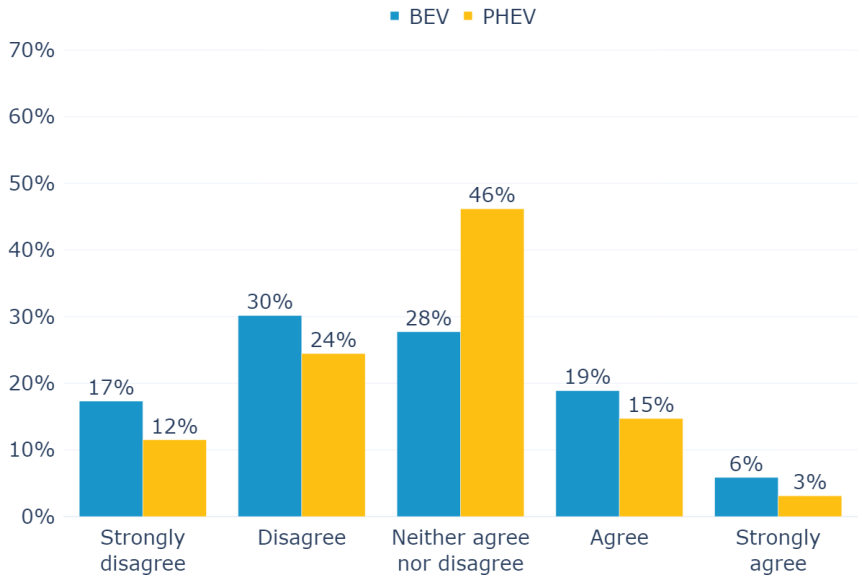


Figure 29. Agreement/Disagreement With The Statement "Public Charging Stations Are Often In Use By Others When I Want To Charge" By Technology Type

Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 117$, $p < 0.01$, $n = 4{,}815$).

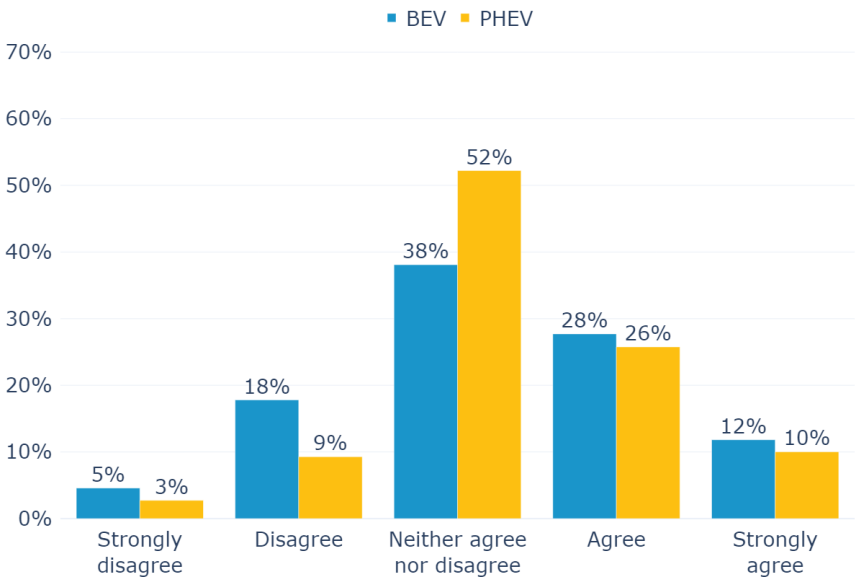
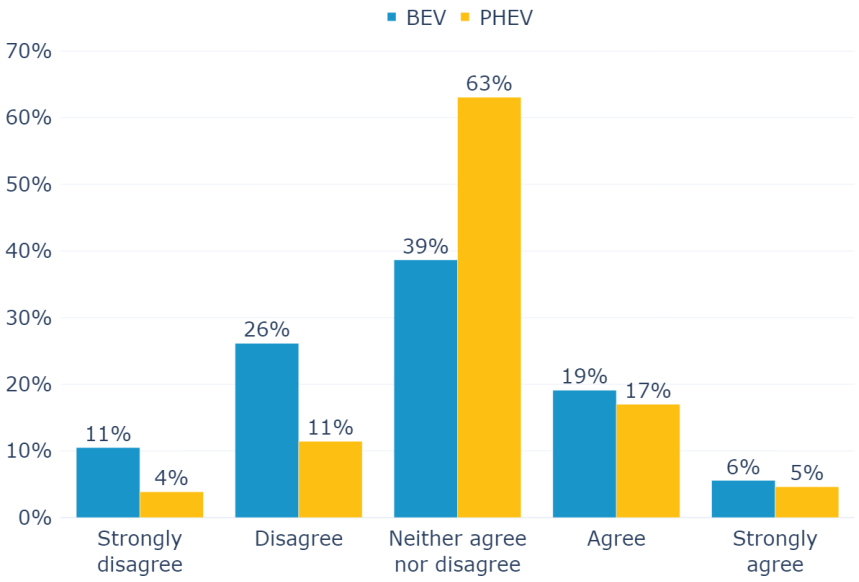


Figure 30. Agreement/Disagreement With The Statement "Public Charging Stations Are Often Not Working When I Want To Use Them" By Technology Type

Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 311$, $p < 0.01$, $n = 4{,}815$).



