



# A NATIONWIDE STUDY

## OF THE ELECTRIC VEHICLE SHOPPING EXPERIENCE



November 2019



## ACKNOWLEDGMENTS

This report was written by the Sierra Club's **Hieu Le** and **Andrew Linhardt**. Hieu served as the overall project manager for the campaign and report.

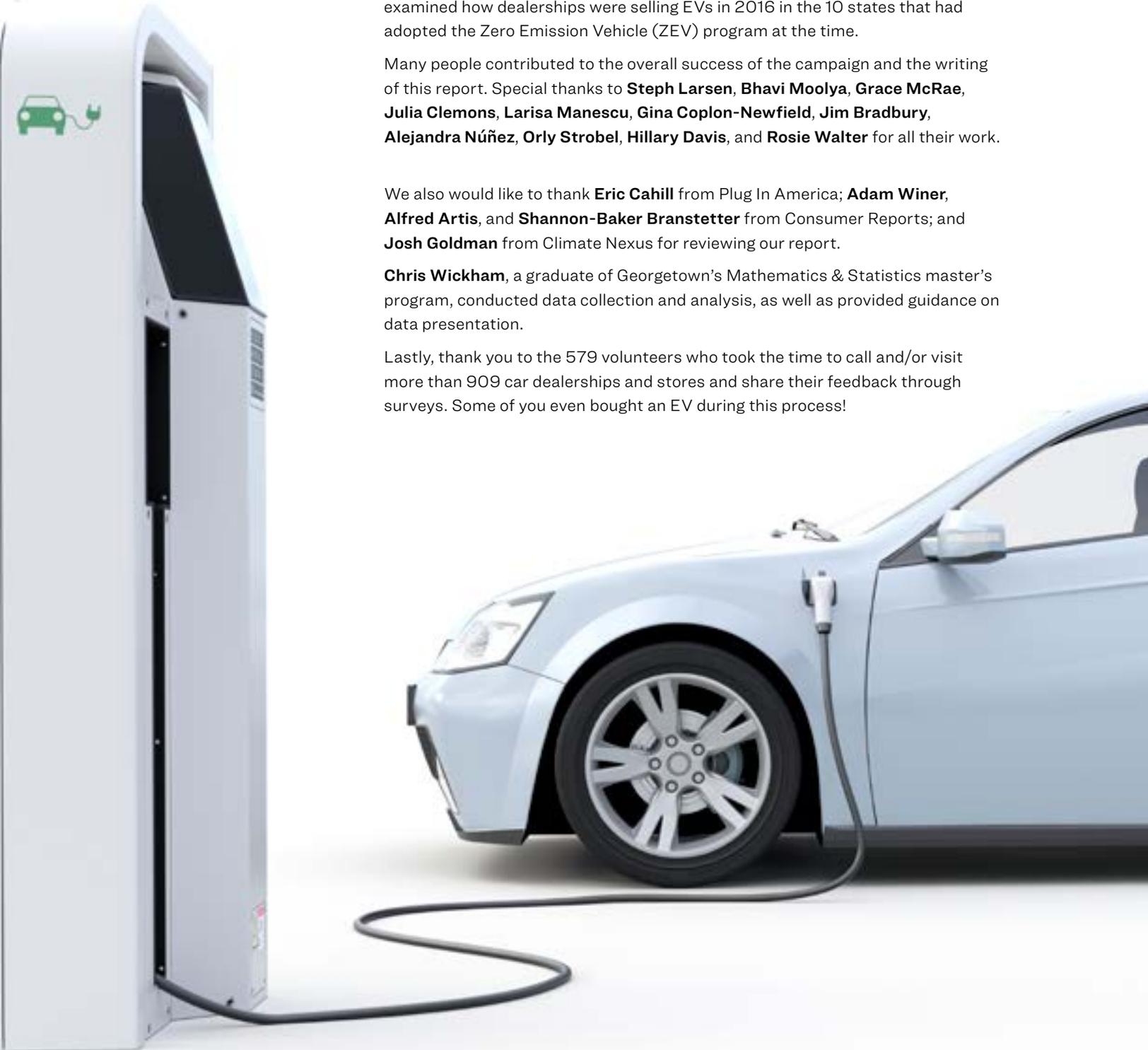
Thank you to the Sierra Club's **Mary Lunetta** and **Gina Coplon-Newfield**, who wrote and published the original "[Rev Up Electric Vehicles](#)" report<sup>1</sup>, which examined how dealerships were selling EVs in 2016 in the 10 states that had adopted the Zero Emission Vehicle (ZEV) program at the time.

Many people contributed to the overall success of the campaign and the writing of this report. Special thanks to **Steph Larsen**, **Bhavi Moolya**, **Grace McRae**, **Julia Clemons**, **Larisa Manescu**, **Gina Coplon-Newfield**, **Jim Bradbury**, **Alejandra Núñez**, **Orly Strobel**, **Hillary Davis**, and **Rosie Walter** for all their work.

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Lastly, thank you to the 579 volunteers who took the time to call and/or visit more than 909 car dealerships and stores and share their feedback through surveys. Some of you even bought an EV during this process!

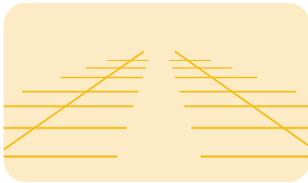


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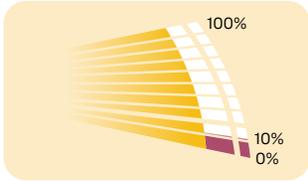
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# KEY FINDINGS



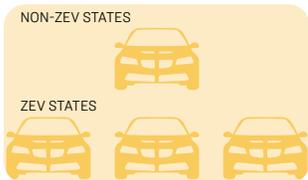
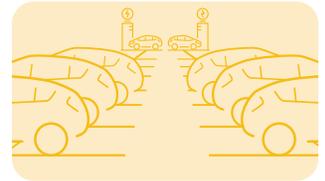
**74%** of auto dealerships nationwide aren't selling electric vehicles.

**Salespeople** often failed to provide information on federal or state consumer incentives or were poorly informed or uninformative about EV technology.



**10%** of the time when volunteers asked to test drive an EV, the vehicle was insufficiently charged and unable to be driven.

**44%** of the dealerships that did sell electric vehicles had no more than two EVs available on the lot. Of the dealerships that sold EVs, more than 66% did not display EVs prominently, with vehicles sometimes buried far in the back.



**Non-ZEV** states had much more limited EV inventory compared with ZEV states which had more EVs offered.

**The Western region** of the US had more inventory, greater EV availability, and the highest consumer satisfaction.



Respondents reported that **25%** of dealerships contacted that had at least one EV on their lots offered both new and used EVs — a sign of the growing market for used EVs.

Among automakers, **Tesla** was reported as providing the best consumer shopping experience, with an average satisfaction score of **4.5** out of **5**.



**Chrysler** was reported as providing the worst consumer shopping experience, with an average satisfaction score of **2.9** out of **5**.

# INTRODUCTION

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The [2018 IPCC report “Global Warming of 1.5°C”](#)<sup>2</sup> details the critical challenge the world and our country face in attempting to prevent the worst impacts of the global climate crisis. The United States accounts for approximately 15% of global emissions, with the leading source being our [transportation sector](#)<sup>3</sup>. Together with the 2012 federal clean car standards, which is the most significant US climate policy ever enacted, accelerating the adoption and sales of electric vehicles (EVs) is crucial to tackling the climate crisis.