Thirty-eight percent (38%) of respondents agreed or strongly agreed with the statement, "Public charging stations are often in use by others when I want to charge," while 19% disagreed or strongly disagreed. BEV respondents were more likely to disagree with the statement than PHEV respondents (Figure 29). Responses to the statement, "Public charging stations are often not working when I want to use them," has a higher percentage of disagreement (29%) than agreement (23%), with BEV respondents more likely to disagree with the statement than PHEV respondents (Figure 30).

2.9 Disadvantaged Communities Participation

Both economic and environmental burdens impact disadvantaged communities (DACs) and need to be prioritized to achieve environmental justice. On March 27, 2023, New York State finalized the criteria to define DACs.[15] Based on these criteria, DACs have a higher proportion of minority residents and lower household incomes relative to New York State. Approximately 36% of New York State residents live in a DAC in 2024.

Overall, 16% of Drive Clean Rebate individual participants with vehicles purchased in 2024 were within DACs. Individual participants within a DAC were almost proportionally represented among survey respondents, making up 14% of respondents (Figure 31). Respondents residing within and outside of DACs were equally likely to purchase or lease BEVs (65%) and PHEVs (35%), shown in Figure 32.

Figure 31. Percentage Of Respondents Within A Disadvantaged Community

(n = 4,534)

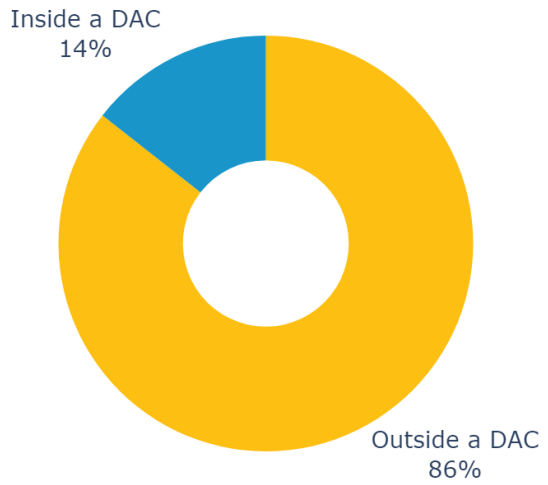
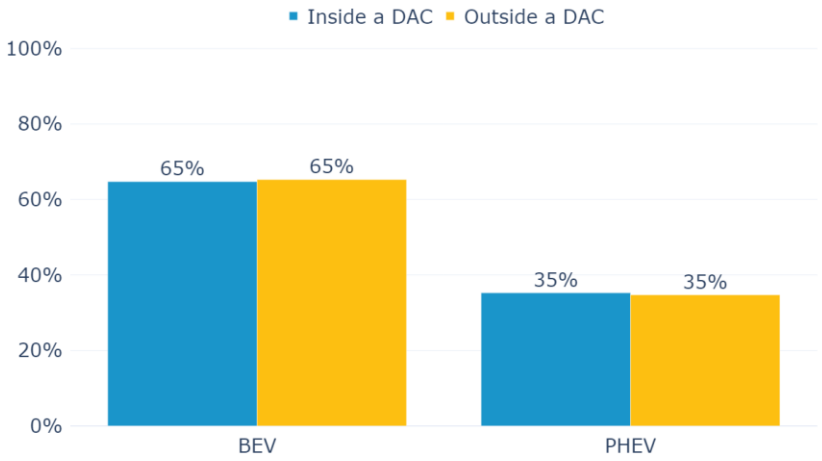


Figure 32. Technology Type By Disadvantaged Community Status

Responses from participants within a DAC and those outside a DAC are not significantly different (n = 4,534). Figure shows the DAC designation distribution to present a visual comparison.



Respondents residing within and outside a DAC reported similar satisfaction levels with owning an electric car (Figure 33) in addition to the likeliness to acquire another electric car (Figure 34).

Figure 33. Respondent Satisfaction With Owning An Electric Car By Disadvantaged Community Status

Responses from participants within a DAC and those outside a DAC are not significantly different (n = 4,503).

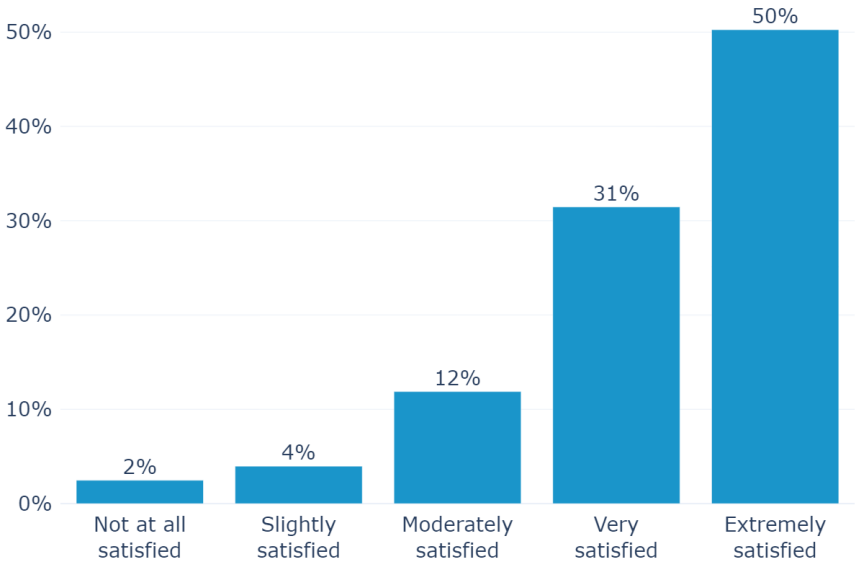
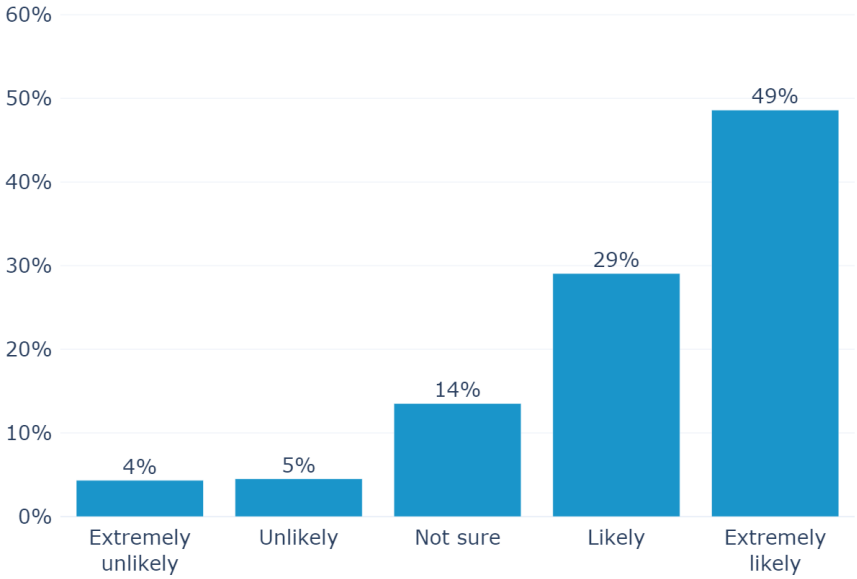


Figure 34. Responses To "How Likely Are You To Purchase/Lease Another Electric Car In The Future?" By Disadvantaged Community Status

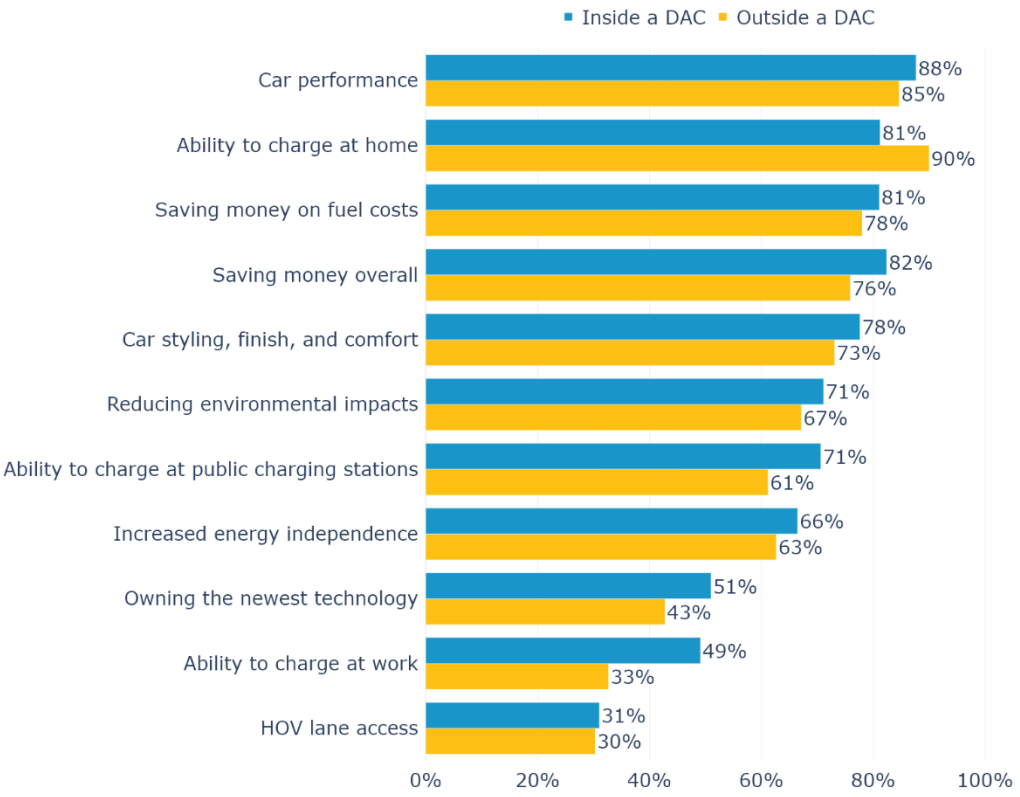
Responses from participants within a DAC and those outside a DAC are not significantly different (n = 4,528).