EV technology has advanced significantly in the US since 2016. Automakers now offer more than 40 models (with many more to come), and EVs produce significantly lower emissions than cars with internal combustion engines. This is true even after accounting for any emissions associated with the electricity that is used to charge electric vehicles. EVs will become even cleaner as electricity generation increasingly shifts to renewable sources. This isn't the case for internal combustion engine vehicles, as their reliance on fuel contributes to increasing emissions from the oil and gas sector, which emitted [315 million metric tons of CO<sub>2</sub>](#) in 2018, according to the [EPA](#). However, [comprehensive research](#) suggests that actual emissions from the oil and gas sector are likely to be at least 60–100% higher than EPA's estimates suggest.<sup>4</sup> Fuel from light and heavy duty internal combustion vehicles account for 70% of petroleum consumption in the nation.

EVs currently are [projected](#) to account for more than 57% of global car sales by 2040. To meet our climate goals, though, we must accelerate that timeline dramatically.

In 2018, EV sales had a historic year; combined with widespread consumer interests, like the fact that two-thirds of American consumers have [expressed interest](#) in purchasing an EV, the U.S. EV market could be even bigger as technology is ready to meet the driving needs of millions of Americans.

As of the date of publication of this report, the Trump administration has taken the unprecedented step of revoking the Clean Air Act authority that allows for California and the other “clean car states” to enact strong clean car standards, including the ZEV program — which requires automakers to sell increasing numbers of EVs. California, other states, and a number of environmental and consumer organizations, including the Sierra Club, are challenging the administration's unlawful action in the courts.

Three years ago, the Sierra Club released [“Rev Up Electric Vehicles: Multi-State Study of the Electric Vehicle Shopping Experience,”](#)<sup>5</sup> a report based on a grassroots initiative that sent volunteers to car dealerships and stores to evaluate how the auto industry was selling EVs and what the consumer shopping experience was like in the 10 states that had adopted the ZEV standards. The resulting report highlighted that EVs were not being displayed prominently and were hard to locate on the lots; many salespeople did not have a basic knowledge of EVs, such as charging times and the availability of rebates and incentives; and some EVs were not charged properly for a test drive.

Our volunteer observations and experiences shopping for an EV, combined with auto industry advertising data from 2017 and 2018, which shows that the industry is spending 28 times more on national advertising for internal combustion engine vehicles than on advertising EVs, indicated very clearly that the auto industry was failing to meet the EV demands expressed by consumers and is providing them with a bad shopping experience.

In May 2019, we launched a new initiative to update our original report, with the goal of showing how well or poorly the auto industry is doing now in providing people with a strong EV shopping experience — this time covering the entire country. This is the first-ever nationwide investigation into the shopping experience for consumer EVs. Based on survey responses and testimonials from volunteers who called or visited 909 auto dealerships and stores across all 50 states, we found that the auto industry is failing to meet market demands. **Shockingly, we found that 74% of auto dealerships nationwide do not have a single EV on their lot for sale and that consumers were still not being given important information about charging, battery range, and financial incentives.** In some instances, volunteers indicated that they could not go for a test drive because the vehicle

was insufficiently charged or that they were encouraged to purchase a non-electric vehicle instead.

Automakers talk a good game about their desire to accelerate the EV market. They claim they are doing their best but consumers just aren't interested. Our survey results show very clearly that this is not the case in the US.

### DETROIT NEWS<sup>6</sup>

“We’re working very hard to be — not part of the problem — but to be part of the solution”

— HONDA MOTOR CO.’S VICE PRESIDENT OF ENVIRONMENTAL VEHICLES, **STEVE CENTER**

### REUTERS<sup>7</sup>

“We’re all in on this and we’re taking our mainstream vehicles, our most iconic vehicles, and we’re electrifying them”

FORD MOTOR COMPANY TO REPORTERS

### GENERAL MOTORS

“We’re committed to an all-electric future...It’s a simple equation: More electric vehicles on the road means fewer emissions and cleaner air for all.”

COMPANY WEBSITE

### CNN<sup>8</sup>

Volkswagen, which has paid more than \$30 billion in penalties since being caught in 2015 rigging the emissions of millions of diesel cars, has embraced electrics...“Volkswagen will change radically,” CEO Herbert Diess told shareholders in March. “Some of you may still be rubbing your eyes in amazement...”

CNN BUSINESS REPORT

People are eager for EVs, but the auto industry makes it difficult for them to shop for EVs. Instead of investing in an electric future that will meet our climate goals, the auto industry is doubling down on selling internal combustion engine vehicles and failing to train dealerships properly on how to sell EVs. Our study collected data from all 50 states and offers a snapshot of how EVs are being sold in different regions and of how states that follow California’s ZEV standards compare with states that do not.

Some of our volunteers did indicate that they had a tremendous EV shopping experience and were impressed with both the salespeople and the level of information provided. Some of them even ended up purchasing a new EV! We’ve made sure to highlight the auto dealerships and automakers that are doing a good job.



PHOTO CREDIT: PLUG IN AMERICA // BEE TWO SWEET

# AVAILABILITY & INVENTORY

If we are to achieve widespread EV adoption, a majority of auto dealerships still need to take the first step and offer EVs for sale. Automakers also need to provide dealerships with sufficient inventory and offer deals on EVs, just as they do for internal combustion engine vehicles. As it stands, consumers who wish to buy an EV must usually call or visit several auto dealerships before finding one that offers EVs.

To get a clearer picture of what EV availability looks across the US, we analyzed data for auto dealerships nationwide:

- Nationwide, **74%** of auto dealerships had no EVs for sale on their lots.
- In non-ZEV states, EV availability was even lower: More than **78%** of auto dealerships in those states had no EVs on their lots.
- In the 10 ZEV states, our volunteers found that **59%** of auto dealerships had no EVs on their lots.

We gave our volunteers the option of asking auto dealership personnel why they did not offer EVs. The answers and reasons varied:

*“I asked if they had any Chevy Bolts (the BEV). They said that they did not. ‘We don’t have any. They only sell them out in Oregon and California. It’s a West Coast thing.’ They did have one used 2017 Chevy Volt (the PHEV).”*

LESTER L. (CHEVROLET DEALERSHIP IN KANSAS)

*“[They said] ‘We are going to let the other car companies figure EVs out. Lexus is going to be late to the game.’”*

CHLOE S. (LEXUS DEALERSHIP IN TEXAS)

*“Oddly, the salesperson told me he loves gas cars, the more gas the better, you will NEVER see EVs used for racing.”*

HOLLY L. (CHEVROLET DEALERSHIP IN FLORIDA)

## Auto Dealerships That Do Sell EVs

When shopping for internal combustion engine vehicles, consumers expect a wide selection and often get their choice of color, trim, and other packages. EV consumers deserve the same standards for inventory and selection.

Although the percentage of auto dealerships that don’t offer EVs is significantly higher, we wanted to examine what

inventory looked like for the minority of dealerships that do sell EVs.

For the dealerships that did have EVs on their lots, we asked our volunteers to observe (in a range approximation) how many EV models were on their lots:

- Of the dealerships contacted that had at least one EV on their lot, **43%** had no more than two vehicles.
- **19%** of the dealerships that sold EVs had 3 to 5 vehicles, while **11%** had 6 to 10.
- Only **9%** of dealerships that sold EVs followed the recommendation of industry experts to offer more than 10 vehicles.