Respondents were asked to rate the importance of various aspects of owning an electric car, from "Not at all important" to "Extremely important." The distribution of responses by DAC designation can be seen in Figure 35. Respondents outside a DAC were more likely to find the ability to charge at home important than respondents within a DAC.

Figure 35. Important Aspects Of Electric Car Ownership By Disadvantaged Community Status (Percent Responding "Very" Or "Extremely Important")

Responses from PHEV and BEV consumers are significantly different for saving money overall (chi-squared test: $\chi2 = 52$, $p < 0.01$, $n = 4,515$), ability to charge at home (chi-squared test: $\chi2 = 46$, $p < 0.01$, $n = 4,510$), ability to charge at public charging stations (chi-squared test: $\chi2 = 56$, $p < 0.01$, $n = 4,513$), increased energy independence (chi-squared test: $\chi2 = 25$, $p = 0.02$, $n = 4,509$), owning the newest technology (chi-squared test: $\chi2 = 45$, $p < 0.01$, $n = 4,511$), ability to charge at work ($\chi2 = 91$, $p < 0.01$, $n = 4,491$). There was no significant difference for car performance ($n = 4,519$), saving money on fuel costs ($n = 4,516$), car styling, finish, and comfort ($n = 4,515$), reducing environmental impacts ($n = 4,510$), or HOV lane access ($n = 4,500$).



Respondents within a DAC were much less likely to live in a detached house than respondents outside a DAC (Figure 36). Results from Figure 37 show the median income is lower for respondents within a DAC, and Figure 38 suggests respondents within a DAC are less likely to identify as white or Caucasian.

Figure 36. Responses To "What Type Of Residence Do You Live In?" By Disadvantaged Community Status

Responses from participants within a DAC and those outside a DAC are significantly different (chi-squared test: $\chi 2 = 298$, $p < 0.01$, $n = 4{,}378$).

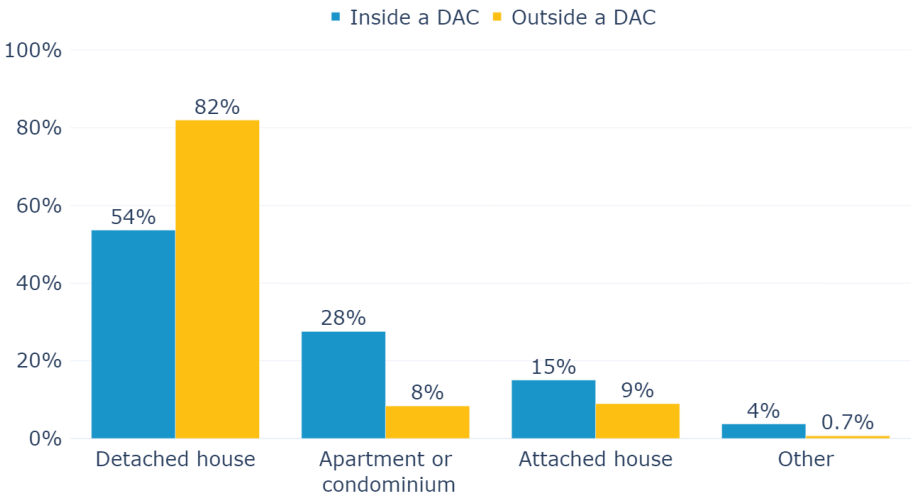


Figure 37. Annual Gross (Pre-Tax) Household Income From All By Disadvantaged Community Status

Responses from participants within a DAC and those outside a DAC are significantly different (chi-squared test: $\chi 2 = 94$, $p < 0.01$, $n = 3{,}728$).