*“Only one Leaf in stock due to ‘low demand and scarcity’”*

RUSS G. (NISSAN DEALERSHIP IN TEXAS)

*“This was the only dealership in the area with an EV to test drive. They did not have the Leaf Plus, which would’ve had a 200-mile range.”*

JUDY H. (NISSAN DEALERSHIP IN VIRGINIA)

*“Although inventory may have sold out by now, Century Chevrolet in Broomfield, Colorado, had an extensive selection of Chevy Bolts when I was there. They were pleasant to work with. The car is awesome. It’s like a quiet jet when accelerating.”*

GREG J. (CHEVROLET DEALERSHIP IN COLORADO)

## Visibility

Our volunteers reported that finding EVs on the lot was often difficult. Of the dealerships that sold EVs, more than 66% did not display EVs prominently, with vehicles sometimes buried far in the back and hard to spot. Instead, EVs and charging stations should be featured prominently, as that would increase consumer interest.

*“Vehicle was buried in the lot in the far back. It was completely dead. Had to jump-start the vehicle because it sat so long.”*

**CJ M. (CHRYSLER DEALERSHIP IN DELAWARE)**

*“No EV info was displayed prominently on the website. No 2020 Leafs w/bigger battery packs/extended range and performance were available.”*

**JERRELL L. (NISSAN DEALERSHIP IN TEXAS)**

*“I asked for a test drive and that took another 15 minutes to arrange, because as he said, ‘Whoa, the Leaf is really buried back there. I’m talking deep deep! We’ll need to move a bunch of cars to get it out.’”*

**DAWN H. (NISSAN DEALERSHIP IN CONNECTICUT)**

*“The EV models were parked right out front. The test drive was great and solidified my commitment to buying an Ioniq EV, although I bought from another dealership that offered a lower price and the color I wanted.”*

**ALYSON B. (HYUNDAI DEALERSHIP IN MARYLAND)**

## EV Knowledge and Consumer Incentives

Consumers often have many questions related to EV technology, such as charging and battery range. They also want to know the specifics of federal and state incentives that reduce the upfront costs of purchasing or leasing an EV. Having well-trained staff who can answer such questions will both sell more EVs and provide a better shopping experience, especially since EVs are still relatively new to the majority of consumers.

We asked our volunteers to observe the expertise of the salespeople and/or dealership staff and to note whether information about EV charging and financial incentives was provided up front or not at all.

## EXPERTISE ON CHARGING AND BATTERY RANGE

- In **29%** of the dealerships visited, salespeople provided information up front without being asked on information relating to charging and battery range.
- In **28%** of the dealerships visited, salespeople provided no information at all about how to charge an electric vehicle.
- In **20%** of the dealerships visited, salespeople did offer information about charging, but only after our volunteers requested it.

*“The salesperson didn’t really understand PHEVs. He thought if we drove it a few miles it would charge up the battery so I could drive it in electric mode.”*

**ROY I. (KIA DEALERSHIP IN ARIZONA)**

## EXPERTISE ON CONSUMER INCENTIVES

- In **31%** of the dealerships visited, salespeople did not provide any information on state and federal incentives.
- In **27%** of the dealerships visited, salespeople provided information up front without being asked.
- In **20%** of the dealerships visited, salespeople did offer information about incentives, but only after our volunteers requested it.

*“The worst! He provided incorrect information and delivered it with confidence. He said you could only claim the federal credit once (he said since I already own a Tesla, I couldn’t get a tax credit on a Leaf— wrong!). When I said, “What about the CT tax credit?” He answered, “Don’t you mean the federal? I’m not aware of anything for Connecticut.” This is also wrong. In CT, there’s a credit for vehicles under \$50K under a program called CHEAPR. I informed him of both. He then responded that this was indeed a very good deal.”*

**DAWN H. (NISSAN DEALERSHIP IN CONNECTICUT)**

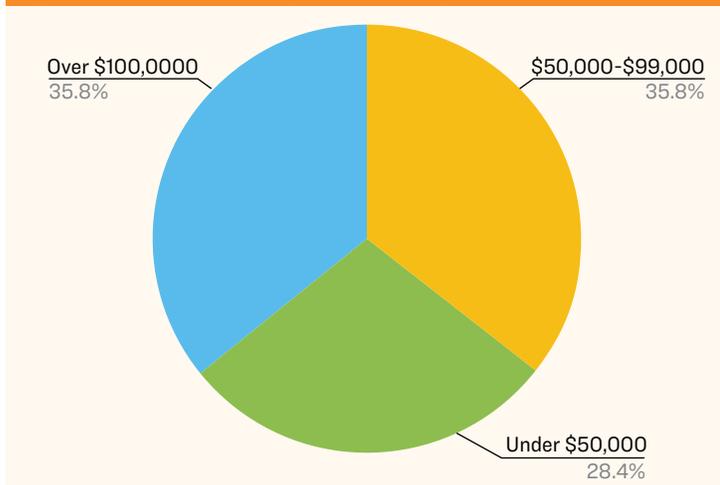
# CONSUMER INTEREST & AUTOMAKER EV ADVERTISING

In 2018, electric vehicle sales rose by more than **81%**<sup>9</sup> over the previous year. A 2019 [study](#)<sup>10</sup> by Consumer Reports and the Union of Concerned Scientists found that nearly two-thirds of prospective US buyers are considering purchasing an electric vehicle in the future:

- **31%** would consider an electric vehicle for their next purchase.
- **27%** would consider an electric vehicle at some point down the road.
- **5%** say they are definitely getting an electric vehicle the next time they purchase a vehicle.

The study also found that people across all income levels are interested in EVs as they become more affordable and popular across all demographics, with people of color more likely to consider going electric than all buyers combined (42% vs. 36%).

**Figure 1: Incomes of Prospective EV Buyers**



The study also found that a majority of Americans support making more electric vehicle models available and that [more than three-quarters of prospective car buyers are unaware whether their state currently offers any discounts, rebates, or credits](#) for purchasing or leasing EVs<sup>11</sup>. This is something that can be resolved.

## Automaker EV Advertising Data

In the time since our original 2016 Rev Up EVs report was published, the US auto industry has made no serious effort to boost electric vehicle sales or provide people interested in EVs with an excellent shopping experience. Northeast States for Coordinated Air Use Management (NESCAUM), a nonprofit association of air-quality agencies, analyzed advertising expenditures for the top six EV manufacturers (other than Tesla): General Motors, Toyota, Nissan, Ford,

Fiat-Chrysler, and Volkswagen. Their analysis compared the [2017](#)<sup>12</sup> and [2018](#)<sup>13</sup> advertising expenditures for manufacturers' EV models versus their best-selling internal combustion engine vehicles.

- The auto industry, in general, spends very little (and in some cases, nothing) on advertising electric vehicles, especially in comparison to what they spend on advertising their best-selling internal combustion engine vehicles.
- In 2017, total spending on national advertising for the best-selling internal combustion engine model of each manufacturer was \$540 million across six models, an average of \$90 million per model. The total spending on national advertising by the same manufacturers for electric vehicles was \$29 million across nine models, or an average of \$3.2 million per model. **That means the auto industry is spending 28 times more on national advertising for internal combustion engine vehicles than on advertising EVs.**
- In 2018, total spending on advertising for the best-selling internal combustion engine model of each manufacturer in the California and Northeast markets was \$230 million, an average of \$38 million per model. The total spending on advertising in the California and Northeast markets was \$22 million across six models, an average of \$3.7 million per model. **That means the auto industry is spending 10 times more on advertising in the California and Northeast markets for internal combustion engine vehicles than on advertising EVs.**<sup>14</sup>

This information helps explain why the feedback from our volunteers was not as positive as it should have been. The lack of EV advertising is one more clear example that the auto industry and car dealerships continue to focus on selling as many gas-guzzlers as possible, while only paying lip service to EVs.