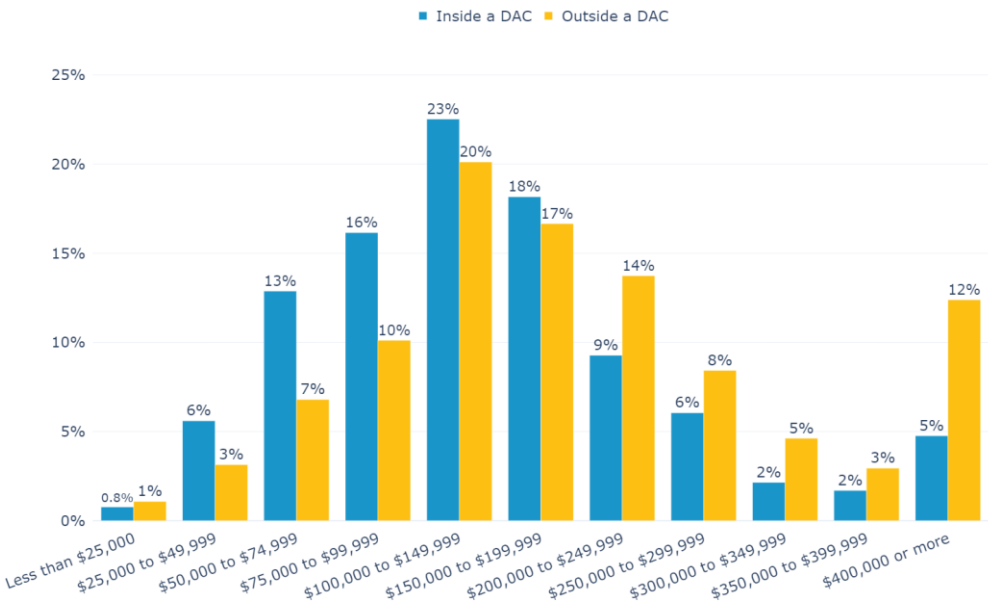
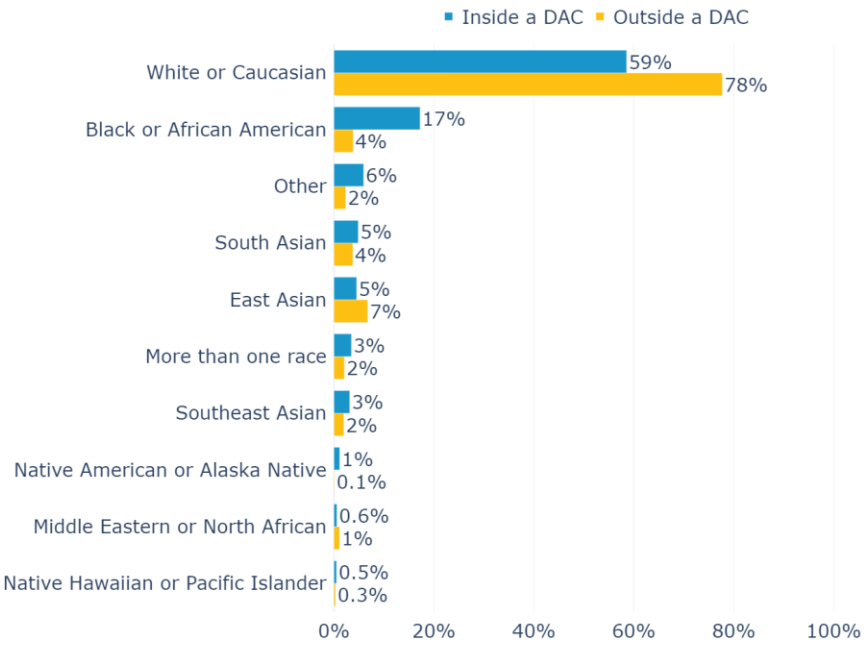


Figure 38. Responses To "How Do You Prefer To Describe Your Racial/Ethnic Identity?" By Disadvantaged Community Status

Responses from participants within a DAC and those outside a DAC are significantly different (chi-squared test: $\chi 2 = 222$, $p < 0.01$, $n = 3{,}882$).



3 Discussion

The Ownership Survey results provide multiple indications that participants continue to be satisfied with their electric cars. Most respondents (81%) said they were very or extremely satisfied and the same percentage said they would "probably" or "definitely" recommend electric car ownership to others. Respondents also reported a high likelihood of acquiring an electric car again, with 78% of respondents saying they were likely or extremely likely to purchase or lease an electric car in the future.

While the overall satisfaction with electric car ownership was high, the survey highlighted challenges that electric car drivers face, and these challenges reflect the same results as last year. Issues related to charging infrastructure were frequently experienced by participants: 50% reported that access to public charging stations was one of the top challenges they've faced, and only 15% thought there were enough public chargers. In addition to a perceived lack of charging infrastructure, other challenges selected by respondents were range limitations and the speed of car charging (55% and 51%, respectively).

A third of BEV respondents (34%) and about half of PHEV respondents (51%) charge at home daily. These percentages decreased slightly as compared to last year's results of 37% and 56% for BEV and PHEV respondents, respectively. Compared to last year's results, respondents drove fewer miles overall which may indicate the lower frequency of charging their electric car, though further research is recommended to understand the changes in home charging trends. The frequency of using a public charger at least a few times a month decreased from last year's survey results, from 77% to 73% for BEV respondents and from 40% to 32% for PHEV respondents.

Survey respondents were demographically similar to new car buyers in the Strategic Vision New Vehicle Experience Survey in terms of percentage that indicated they were solely white or Caucasian (75% in Ownership Survey and 76% in NVES results), but were dissimilar otherwise. Survey respondents were more likely to identify as male (69% vs 55%), to be 40 years old or older (83% vs 76%), to have a bachelor's degree or higher (76% vs 64%), to have a household income greater than $100,000 (77% vs 55%), and to own a home (85% vs 77%).

The ownership survey provided insight into the electric car ownership experience of respondents and revealed some areas, like public charging infrastructure, that indicate progress with room for further improvements. Charging behavior continues to evolve among both BEV and PHEV drivers as battery technology advances and the electric car market matures.

Appendix A. Ownership Survey Questionnaire

A.1 Introduction

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

Your participation in this 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 should be completed by the primary driver of the car. If you aren't the primary driver, we encourage you to have them 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

A.2 Car Status

Page exit logic: Skip / Disqualify Logic **IF:** #1 Question "According to our records, you received a rebate for a **[question('value'), id='17'] [question('value'), id='18']**. Does your household still have this electric car?" is one of the following answers ("No, but my household has a different electric car","No, my household no longer owns an electric car") **THEN:** Jump to page 11 - Disqualification - rebated car no longer in use

Logic: Show/hide trigger exists.

According to our records, you received a rebate for a **[question('value'), id='17'] [question('value'), id='18']**. Does your household still have this electric car?*

( ) Yes

( ) No, but my household has a different electric car
( ) No, my household no longer owns an electric car

Logic: Hidden unless: #1 Question "According to our records, you received a rebate for a [question('value'), id='17'] [question('value'), id='18']. Does your household still have this electric car?" is one of the following answers ("Yes","No, but my household has a different electric car")

Are you the primary driver of your electric car?

( ) Yes
( ) No

Logic: Hidden unless: #1 Question "According to our records, you received a rebate for a [question('value'), id='17'] [question('value'), id='18']. Does your household still have this electric car?" is one of the following answers ("No, but my household has a different electric car","No, my household no longer owns an electric car")

Please describe what happened to your rebated [question("value"), id="17"] [question("value"), id="18"].

( ) I sold it or traded it in.
( ) I donated it or gave it to someone else.
( ) It was damaged or stolen.
( ) Other, please specify:

A.3 Household Cars

Please tell us how many of each of the following cars your household currently owns (exclude motorcycles, RVs, and non-highway-capable cars).

Car Technology Type	0	1	2	3 or more
Gasoline car:	___	___	___	___
Conventional hybrid car (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 car:	___	___	___	___
Compressed natural gas car:	___	___	___	___

Flex-fuel (E85 ethanol) car:	___	___	___	___
Other alternatively fueled car:	___	___	___	___

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.

A.4 Satisfaction with Electric Car Ownership

Overall, how satisfied are you with your experience owning an electric car?

( ) Not at all satisfied
( ) Slightly satisfied
( ) Moderately satisfied
( ) Very satisfied
( ) Extremely satisfied

On a scale of 1 to 5 (with 1 representing "Not at all important" and 5 representing "Extremely important"), please indicate how important the following aspects of electric car ownership are to you.

Aspects of Electric Car Ownership	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	( )	( )	( )	( )	( )
Ability to charge at home	( )	( )	( )	( )	( )
Ability to charge at work	( )	( )	( )	( )	( )
Ability to charge at public charging stations	( )	( )	( )	( )	( )
Speed of refueling	( )	( )	( )	( )	( )
Car performance	( )	( )	( )	( )	( )

Car styling, finish, and comfort	( )	( )	( )	( )	( )
Owning the newest technology	( )	( )	( )	( )	( )

Validation: Max. answers = 3 *(if answered)*

Logic: Hidden unless: (nyfueltype matches regex pattern "BEV" OR nyfueltype matches regex pattern "PHEV")

What are the three greatest challenges to owning an electric car in New York?

[ ] Cost of charging
[ ] Overall cost of ownership
[ ] Car performance in cold/inclement weather
[ ] Car maintenance
[ ] Overall car performance
[ ] Charging at home
[ ] Access to public charging stations
[ ] Speed of car charging
[ ] Range limitations
[ ] Other, please specify: _____

Validation: Max. answers = 3 *(if answered)*

Logic: Hidden unless: nyfueltype matches regex pattern "FCEV"

What are the three greatest challenges to owning an electric car in New York?

[ ] Cost of hydrogen fueling
[ ] Overall cost of ownership
[ ] Car performance in cold/inclement weather
[ ] Car maintenance
[ ] Overall car performance
[ ] Access to fueling stations
[ ] Functionality of fueling stations
[ ] Range limitations
[ ] Other, please specify: _____

A.5 Electric Car Driving

How often do you use your electric car to do the following?

Electric Car Usage	Never	A few times per month or less	About once per week	A few times per week	Daily or almost daily
Commute all the way to and from work	( )	( )	( )	( )	( )
Commute partway to or from work (e.g., driving to a park-and-ride lot)	( )	( )	( )	( )	( )
Run local errands (< 10 miles from home)	( )	( )	( )	( )	( )
Take long trips (>50 miles from home)	( )	( )	( )	( )	( )
As a car for ride sourcing services (e.g., Uber, Lyft)	( )	( )	( )	( )	( )

Validation: Min = 0 Max = 500 Must be numeric Whole numbers only Positive numbers only Min character count = 0

About how many miles do you drive your electric car per day?