*"Sales person told me that VW corporate didn't want them selling any electric cars at their dealership because there was such a poor charging infrastructure in place in the community."*

**MATTHEW A. (VOLKSWAGEN DEALERSHIP IN IOWA)**

*“Nobody knew. Negative false remarks about electric vehicles. Example prices all wrong. Salesperson said best range is 35 miles and car is super expensive.”*

**TOM C. (FORD DEALERSHIP IN FLORIDA)**

*“They claimed that there’s no demand on one hand, but the salesman also said that he had received several internet leads expressing interest in the Kona EV.”*

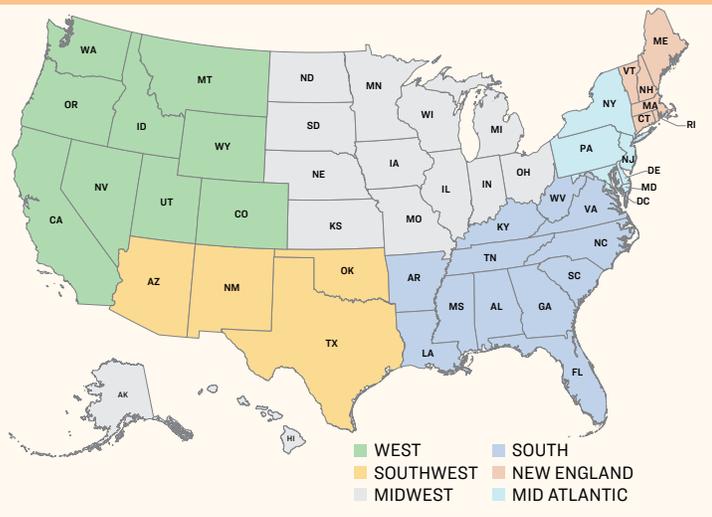
**SUSAN K. (HYUNDAI DEALERSHIP IN GEORGIA)**

## REGIONAL VARIATIONS

The experiences of our volunteers differed depending on where in the country they were. Unsurprisingly, dealerships in some regions provided a better EV consumer shopping experience than others did.

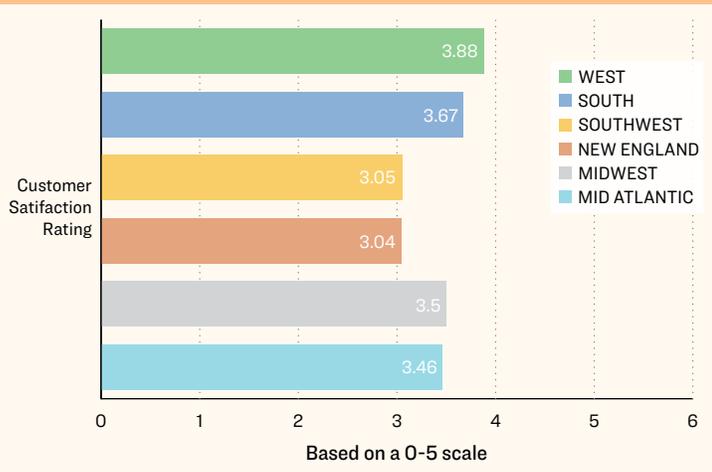
For purposes of this report, we compared results from six different regions: New England, the Mid-Atlantic, the South, the West, the Southwest, and the Midwest.

**Figure 2: Regions Reported On**

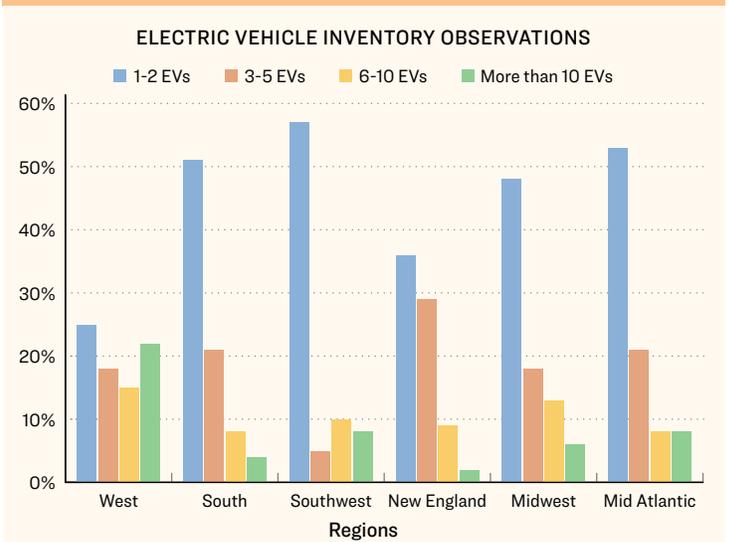


Our volunteers found that dealerships and automakers in the West did a far better job of selling EVs, while consumers in other areas of the country faced higher barriers to EV access and information.

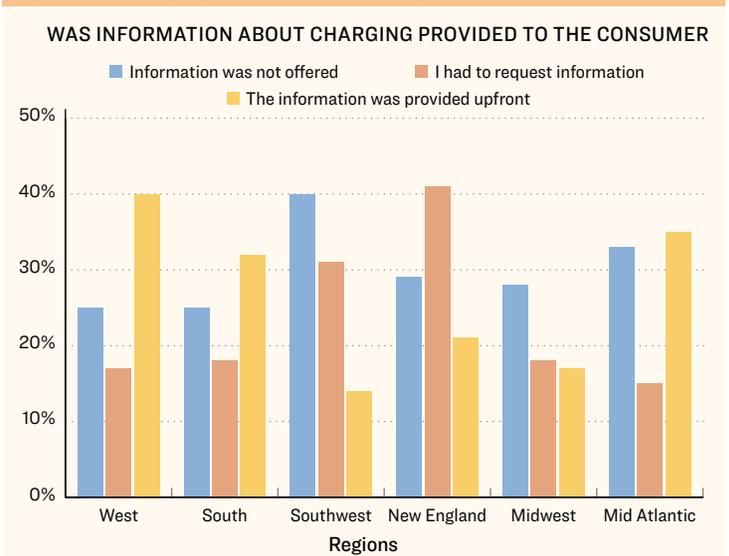
**Figure 3: Customer-Satisfaction Ratings**



**Figure 4: EV Inventories by Region**



**Figure 5: Charging Information by Region**





*“Salesman told me without hesitation that he doesn’t like hybrids or electric cars because he doesn’t want to deal with the cost of replacing the battery. He, like everyone else, didn’t factor in the savings.”*

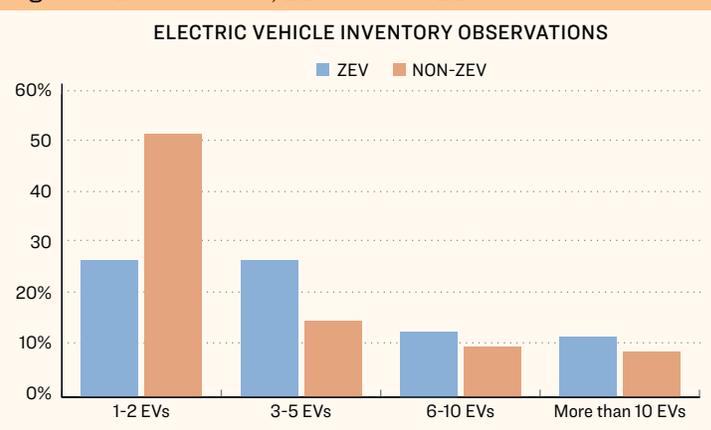
**CHRISTOPHER H. (HYUNDAI DEALERSHIP IN OREGON)**

dealerships in the states that had enacted the ZEV program were doing a much better job overall, resulting in a larger share of EVs being sold. To be clear, this is as a result of effort by both the dealerships and the automakers to provide inventory and increased salesperson training. In 2018, the US saw 328,118 EV sales — an increase of 81% from the previous year. The 10 ZEV states accounted for 63% of total EV sales (205,346), while non-ZEV states accounted for only 37% of total sales (122,772).