_____

Validation: Min = 0 Max = 75000 Must be numeric Whole numbers only Positive numbers only

How many total miles have you driven your electric car so far?

_____

Validation: Min = 0 Max = 100

Logic: Hidden unless: nyfueltype matches regex pattern "PHEV"

What percent of your total miles driven have been **electric** miles?

0 _____[__]_____ 100

Please list the 5-digit ZIP code of your place of employment, if applicable.

Validation: Max character count = 5 Min character count = 5

Logic: Show/hide trigger exists.

ZIP code: _____

Logic: Show/hide trigger exists. Hidden unless: Question "ZIP code:"

OR select one of the following:

( ) I don't work
( ) I work at home
( ) My work location varies

Page entry logic: This page will show when: (nyfueltype matches regex pattern "PHEV" OR nyfueltype matches regex pattern "BEV")

A.6 Charging

Logic: Show/hide trigger exists. Hidden unless: Question "OR select one of the following:" is not one of the following answers ("I don't work","I work at home")

Do you have access to charging at your place of work?

( ) Yes, and I can charge for free.
( ) Yes, and I must pay to charge.
( ) No
( ) I don't know

How often do you charge at each of the following locations?

Charging Locations	Never	A few times a month or less	About once per week	A few times per week	Daily or almost daily
At my home:	( )	( )	( )	( )	( )
Onsite at my workplace:	( )	( )	( )	( )	( )
Where I park during work (I don't park onsite at work):	( )	( )	( )	( )	( )

At other public charging stations:	( )	( )	( )	( )	( )
Other	( )	( )	( )	( )	( )

Logic: Hidden unless: Question "Other" is one of the following answers ("A few times a month or less","About once per week","A few times per week","Daily or almost daily")

Please specify the other charging location

_____

Logic: Hidden unless: Question "At my home:" is one of the following answers ("A few times a month or less","About once per week","A few times per week","Daily or almost daily")

Which charging method(s) are you currently using when charging at home? [select all that apply]

[ ] Plugging directly into a 120V outlet (typical household outlet)
[ ] Plugging directly into a 240V outlet (e.g., dryer outlet)
[ ] Using a level 1 (120V) charging station
[ ] Using a level 2 (240V) charging station

How much do you disagree or agree with the following statements?

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
There are enough public chargers.	( )	( )	( )	( )	( )
Public charging stations are often in use by others when I want to charge.	( )	( )	( )	( )	( )
There are public charging stations in the places where I need them.	( )	( )	( )	( )	( )
Public charging stations are often not working when I want to use them.	( )	( )	( )	( )	( )
I frequently see gasoline-fueled cars parked in spaces with public electric car chargers.	( )	( )	( )	( )	( )

Logic: Hidden unless: #14 Question "Do you have access to charging at your place of work?" is one of the following answers ("Yes, and I can charge for free.","Yes, and I must pay to charge.")

How much do you disagree or agree with the following statements?

Statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
There are enough workplace chargers.	( )	( )	( )	( )	( )
Workplace charging stations are often in use by others when I want to charge.	( )	( )	( )	( )	( )
Workplace stations are often not working when I want to use them.	( )	( )	( )	( )	( )
I frequently see gasoline-fueled cars parked in spaces with workplace electric car chargers.	( )	( )	( )	( )	( )

Page entry logic: This page will show when: nyfueltype matches regex pattern "FCEV"

A.7 Fueling

How often do you refuel your fuel-cell electric car?

( ) Less than once per month
( ) About once per month
( ) A few times per month
( ) About once per week
( ) A few times per week
( ) Daily or almost daily

When you visit a fueling station, how often is it out of order?

( ) I have never encountered a station that was out of order
( ) Rarely
( ) Sometimes
( ) Frequently
( ) Almost always

A.8 Program Performance/Efficacy

Logic: Show/hide trigger exists.

Would you recommend electric car ownership to other people?

( ) Definitely would not recommend
( ) Probably would not recommend
( ) Not sure
( ) Probably would recommend
( ) Definitely would recommend

Logic: Hidden unless: #22 Question "Would you recommend electric car ownership to other people?" is one of the following answers ("Definitely would not recommend","Probably would not recommend")

Please share the main reason(s) why you wouldn't recommend an electric car.

_____

_____

Have any of your friends or family purchased/leased an electric car since you acquired your electric car?

( ) Yes
( ) No
( ) I don't know

How likely are you to purchase/lease another electric car in the future?

( )Not at all likely/Extremely unlikely
( ) Unlikely
( ) Not sure
( ) Likely
( ) Extremely likely

Would you purchase or lease another electric car if the New York State electric car rebate (Drive Clean Rebate) were not available?

( ) Yes
( ) No

A.9 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.

Do you own or rent your residence?*

( ) Own
( ) Rent
( ) Neither rent or own
( ) Prefer not to answer

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

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.

How many people live in your household, including yourself?