*“Salesman criticized the state’s Democratic governor for signing into law a requirement that 10% of all cars sold in next 10 years had to be electric. They had zero electric vehicles on the lot, all the vehicles were standard gas vehicles. I’ll never go back there but will get an auto broker.”*

**BETTY H. (TOYOTA DEALERSHIP IN COLORADO)**

**Figure 8: EV Inventories, ZEV and Non-ZEV States**



When volunteers visited dealerships, they found significant differences in inventory and number of EVs available between ZEV and non-ZEV states. Non-ZEV states had much more limited EV inventory; among those that offered EVs, a majority (52%) offered only from 1–2 EVs. In ZEV states, a majority (53%) offered more than two EVs, 27% offered from 3 to 5, 13% offered from 6 to 10, and 12% offered more than 10.

Differences in customer satisfaction between ZEV and non-ZEV states were statistically insignificant, except in California, where satisfaction was notably higher. However, salespeople at auto dealerships in ZEV states were more likely to provide information on charging, battery range, and federal and state rebates and incentives for consumers.

## AUTOMAKER BRAND VARIATIONS

Our volunteers contacted dealerships representing 19 different automobile brands:

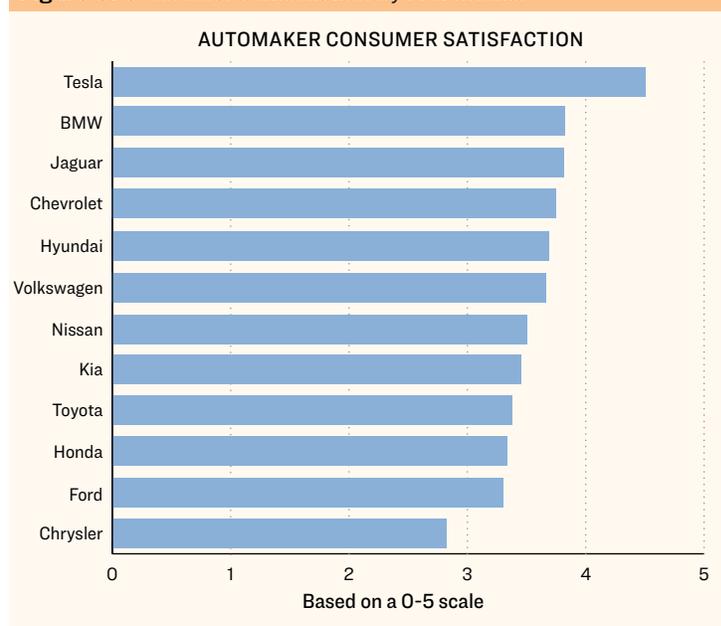
Audi, BMW, Chevrolet, Chrysler, Fiat, Ford, Honda, Hyundai, Jaguar, Kia, Lexus, Mercedes, Mini, Mitsubishi, Nissan, Subaru, Tesla, Volkswagen, and Volvo.<sup>15</sup>

We asked volunteers to rate their overall shopping experience at each dealership on a five-point scale. A score of 1 was considered “very negative” and a score of 5 was considered “very positive.” Figure 9 shows the average score for each automaker brand.

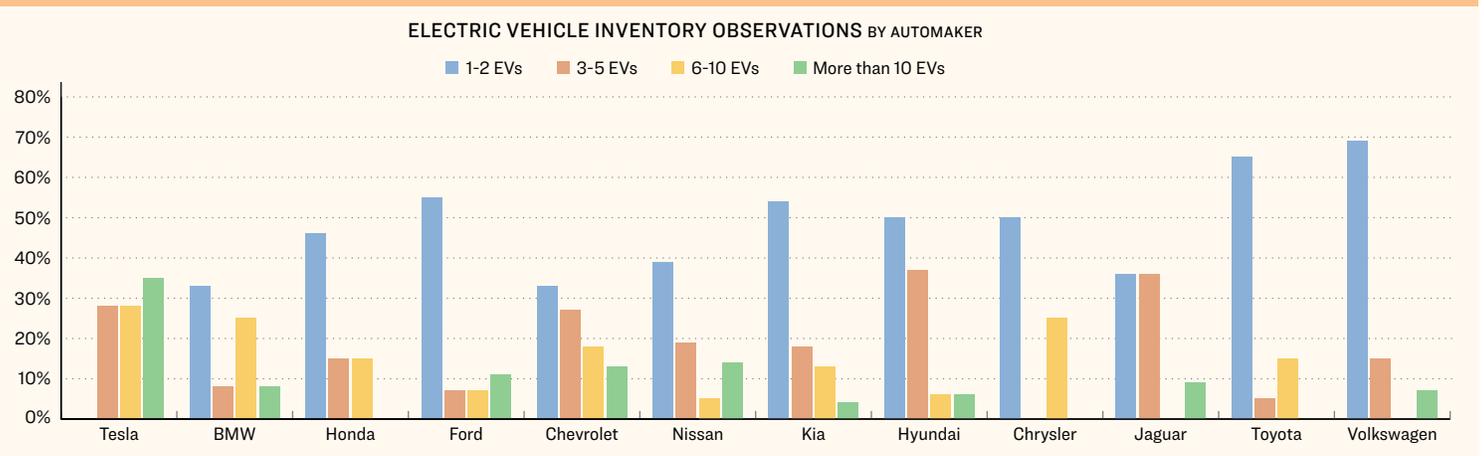
Our volunteers reported that Tesla provided the best overall EV shopping experience, while Chrysler provided the worst overall EV shopping experience.

We also examined the inventory of available EV models that were being sold on the lots, and whether or not our volunteers were being provided with information from salespeople relating to charging, battery range, and federal and state incentives for those particular models and automotive brand.<sup>16</sup>

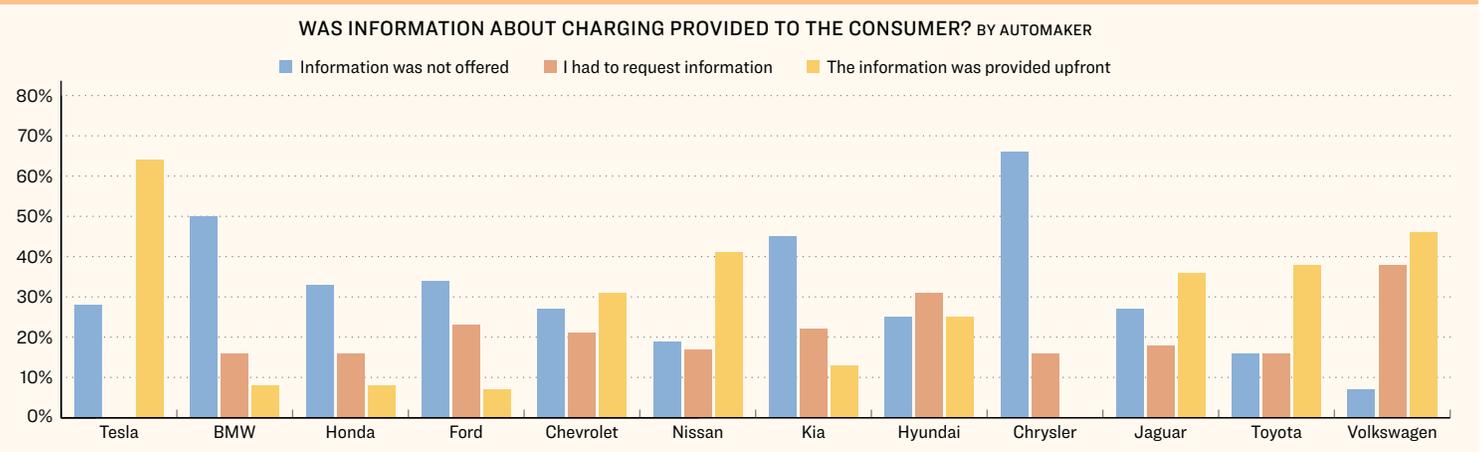
**Figure 9: Consumer Satisfaction by Automaker**