( ) 1
( ) 2
( ) 3
( ) 4
( ) 5
( ) 6
( ) 7
( ) 8
( ) 9 or more

What is your age?*

( ) 16–20

( ) 21–29
( ) 30–39
( ) 40–49
( ) 50–59
( ) 60–69
( ) 70–79
( ) 80+
( ) Prefer not to answer

What is your gender?*

( ) Female
( ) Male
( ) Non-binary/third gender
( ) Prefer to self-describe:: _____
( ) Prefer not to answer

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

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 $249,999
( ) $250,000 to $299,999
( ) $300,000 to $349,999
( ) $350,000 to $399,999
( ) $400,000 or more
( ) Prefer not to answer

Are you Hispanic or Latino/a?*

( ) Yes
( ) No
( ) Prefer not to answer

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

[ ] Black or African American
[ ] East Asian
[ ] Middle Eastern or North African
[ ] Native American or Alaska Native
[ ] Native Hawaiian or Pacific Islander
[ ] South Asian
[ ] Southeast Asian
[ ] White or Caucasian
[ ] Other, please specify: _____*
[ ] Prefer not to answer

A.10 Other comments

Page exit logic: Skip / Disqualify Logic**IF:** #1 Question "According to our records, you received a rebate for a **[question('value'), id='17'] [question('value'), id='18']**. Does your household still have this electric car?" is one of the following answers ("Yes") **THEN:** Jump to page 12 - Thank You! Flag response as complete

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

Please be sure to click “Next” at the bottom of the page to complete the survey.

_____

_____

A.11 Disqualification - rebated car no longer in use

Unfortunately, you do not qualify for this survey at this time. You indicated that you no longer own the car associated with your survey invitation.

However, we welcome you to provide any feedback you have about the Drive Clean Rebate and your experience owning your electric car in the comment box below. Please be sure to select "Submit" so your comments are saved.

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

Please share any comments in the box below.

_____

_____

A.12 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

Endnotes

[1] Program participants are invited to take the Ownership Survey once per quarter. Therefore, the time since they have acquired their vehicle ranges from 9.4 – 14.1 months.

[2] Defined as using their vehicle a few times per week or more.

[3] Program participants are defined as purchasers or lessees of an eligible zero or low emission car from a participating dealership and received a rebate, in the form of car price reduction, through NYSERDA's Drive Clean Rebate Program.

[4] For example, participants who purchased their car anytime during quarter one 2024 receive the survey invitation in the middle of quarter one 2025. Therefore, they may have been in possession of their car anywhere from 9.4 – 14.1 months.

[5] The weighting approach was developed in C. Johnson, B.D. Williams, C. Hsu, J.B. Anderson, Summary Documentation of the Electric Vehicle Consumer Survey, 2013–2015 Edition | Clean Vehicle Rebate Project, Center for Sustainable Energy (CSE), San Diego CA, 2017. Accessed February 5, 2020.

[6] Raking, also known as iterative proportional fitting, is a technique used to match distributions from a sample to the known distributions of the broader population.

[7] Similar segmentation methodology is used in B.D. Williams, J. Orose, M. Jones, J.B. Anderson, Summary of Disadvantaged Community Responses to the Electric Vehicle Consumer Survey, 2013–2015 Edition | Clean Vehicle Rebate Project, Center for Sustainable Energy (CSE), San Diego CA, 2018. Accessed July 1, 2020.

[8] Rao, J. N. K., and A. J. Scott. 1984. On chi-squared tests for multiway contingency tables with cell proportions estimated from survey data. Annals of Statistics 12: 46–60.

[9] The Holm-Bonferroni Method reduces the possibility of getting falsely statistically significant results (Type I error) when performing multiple tests by adjusting the raw p-values for the comparisons.

[10] The NVES sample does not include Tesla consumers. However, as the Drive Clean Rebate Program is a new-car program, new-car buyers are the appropriate baseline for comparison.

[11] Strategic Vision. (2022). *New Vehicle Experience Study (NVES), special New York data extraction, 2022* [Data set]. The Edwards Associates, Inc. dba Strategic Vision.

[12] Responses from BEV and PHEV consumers are significantly different (chi-squared test: $\chi 2 = 37$, $p = 0.01$, $n = 4{,}605$).

[13] The ratio of electric car per charger in New York State is 18.5 electric cars per Level 2 port and 65.77 BEVs per DCFC port (accessed March 11, 2026 from the NYSERDA Electric Vehicle Registration Map, last updated February 9, 2026). Although there is no standard for identifying the ideal electric car to charger ratio, sources like the HERE-SBD EV Index and the post "When and Where Should We Install EV Chargers?" by the Transportation Energy Institute, noted 10 to 20 BEVs per charger and 10.4 electric car to charger, respectively, to support the growth of the electric car market. The current ratio of electric car per charger for New York state is higher than the ratio listed in these two sources.

[14] Note that multiple options could be selected, so percentages do not add to 100%.

[15] The disadvantaged community webpage contains the finalized criteria as defined by New York State.