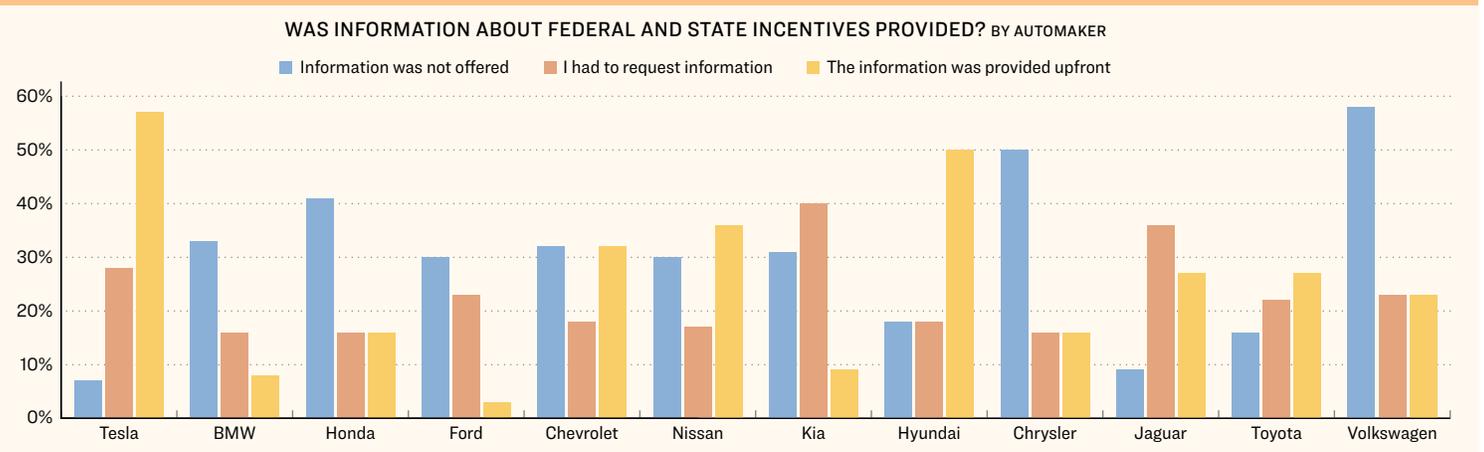
**Figure 10: EV Inventories by Automaker**



**Figure 11: Charging Information by Automaker**



**Figure 12: Incentives Information by Automaker**



*“I asked if Subaru might offer EVs in the future and the answer was no, that customers like their gas-saving cars as is. When I suggested EVs use no gas, the representative said EVs aren’t that great because they use lithium for batteries, a nonrenewable resource. He then said public transportation is the ultimate answer to our auto emissions challenges. He did add that VW will be offering an electric bus in the near future.”*

**KAREN S. (SUBARU-VOLKSWAGEN DEALERSHIP IN COLORADO)**

# HOW CALIFORNIA COMPARES

California is the fifth-largest economy in the world. With a population of more than 40 million people, the state represents critical market share that could help spur EV adoption in the rest of the country. In 2018, California accounted for almost [half](#)<sup>17</sup> of all EV sales in the nation, and the percentage of EVs in the state will only continue to grow.

We had the most volunteers and auto dealership surveys from California and, given the state’s importance in shaping and advancing the EV market, we were interested in looking at how it compares with the rest of the country. Overall, our volunteers had much more positive shopping experiences in California than in all other states.

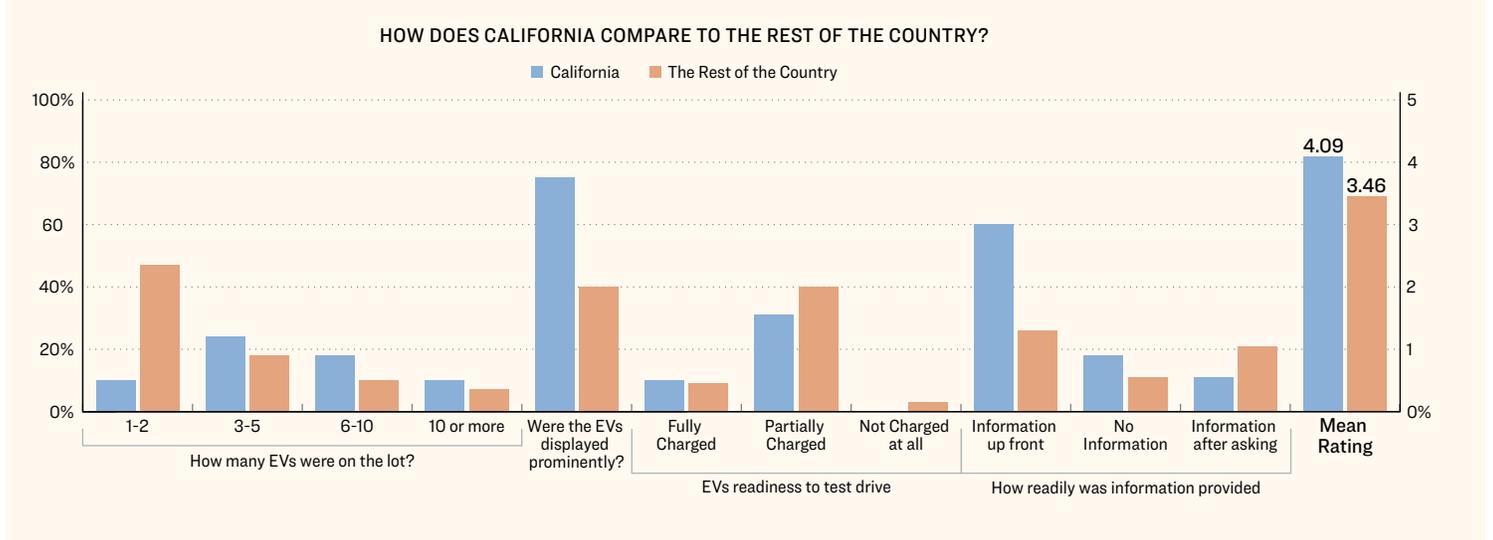
## California

- For dealerships with EVs on their lots, we found that **24%** offered from 3 to 5 models, **18%** offered from 6 to 10 models, **10%** offered more than 10 models, and **10%** offered only 1 or 2 models.
- **75%** of dealerships with EVs displayed them prominently on the lot.
- **73%** of the dealers with EVs had vehicles that were fully charged for a test drive, and **10%** had vehicles that were partially charged.
- **60%** of our volunteers received information up front on state/federal rebates and tax incentives that would save them money, **18%** received no information, and **11%** received information only after requesting it.
- The mean rating for EV shopping in California was **4.09** out of **5**.

## The Rest of the Country

- For dealerships with EVs on their lots, we found that **47%** offered only 1 or 2 models, **18%** offered from 3 to 5 models, **10%** offered from 6 to 10 models, and **9%** offered more than 10 models.
- Only **40%** of dealerships with EVs displayed them prominently on the lot.
- **34%** of the dealers with EVs had vehicles that were fully charged for a test drive, **9%** had vehicles that were partially charged, and **3%** had vehicles that were not charged at all.
- **26%** of our volunteers received information up front on state/federal rebates and tax incentives that would save them money, **33%** received no information, and **21%** received information only after requesting it.
- The mean rating for EV shopping in all other states was **3.46** out of **5**.

**Figure 13:** How Does California Compare to the Rest of the Country?



# BEST PRACTICES & POLICY RECOMMENDATIONS

Based on all of the feedback we received from our volunteers, along with guidance from industry experts, what follows is a summary of best practices and recommendations for both automakers and dealerships to successfully sell their EVs, as well as for policy makers to provide regulatory incentives for EV expansion.

## Availability and Inventory

As indicated from our independent sampling, we found that 74% of the auto dealerships that our volunteers visited nationwide did not have any EVs on their lots. The failure of dealerships to offer EVs creates a huge barrier to access for consumers. For those that do offer EVs, 44% of those dealerships visited only had one or two cars available, which limits choice in regard to vehicle features such as color and trim. Depending on their region and state, many consumers may be left out of the EV market altogether simply through lack of availability.

To improve this situation, automakers should manufacture and advertise higher volumes of EVs. They must also provide more incentives and discounts for dealerships to sell EVs, as they do for various internal combustion engine vehicles. Dealerships on the other hand, must secure a larger number of EVs from automakers.

Another barrier to address is the costly dealership certification fee that many automakers impose on dealerships just so they can sell EVs. This is something that should be offered at a free or affordable rate in order to expand accessibility and inventory of EVs across the country.

## Visibility

Prominently displaying EVs and charging stations will generate consumer interest and increase sales. Our volunteers often had difficulty locating EVs because they were buried far back on the lots.

It is important that EVs be displayed prominently, whether inside the showroom or at the front of the lot. This both makes it easier for consumers to find vehicles and reassures them that EVs are products that the automakers and dealers are excited to promote and sell.

## Expertise

Many widespread myths persist about electric vehicles, which makes it especially important for dealerships to have well-trained staff and salespeople who are knowledgeable about them. Many customers will have questions about

charging and range, as well as about federal and state incentives.

Explaining the advantages of EV technology and alerting customers to available incentives are two of the most effective tools for increasing widespread EV adoption. However, as our volunteers found, salespeople often provide consumers with insufficient or incorrect information about EVs regarding charging, battery range, and federal and state incentives. Automakers and auto dealers should utilize certification and training programs to ensure that salespeople have the proper knowledge about EVs.

## Recommendations

### Automakers should:

- Manufacture more EVs for sale across a wider share of states and regions, and increase inventory volume.
- Manufacture additional EV models with different features such as battery range and performance.
- Provide better incentives to dealerships for selling EVs.
- Provide free or affordable certification for dealerships to sell EVs.
- Increase marketing and advertising for EVs.
- Provide information to dealerships on EV technology and federal/state incentives.<sup>18</sup>

### Auto dealers should:

- Proactively secure more EVs from automakers.
- Provide sales staff access to periodic EV training and certification opportunities on charging technology, consumer incentives (state and federal rebates, tax credits), and effective sales strategies.
- Have one or more salespersons designated as EV experts.
- Encourage potential EV customers to schedule their visit when a staff EV expert is available.
- Display EVs prominently.
- Work with local pro-EV groups to participate in test ride events.

- Help prepare incentive paperwork for customers at the point-of-sale, where feasible.
- Ensure that EVs are consistently charged and ready to be test driven.

**State regulators and policymakers should:**

- Maintain or increase existing consumer rebate and incentive programs for the purchase and lease of new and used EVs, and provide additional incentives for low-income and disadvantaged communities, including provisions that protect people against dubious auto financing scams.
- Create EV consumer-rebate programs in states that do not have them—ideally to be administered at the point-of-sale and for the salesperson and/or dealership to

receive a small cut of the rebate.

- Announce target EV consumer adoption and infrastructure goals for 2025, 2030, and 2050.
- Provide grants and incentives for businesses, municipalities, and government agencies to invest in EV fleets and EV charging infrastructure.
- Create consumer EV-education programs.
- Require utilities to install charging infrastructure, including at workplaces, at apartment complexes, and in low- and moderate-income neighborhoods.
- Grant utilities the freedom and flexibility to invest in consumer and dealer education and incentive programs, just as they'd previously been granted such flexibility for promoting energy efficient appliances.

## METHODOLOGY

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This study was conducted by the Sierra Club from May through July 2019. Our research and polling team provided us with individual target numbers of auto dealerships in each state to survey—based on figures from the [National Automobile Dealers Association](#)<sup>19</sup> — in order to obtain a representative sample for a nationwide report. We reached our survey goals in all 50 states.

We recruited 579 volunteers via email, phone, and media outreach. Collectively, they surveyed more than 909 auto dealerships and stores across all 50 states.

We asked volunteers to indicate the date that they expected to call or visit a dealership so we could schedule follow-up emails and calls until their completion.

To avoid potential bias or skewing of results, volunteers were directed to choose auto dealerships in their area and then visit or make a phone call as part of the campaign.

Volunteers were given a [fact sheet](#)<sup>20</sup> that explained the campaign, supplied background information on electric vehicles, and provided general instructions. Rev Up EVs is not a “secret shopper” initiative. Volunteers were welcome to mention to salespeople that they were participating in a survey on behalf of the Sierra Club — or not — depending on their preference.

Participants were not given a script and were asked to have their interactions be as organic as possible.

After their visit or phone call, each volunteer completed an online survey to report the findings. In consultation with our polling and research department and our data consultant, we analyzed the results from 685 surveys.

We also used a proportion-estimation procedure to estimate the percentage of dealerships that offer any electric vehicles. We did this separately from the volunteer visits; 224 phone calls were made to randomly selected dealerships evenly distributed throughout the country. We did this because of the possibility that volunteers might make an effort to find dealerships with EVs available and thus under-report on dealerships that did not have EVs. Since we conducted a large number of calls (N>200), our procedure met the requirements for proportion estimation with a normal distribution. We estimate that 74% of auto dealerships do not offer any EVs, and are 95% confident that the true proportion lies between 68% and 80%.

# APPENDIX: TOP-RATED DEALERSHIPS

The following dealerships received the highest rating (five stars) from our volunteers after their EV shopping experience.

## ARKANSAS

Parker Audi, **Little Rock**

## CALIFORNIA

Selman Chevrolet, **Orange**

Novato Chevrolet, **Novato**

North Bay Nissan, **Petaluma**

Tesla, **San Diego**

Stevens Creek Kia, **San Jose**

Nissan Fremont and Nissan Dublin,  
**Fremont**

Toyota of Carlsbad, **Carlsbad**

Fiat, **Orange**

Putnam Nissan, **Burlingame**

Tesla, **Los Angeles**

John L Sullivan Chevrolet, **Roseville**

Tesla, **Santa Monica**

Oakland Kia, **Oakland**

Sunnyvale Volkswagen, **Sunnyvale**

Central Valley Hyundai, **Modesto**

KIA, **Victorville**

Manly Honda, **Santa Rosa**

Platinum Chevrolet, **Santa Rosa**

Jim Bone Nissan of Santa Rosa,  
**Santa Rosa**

Victory Chevrolet, **Petaluma**

San Leandro Hyundai-Kia,  
**San Leandro**

Future Nissan of Folsom, **Folsom**

## FLORIDA

Pompano Ford & Lincoln,  
**Pompano Beach**

Sarasota Mitsubishi Suzuki, **Sarasota**

Honda of Fort Myers, **Fort Myers**

Audi of Sarasota, **Sarasota**

Kraft Nissan, **Tallahassee**

Tesla, **Boca Raton**

Grieco Chevrolet, **Fort Lauderdale**

Mercedes-Benz of Naples, **Naples**

## GEORGIA

Rick Hendrick Chevrolet, **Duluth**

Atlanta Classic Cars Mercedes-Benz,  
**Duluth**

Dyer & Dyer Volvo, **Atlanta**

## HAWAII

New City Nissan, **Honolulu**

## IDAHO

Dennis Dillon Nissan, **Boise**

## ILLINOIS

Illini Nissan, **Champaign**

Bob Jass Chevrolet, **Elburn**

Fletcher Jones, **Chicago**

## INDIANA

D-Patrick Nissan, **Evansville**

Tesla of Indianapolis, **Indianapolis**

## KENTUCKY

Jaguar Louisville, **Louisville**

## MARYLAND

Ourisman Chevrolet of Baltimore,  
**Baltimore**

Ideal Hyundai, **Frederick**

Tesla, **Bethesda**

Antwerpen Hyundai, **Catonsville**

Ourisman Hyundai, **Bowie**

## MICHIGAN

Atchinson Ford, **Van Buren Twp**

Feldman Chevrolet of Highland, **Highland**

Kia of Canton Michigan, **Canton**

Robert DeNooyer Chevrolet, **Holland**

## MINNESOTA

Jeff Belzer's Chevrolet, **Lakeville**

Rosedale Chevrolet, **Roseville**

## NORTH CAROLINA

Carvana, **Boone**

Michael Jordan Nissan, **Durham**

Chevrolet of New Bern, **New Bern**

## NEW JERSEY

Ciocca Chevrolet, **Lawrenceville**

Tesla of Cherry Hill, **Cherry Hill**

Ramsey Nissan, **Ramsey**

## OHIO

Porsche Beachwood, **Beachwood**

## OREGON

Wilsonville Chevrolet, **Portland**

Gladstone Mitsubishi, **Milwaukie**

Subaru of Portland, **Portland**

Kendall, **Eugene**

Rustom Nissan, **Portland**

Platt Auto, **Milwaukie**

## PENNSYLVANIA

Sloane Toyota of Glenside, **Glenside**

Fred Beans Ford, **Doylestown**

#1 Cochran Nissan, **Monroeville**

## RHODE ISLAND

Balise Toyota of Warwick,  
**West Warwick**

## TENNESSEE

Mtn View Nissan, **Chattanooga**

Oak Ridge Nissan, **Oak Ridge**

West Chevrolet, **Alcoa**

## TEXAS

Alfa Romeo of Fort Worth, **Fort Worth**

Auto Nation Chevrolet, **Austin**

Audi North Austin, **Austin**

## UTAH

Stephen Wade Chevrolet, **St. George**

Tesla Salt Lake City, **Salt Lake City**

## VIRGINIA

Tesla, **Richmond**

Koons Falls Church Ford, **Falls Church**

Pohanka Chevrolet, **Chantilly**

## VERMONT

Burlington Hyundai-Subaru, **Burlington**

Lamoille Valley Chevrolet, **Hyde Park**

## WASHINGTON

Bill Pierre Chevrolet, **Seattle**

Kia of Puyallup, **Puyallup**

## WISCONSIN

International Autos, **Milwaukee**

Heiser Chevrolet, **West Allis**

## WEST VIRGINIA

Germain Nissan, **Columbus**

Wilson Ford Lincoln, **White Hall**

## ENDNOTES

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- 1 [https://content.sierraclub.org/creative-archive/sites/content.sierraclub.org/creative-archive/files/pdfs/1371%20Rev%20Up%20EVs%20Report\\_09\\_web.pdf](https://content.sierraclub.org/creative-archive/sites/content.sierraclub.org/creative-archive/files/pdfs/1371%20Rev%20Up%20EVs%20Report_09_web.pdf)
- 2 <https://www.ipcc.ch/sr15/>
- 3 <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>
- 4 Recent research suggests that oil and gas industrial facilities release at least 13 million metric tons of methane pollution a year – the same climate impact as operating nearly 300 coal-burning power plants for a year or driving more than 200 million motor vehicles for a year. Methane, the primary component of fracked gas, and one of the top emissions from the onshore oil and gas production and supply chain, has 87 times the warming power as CO2 during the time it remains in the atmosphere.
- 5 [https://content.sierraclub.org/creative-archive/sites/content.sierraclub.org/creative-archive/files/pdfs/1371%20Rev%20Up%20EVs%20Report\\_09\\_web.pdf](https://content.sierraclub.org/creative-archive/sites/content.sierraclub.org/creative-archive/files/pdfs/1371%20Rev%20Up%20EVs%20Report_09_web.pdf)
- 6 <https://www.detroitnews.com/story/business/autos/mobility/2019/05/03/why-automakers-betting-so-big-electric-vehicles/3615444002>
- 7 <https://www.reuters.com/article/us-autoshow-detroit-ford-motor/ford-plans-11-billion-investment-40-electrified-vehicles-by-2022-idUSKBN1F30YZ>
- 8 <https://www.cnn.com/interactive/2019/08/business/electric-cars-audi-volkswagen-tesla>
- 9 <https://www.greentechmedia.com/articles/read/us-electric-vehicle-sales-increase-by-81-in-2018>
- 10 <https://www.ucsusa.org/clean-vehicles/electric-vehicles/ev-survey-2019>
- 11 <https://advocacy.consumerreports.org/wp-content/uploads/2019/07/ConsumerReports-UnionofConcernedScientists-2019-EV-Survey-7.17.19.pdf>
- 12 <https://mailtrack.io/trace/link/7a0072b7c0d45fe829a16908d575b6889defc6d9?url=http%3A%2F%2Fwww.nescaum.org%2Fdocuments%2F2017-ev-marketing.pdf&userId=1678180&signature=1820c7027d9c1e96>
- 13 <https://www.nescaum.org/documents/2018-ev-marketing.pdf>
- 14 National advertising data for 2018 has not yet been analyzed by NESCAUM. Current analysis only includes advertising expenditures in the California and Northeast markets.
- 15 The following auto brands were surveyed but did not meet our quantity threshold to be included in this analysis: Audi, Fiat, Mercedes, Subaru, Volvo, Mini
- 16 The following auto brands were surveyed but did not meet our quantity threshold to be included in this analysis: Audi, Fiat, Mercedes, Subaru, Volvo, Mini
- 17 <https://www.latimes.com/business/story/2019-09-10/ev-electric-car-sales-california-tesla>
- 18 Third party certification program exists ([Plug Star](#) and [Smart Columbus](#)) which provide trainings to auto dealerships on how to effectively sell EVs to interested consumers:
- 19 <https://www.nada.org/>
- 20 <https://content.sierraclub.org/evguide/sites/content.sierraclub.org/evguide/files/rev-up-2.0-faq.pdf>



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